

Science Translation and Innovative Research (STAIR™)¹ Grant Program: Request for Proposals (FY 2021-22)

TABLE OF CONTENTS

PROGRAM OVERVIEW	2
KEY DATES	3
IMPACT AREAS	4
ELIGIBILITY REQUIREMENTS	5
GRANT TERMS AND AMOUNTS	6
STAIR SIDE-CAR AWARD WITH TRIPLE RING TECHNOLOGIES CONSULTING	6
ALLOWABLE COSTS	7
TIMELINE	8
HOW TO APPLY	8
REVIEW PROCESS	9
AWARD PROCESS AND POST-AWARD ADMINISTRATION	10
CONTACT INFORMATION	11

¹ STAIR is a trademark of The Regents of the University of California.

PROGRAM OVERVIEW

The UC Davis Science Translation and Innovative Research (STAIR) Grant is one of the technology proof-of-concept programs managed by Venture Catalyst in collaboration with InnovationAccess. Core funding for the STAIR Grant is provided by the Vice Chancellor for Research with supplemental funding provided by Innovation & Technology Commercialization (InnovationAccess and Venture Catalyst) as well as campus and industry partners.

Early-stage technologies from university research are often perceived as too uncertain or too risky to attract funding to translate into commercial products or services. The lack of accessible funding creates a gap between basic research and early-stage commercialization efforts. The STAIR Grant helps bridge this gap by providing funding and resources to translate basic UC Davis research with commercial potential by demonstrating proof-of-concept and establishing market viability, thus de-risking the innovation. The ultimate objective of the program is to develop technologies that attract entrepreneurs, industry, and investors willing to commercialize UC Davis technologies, resulting in societal and economic impacts.

Successful projects will advance UC Davis technologies towards commercialization by achieving specific research and development milestones. Outcomes that might be enabled by STAIR Grant funding include, but are not limited to:

- Building a working prototype or second iteration prototype to prepare for commercialization
- Generating translational data or research results to create more robust foundational IP
- Enabling patent claims
- Testing commercial and market feasibility
- Demonstrating scale-up development potential
- Producing results that support more competitive Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grant applications

A key to achieving translational impact is mentoring provided by industry experts to STAIR Grant awardees and finalists. Feedback from industry experts through the review and mentoring processes has been invaluable to the program and to UC Davis researchers as they design and implement research plans to increase the commercial potential of UC Davis technology.

In addition to enabling outcomes such as those listed above, the program also helps develop an innovative and entrepreneurial culture that extends the benefits of UC Davis research activities beyond the boundaries of the university.

KEY DATES

RFP Issue Date:	January 27, 2022
RFP Closing Date:	March 17, 2022
Committee Online Application Review:	April 4, 2022
Committee In-Person Review Session for Selection of Awardees:	May 12, 2022
Award(s) Announcement:	Mid-June 2022

IMPACT AREAS

Proposed projects will be awarded based on their focus on solutions in one of **five main impact areas**, aligned with UC Davis areas of excellence. Review panels will make recommendations for awards in each category independently.

The five impact areas are:

1. Human Health

- Examples may include, but will not be limited to include medical devices, biopharmaceuticals, digital health solutions, genetic engineering and many others, as it could relate to the prevention, diagnostics, or treatment of illness and/or improvement of health outcomes.

2. Animal Health

- Examples may include but will not be limited to animal health and well-being (diagnostics, therapeutics, vaccines), improving safety and quality of animal-derived products, aquaculture, animal husbandry and welfare, sustainable animal production, digital tech (data capturing) for pet and farm animals.

3. Environmental Health & Sustainability

- Examples may include but will not be limited to any technology that can have a positive impact on the environment, such as ways to impact transportation, infrastructure, climate change, energy efficiency and storage, packaging, fuels, water, advanced chemicals, batteries and more. Examples of disciplines from past awardees include chemistry, engineering, computing, and many others.

4. Food, Agricultural Systems & Nutrition

- Examples may include but will not be limited to food Safety and quality, improving functionality and efficacy of foods, nutrients and/or dietary bioactive components in promoting health, plant production and protection, robotics and many others.

5. Computing, Electronics & Information Systems

- Examples may include but will not be limited to AI/ML, Robotics, IoT, Blockchain, cloud and High-Performance Technology (software and hardware), electronic devices, integrated circuits, wireless networks, optics, algorithms/codes, digital health solutions and many others.

Applicants will be able to select the Impact Area they believe their innovation aligns with best. If you are unsure about where your proposal might fit, please reach out to us at stairgrant@ucdavis.edu and we would be happy to provide guidance.

ELIGIBILITY REQUIREMENTS

Eligible Projects and Applicants

Projects eligible for STAIR funding will feature an early-stage technology that meets one or more of the following criteria:

- Has advanced beyond the basic research stage, but requires early proof-of-concept data to show feasibility for commercial potential
- Has demonstrated successful results in the research environment and is poised for commercialization pending a specific, targeted demonstration, test result, or prototype
- Has reached a critical stage of technology development, whereby specific questions pertaining to commercialization feasibility can be answered within the resource constraints of the program
- Has identified milestones that would overcome a specific hurdle to commercialization, enabling a technology to become more attractive for either licensing to an existing company or enabling the formation of a startup company within 1-2 two years of project completion

Early-stage proof-of-concept projects not eligible for grant support from traditional research funding sources (NSF, NIH, etc.) or without existing funding will be given priority over projects with other forms of support (e.g., angel or venture capital funding, industry funding, and other proof-of-concept grants). Leveraging other funding sources – as long as there is no overlap in funded projects under a project plan – is encouraged. In such cases, it will be important to identify an IP management plan through coordination with InnovationAccess.

Anyone with Principal Investigator (PI) status at UC Davis is eligible to apply as a project PI. Postdoctoral scholars and university staff researchers are eligible to submit applications as Co-PI with an eligible PI.

Intellectual Property Conditions

A project proposed in a grant application must address technology with potentially patentable intellectual property (IP). All potentially patentable IP developed under a STAIR Grant project will be assigned to the University of California.

If the technology has not been previously disclosed to InnovationAccess, then the applicant must participate in a Pre-Application Meeting with InnovationAccess before the STAIR Grant proposal deadline. Though this year you do NOT need to submit a full Record of Invention prior to applying, the purpose of the Pre-Application Meeting will be to provide input on alignment with STAIR Grant technology commercialization objectives so that you might propose a more competitive grant and to assess whether the proposed project may cover potentially patentable IP. Please email stairgrant@ucdavis.edu with the following information: **Name, E-mail address, Phone #, Department/College, Availability for at least 2-3 time slots.**

Technologies that have been optioned or licensed to a company are not eligible to receive STAIR Grant funding. However, technologies under a Letter Agreement with a company are eligible. Applicants are encouraged to contact InnovationAccess regarding IP-related eligibility.

Funding Conditions

The total amount of requested funding support cannot exceed \$50,000, and the project objectives must be achievable with awarded funds within a 12-month period following first funds disbursement. Project objectives described in the grant application must be achievable within the proposed budget request and not contingent on other funds.

Funds may only be used for eligible expenses (see *Allowable Costs* section below). The awardee's department will be responsible for covering any expenses deemed ineligible.

One or more of the PI, Co-PI and key personnel will have participated in, or will commit to participate in a structured entrepreneurial training program approved by Venture Catalyst. Examples of potential training programs include the Entrepreneurship Academies administered by the UC Davis Mike and Renee Child Institute for Innovation & Entrepreneurship (IIE) or the NIH and NSF Innovation Corps programs hosted by Venture Catalyst in collaboration with program partners.

GRANT TERMS AND AMOUNTS

Up to \$250,000 is available for the STAIR Grant Program in Fiscal Year 2021-2022. Approved projects may be eligible for up to \$50,000. All submitted proposals must be limited in scope of work and budget, such that work can be completed within a 12-month period. Funds may be released to an awardee in one or more tranches, based on the work plan of the awardee and at the discretion of the STAIR Grant Review Committee and the Vice Chancellor of Research. The number of STAIR Grants awarded will depend on funds available in the fiscal year, the quality of the proposals received, and the discretion of the Vice Chancellor for Research.

In addition, Venture Catalyst has engaged several partners to expand potential funding available to particular technologies and projects through the STAIR Grant program. Partners include, Triple Ring Technologies, TurtleTree, the UC Davis College of Biological Sciences, the UC Davis College of Letters & Science, the UC Davis School of Medicine and the UC Davis School of Veterinary Medicine.

STAIR SIDE-CAR AWARD WITH TRIPLE RING TECHNOLOGIES CONSULTING

Triple Ring Technologies (Triple Ring) works at the nexus of life sciences, physical sciences, and engineering. Triple Ring has offered minimum viable product support, prototyping, full-service concept-to-manufacturing development, and industrial design for customers from around the US and world since 2004, supporting companies ranging from startups to Fortune-100s.

On a pro bono basis, Triple Ring will provide 60 in-kind person-hours of services in the aggregate over a 2-3 month period to 2-3 recipients jointly chosen by Triple Ring and UC Davis Innovation and Technology Commercialization (ITC).

The focus areas of the engagement will vary depending on the maturity of the technology and will be agreed to between Triple Ring, ITC, and the awardee prior to engagement:

- Early-stage technical validation, considering prototype-ability, scalability, manufacturability, and supply chain.
- Minimum viable product specification, if recipient has a high-level description, and first/second/third generation evolution.
- From benchtop to prototype – if prototype is needed, high-level guidance on prototype design and build. Specifications may be an output, depending on the state of the benchtop demo.
- Coaching on how Triple Ring would assess the opportunity from a VC perspective, including feedback on the pitch deck, presentation, and market analysis. This includes product versus business questions.

Applicant Pool and Recipient Selection

Up to 3 recipients will be jointly selected prior to the start of the 2-3 month period. Additional recipients may be added if resources become available.

Recipients will be selected from an applicant pool that will be established via the following sequential process:

- Applications to the Venture Catalyst proof-of-concept STAIR Grant Program will serve as the primary pool.
- ITC will make grant applications available to Triple Ring for review.

In order to be considered in the primary pool, applicants must have at least one invention disclosure in place with UC Davis InnovationAccess. Applicants selected for further review will make a presentation/pitch to Triple Ring and ITC on their solution and outlining the innovator's vision for a successful consulting engagement.

Recipient Participation Requirements

Selected recipients will be expected to meet the following requirements for receipt of Triple Ring's services.

- Participate in an orientation session with Triple Ring and ITC representatives to outlay expectations and answer questions. A pre-program assessment will establish the "initial conditions" for each recipient.
- Engage with Triple Ring in a highly interactive manner with expectations that both parties will leave a meeting with tasks to be completed before the next meeting. Active engagement may include Zoom/distant interaction.
- Work with Triple Ring and ITC to design in checkpoints to facilitate mid-course corrections in the engagement.

ALLOWABLE COSTS

STAIR Grant funding may be used only to cover direct costs. Examples of direct costs that may be included in the grant request are supplies, reagents, and non-capital equipment.

Up to 20% of STAIR Grant funding requested maybe used for salary support, for post-doctoral fellows, technical research staff, and graduate students² employed at the university in such capacity at the time of application submission. Clear justification must be provided to show why the requested salary

² Salary support requests for graduate students may include tuition and fees remission, in accordance with the UC Davis Academic Personnel Manual, Appendix II-B.

support is essential for the proposed project. If the proposal includes funding for graduate students, the PI responsible for supervising the education, training, or thesis-directed research or related activities of participating graduate student(s) must certify that participation of the student(s) in the program will not adversely impact their education, training, or thesis-directed activities. Additionally, PI will agree to release such student(s) to participate in an Entrepreneurship Academy managed by IIE or an equivalent structured entrepreneurial training program approved by Venture Catalyst.

As an exception to the 20% cap on salaries, if the proposed project requires software development (either to enable IP being developed or as an integral part of an IP-supported proof-of-concept proposal), up to \$10,000 may be applied to salaries for project software development personnel. For Computing, Electronics and Information Systems, up to \$25,000 may be eligible to be applied to salaries for project software development personnel/contracting.

STAIR Grant funds can be used to hire contractors for certain activities, such as prototype fabrication, third-party technical validation testing, or medicinal chemistry services. PIs should identify potential service providers in the proposal. Awardees must secure an effort commitment within three months of notification of award, so the team can complete all work described in the proposal within the award period.

STAIR Grant support may not be used for capital equipment (\$5,000 or more)³, market research reports, business consulting expenses, maintenance agreements, costs associated with attending conferences. Travel costs are generally excluded from eligibility, except in rare cases. The previous list is not exhaustive and applicants are encouraged to discuss any questions on budget items with us prior to application submission.

The program is generally not intended to fund research directly involving human subject testing.

Only research activities specifically described in the grant proposal will be funded. Research that has already been performed or expenses that have already been incurred in any manner at the time of grant application or grant award are not eligible for funding.

TIMELINE

- Announcement release: Thursday, January 27, 2022
- **Application deadline: Thursday, March 17, 2022 at 11:59 pm PDT**
- Notice of award: Anticipating mid-June 2022

HOW TO APPLY

Application form, along with detailed instructions, can be found at the following URL:

<https://itc.ucdavis.edu/proof-of-concept-program/>

Applications can be submitted through Office of Research's InfoReady grant application platform at <https://ucdavis.infoready4.com/#competitionDetail/1861976> (Kerberos login required).

³ Defined per UC Davis Policy and Procedure Manual, Ch. 350, Section 50:
<https://ucdavispolicy.ellucid.com/documents/view/489/509/>

Potential applicants should send an email indicating their interest to stairgrant@ucdavis.edu, so that the Proof-of-Concept & Innovation Programs Manager may contact you to provide updates, special announcements, or other communications (e.g., upcoming information sessions).

REVIEW PROCESS

Overview

Venture Catalyst staff will perform an initial review of all proposals for any errors in completion or other non-substantive issues. Venture Catalyst will then provide proposals electronically to the STAIR Grant Review Committee for assessment and scoring. The STAIR Grant Review Committee will score proposals on review criteria identified below. Following the online review, a group of finalist proposals in each of the five Impact Areas will be identified based on the reviews. The Review Committee will further evaluate these finalist proposals at an in-person or virtual meeting.

Based on quality of proposals received and the total budget request, the STAIR Grant Review Committee will recommend a number of applications (expected to be approximately five, though the number may be higher or lower) for approval by the UC Davis Vice Chancellor for Research.

Prior to a final funding decision, the Office of Research may undertake a conflict of interest review of the proposed project.

Venture Catalyst anticipates providing summarized anonymized reviewer comments to all applicants based on the review criteria.

STAIR Grant Review Committee

The STAIR Grant Review Committee will include industry representatives with corporate, investor, and entrepreneurial expertise. Venture Catalyst may add supplemental members to the Review Committee, including Office of Research staff and campus subject matter experts qualified to evaluate a combination of business and scientific translational merits of the proposals received. All reviewers will be obligated to protect the confidentiality of proposals and will disqualify themselves in cases of conflict of interest.

Review Criteria

Reviewers will score applications on a scale of “1” (lowest) to “9” (highest). Review criteria fall into four broad categories: 1) Program Fit, 2) Technical Merit, 3) Commercial Potential, 4) Budget and Timelines, and 5) Milestones. Applicants should be prepared to answer the following questions in their proposal:

- Program Fit
 - Does the proposal fit with program objectives and eligibility?
The technology or project is at a stage where proof-of-concept funding will substantially enable next steps towards technology commercialization; and the project reflects a gap in early technology development with potential for commercial impact.
- Technical Merit
 - Does the project team have scientific or technological expertise required by the proposal?

- How clearly does the proposal describe the proposed research and the anticipated results?
- Does the proposal clearly describe and provide sufficient prior proof-of-concept or enabling research results to support the work proposed?
- Commercial Potential
 - Does the proposal effectively describe the product or service that would be enabled by the proposed work and end-user served? How well the proposal identifies a market need and product fit within the competitive landscape?
 - How effectively does the proposal present the current intellectual property and intellectual property strategy?
- Budget and Timelines
 - Is there a reasonable likelihood of achieving project objectives, given the available financial and technical resources identified or anticipated?
 - How appropriate is the timeline presented for achieving the proposal's objectives?
- Milestones
 - Does the proposal indicate clear recognition of the steps, challenges, and value-generating milestones that would enable commercial feasibility for the technology?

AWARD PROCESS AND POST-AWARD ADMINISTRATION

Prior to award disbursement, Venture Catalyst will verify that the awardee is still eligible, based on criteria established in the RFP. (For example, IP must not be licensed or optioned at the time of the award; proposed research has not received alternative funding; etc.)

The amount of requested funding support cannot exceed a total of \$50,000. The Office of Research reserves the right to reduce the final amount of funding approved, including salary requests, when making a final determination of grant award. The STAIR Grant Review Committee will conduct a final review of 1) proposed milestones, and 2) fit with the requested budget, prior to a final funding decision. Funds must only be used for eligible expenses (see *Allowable Costs* section above); the awardee's department will be responsible for covering any expenses deemed ineligible.

All awardees will be assigned industry mentors from the Review Committee to provide guidance on technology commercialization and work with the project team over the grant period. The Venture Catalyst team will select mentors based on factors such as professional background, technical expertise aligned with the project, and comments provided in the review process.

Awardees will be expected to engage with STAIR Grant mentors on a regular basis and submit reports indicating progress towards or achievement of project milestones. Progress report content and timelines will be discussed and agreed upon prior to release of funds, and at a minimum will include quarterly accounting and mid-year progress and final reports.

Funds will be disbursed only after the first meeting (facilitated by Venture Catalyst staff) with the assigned mentors, and subsequent sign-off by the mentors and researcher on the proposed project milestones. Funds awarded are to be expended within 12 months of release of funding from Office of

Research to the PI's department. On a case-by-case basis, upon submission of reasonable justification by the PI and at the discretion of the Vice Chancellor for Research, a single no-cost extension of not more than 6 months may be provided.

As a condition of the award, awardees will be expected to:

- Meet quarterly (in person or by telephone) with mentor(s)
- Provide quarterly accounting to indicate use of funds on the project in the achievement of project milestones
- Submit a mid-year progress report that includes milestone tracking and a clear accounting of the use of granted funds in the furtherance of the project and achievement of proposed project milestones
- Submit a final project report that summarizes technical achievements and discusses commercial next steps
- PI/co-PI and key personnel (including any graduate students involved in the project) participate in a structured entrepreneurial training program approved by Venture Catalyst
- Participate in a mini-symposium in 2023 to present project results to-date and commercialization-related outcomes

CONTACT INFORMATION

For any questions related to the STAIR Grant process, please send an email to stairgrant@ucdavis.edu.