

STAIR/DIAL Grant Program 2019-20

Presented By:
Venture Catalyst
Office of Research

UCDAVIS
VENTURE CATALYST



Agenda

- Overview of Venture Catalyst and ITC
- STAIR and DIAL Grant Program Objectives, Features, and Benefits
- Potential Funding from Additional Partners
- Application Process and Review Criteria
 - Eligible Projects and Applicants
 - STAIR Grant Funding, Allowable Costs, and Ineligible Costs
 - Timeline
 - Review Criteria
- Requirements for Grant Awardees
- Additional Details and Contact Information
- Q & A
- Previous STAIR/DIAL Grant Awardees

Innovation & Technology Commercialization

RESEARCH

MARKET

InnovationAccess

Stewards intellectual property and negotiates licenses

Venture Catalyst

Supports the development of new ventures fueled by university research

UC DAVIS

VENTURE CATALYST

UC Davis Venture Catalyst facilitates the translation of research and technology by driving the development of new ventures



Proof-of-Concept Funding

Science Translation and Innovative Research (STAIR™) Grant

Supports translational science and innovative research with targeted funding to help move technology towards commercialization

Economic Engagement

Economic Engagement and Community Outreach (EECO™) Systems

Facilitates connections between startups and the regional innovation and economic development ecosystem



New Venture Toolkit

Smart Toolkit for Accelerated Research Translation (START™) Program

Equips entrepreneurs with the tools, resources, and services they need to form and grow prosperous companies

Distributed Incubator Network

Distributed Research Incubation and Venture Engine (DRIVE™) Network

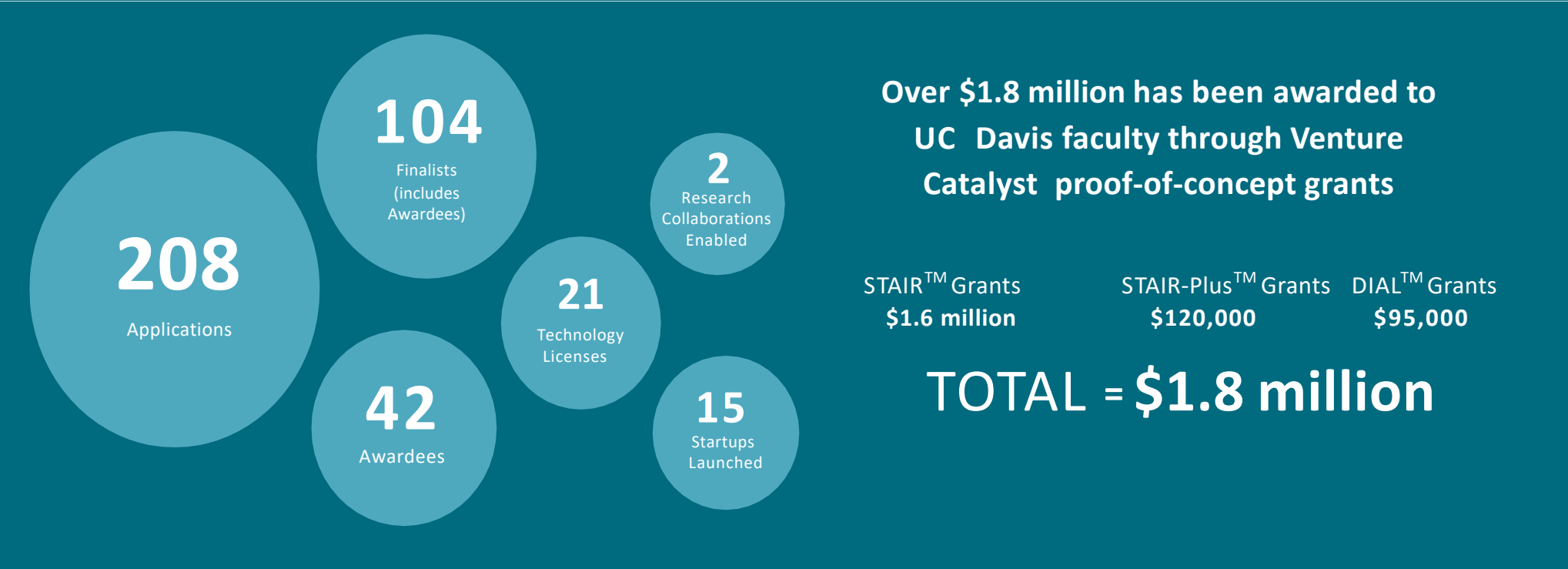
Offers early-stage startups access to shared office and technical research and development space



What are STAIR and DIAL Grants?

- STAIR™ = Science Translation and Innovative Research
 - Launched in 2014; now entering seventh year
 - Funded by Office of Research
 - Potentially patentable technologies are eligible
 - Up to \$50K per project; total of \$250K available
- DIAL™ = Data, Informatics & Application Launch
 - Program launched in 2017; now in third cycle
 - Eligible projects will have a focus in information science, software, or related applications (e.g., digital health)
 - Up to \$20K per project; total of \$40K available

Proof of Concept | Commercial Feasibility Funding



STAIR/DIAL Grant Program: Intent and Objectives

- Support translational science and innovative research with targeted funding for UC Davis researchers
- Help move UC Davis technology towards commercialization by funding the generation of research results to create more robust foundational IP and improve funding prospects for startups that might be formed based on this IP
- Stimulate entrepreneurial activity powered by technological advances at UC Davis
- Spur more research and innovation in Davis and the surrounding region by helping to grow infrastructure to support other entrepreneurial ventures

STAIR/DIAL Grant: Features and Benefits

- Funding for early-stage translational research that might not be eligible for other grants
- Review panel includes external industry participants (e.g., R&D staff in companies; investors), providing both external and market commercialization expertise
- Programs provide all applicants with summarized comments from reviewers (~1-2 pages)
- Programs provides access to mentors (advisors) in industry for finalists who wish to avail themselves of advisors' expertise
- Programs provide grant winners with mentor and program support throughout the course of the project (one year for STAIR, DIAL, projects may be shorter in duration)

Potential Additional Funding by Elanco and BASF

- Partnering company will make up to \$50,000 available per proposal for successful STAIR Grant recipients in Sponsoring company's areas of focus
- PIs who believe that their STAIR Grant proposal falls within the partnering company's scope should indicate their interest in being considered in the Project Abstract section of the online RFS project application
- If the partnering company selects a PI's proposal for consideration, Sponsoring company will work with STAIR Grant awardees and assigned STAIR Grant mentors to create modified budgets that best support projects

* Including applicable fees, benefits, etc.

Elanco Areas of Interest *

- Platform
 - Large molecules, vaccines, small molecules, nutritional health
- Species
 - Food Animal (cattle, swine, poultry, fish)
 - Companion Animal (dogs, cats)
- Unmet Needs
 - Food Animal (Respiratory, enteric/gut health, mastitis, metabolic, parasiticide)
 - Companion Animal (parasiticide, dermatology, pain/osteoarthritis, cardiovascular, diabetes)
- Ancillary Areas of focus
 - Food Animal (reproduction, milk production)
 - Companion Animal (oncology, CKD, IBD)

BASF Areas of Interest

- Chemicals
 - Petrochemicals, Intermediates
 - Materials
 - Performance Materials, Monomers
 - Industrial Solutions
 - Dispersions & Pigments, Performance Chemicals
 - Surface Technologies
 - Catalysts, Coatings
 - Nutrition & Care
 - Care Chemicals, Nutrition & Health
 - Agricultural Solutions
- Other
 - Oil & Gas, Construction Chemicals

Bio-based materials
that are
synthetic-competitive
(cost effective and
quality comparable)

Additional Support for CBS, SOM and SVM STAIR researchers

- PIs from these Schools/Colleges are eligible for additional support if their proposal is selected for a STAIR Grant through the regular STAIR Grant proposal/review process
- Supplements will be 50% of the awarded STAIR budget and can be used for graduate student, post-docs, or staff salary support* or other expenses
- Proposals must be submitted through regular STAIR Grant process and meet all eligibility requirements (including budget up to \$50,000)
- Schools/Colleges will work with STAIR Grant awardees and assigned STAIR Grant mentors to create modified budgets that best support projects

* Including applicable fees, benefits, etc.

STAIR Grant Funding Announcement: IIFH

- The Innovation Institute for Food and Health (IIFH) at UC Davis will make up to \$25,000 in salary support¹ available for graduate student, post-doctoral scholar or staff for one or two STAIR grants that are within IIFH's scope and mission²
- Proposals must be submitted through regular STAIR Grant process and meet all eligibility requirements (including budget up to \$50,000)
- PIs who believe that their STAIR Grant proposal falls within IIFH's scope should indicate their interest in being considered in the Project Abstract section of the online RFS project application
- If the IIFH selects a PI's proposal for consideration, the PI will be asked to submit a revised budget and scope of work reflecting the additional potential support for the project

¹ Including applicable fees, benefits, etc.

² IIFH's mission is "Enabling safe, sustainable, and secure nutrition for all"

Eligible STAIR/DIAL Projects and Applicants

- Eligible Projects
 - Research past the fundamental research stage but still requiring basic proof-of-concept to demonstrate commercial feasibility
 - Technology with demonstrated results in the research environment, but which still requires specific, targeted demonstrations, test results, or prototypes in support of commercialization activities
 - A PI may submit more than one application (each proposal must represent a different project)
- Eligible Applicants
 - Anyone with PI eligibility at UC Davis is eligible to apply for a STAIR Grant
 - Post-doctoral scholars and university staff are eligible to apply as co-PIs

STAIR Grant: Intellectual Property

- Projects proposed in STAIR Grant applications must address technology with potentially patentable IP
- If the technology is not covered by a patent or patent application or has not been disclosed to UC Davis' technology transfer office, Innovation Access, via the Record of Invention (RIO) process, by January 24, 2020, then the applicant must participate in a Pre-Application Meeting with Innovation Access before the STAIR Grant proposal deadline
- Technology under Letter Agreement is eligible (however, technology under option or license agreement is not)
- You can sign up for a Pre-Application Meeting by selecting a designated time slot through the following site:

<https://www.surveymzmo.com/s3/5426218/STAIR-pre-application-signup>

STAIR Grant: Funding and Allowable Costs (Slide 1 of 2)

- Grant Awards
 - Up to \$50,000 per award; total of \$250,000 available from Office of Research
- Allowable costs (*examples –review RFP carefully for full list*)
 - Direct costs only- supplies, reagents, small equipment
 - Salary support for UC Davis post-docs, grad students, and research staff only*
 - Up to 20% of awarded funds may be used for salary support
 - IP-enabling software development- up to \$10,000 of awarded budgets (even if budget is <\$50k) can be used for software development personnel
 - Hiring of external contractors (e.g. CROs, prototyping firms) is allowed

** Research staff to be supported by salary must be identified in the application*

STAIR Grant: Funding and Allowable Costs (Slide 2 of 2)

- Ineligible cost (example-review RFP carefully for full list)
 - Capital equipment (equipment equal to or greater than \$5,000)
 - Equipment maintenance agreements
 - Fees and associated costs (e.g., travel, hotel, etc.) to attend conference
 - Market research reports, publication costs, etc.
 - Consulting services
 - Salary support for faculty, undergraduate students, non-technical staff

** Research staff to be supported by salary must be identified in the application*

STAIR and DIAL Grant: Timeline

- Launch: January 28, 2020
- **Application deadline: March 3, 2020**
- Notice of award: Anticipated mid-June, 2020
- Disbursement of funds: Anticipated July-August 2020
- Awardee Showcase: Anticipated early-to-mid May, 2021
- Project period: Maximum of one year from funds disbursement date

Review Criteria (Slide 1 of 2)

- Fit with program objectives and eligibility
 - Stage of technology or project relative to potential commercialization
 - Unlikely to be eligible for existing federal or other grant funding
- Technical Merit
 - Scientific/ technical competencies of the team
 - Clarity of description of proposed work and anticipated results
 - Prior proof-of-concept or other enabling research results supporting the work

Review Criteria (Slide 2 of 2)

- Budget, Milestones, and Timelines
 - Justification for achieving project objectives, given the available financial and technical resources identified or anticipated?
 - Justification of timeline presented for achieving the proposal's objectives
- Commercial Potential
 - Demonstrated awareness of steps, challenges, stage-gates and value-generating milestones to move technology towards commercialization
 - Description of potential product or service and end-user served
 - Description of IP status of technology and any concerns (not applicable for DIAL Grant)

STAIR and DIAL Grant Award Requirements (Slide 1 of 2)

- Mentor Engagement
 - Prior to grant fund disbursement, awardees must meet with assigned mentor (facilitated by Venture Catalyst)
 - Researcher and mentor agree upon current existing research plan, or develop proposed modifications to project
 - Funding disbursed upon sign-off by Venture Catalyst related to project milestones, budget, and timelines
 - Quarterly meetings, facilitated by Venture Catalyst
- Progress Report
 - 6 months and 1 year from date of funds disbursement
 - Timeline for milestones will be agreed upon at time of funding

STAIR and DIAL Grant Award Requirements (Slide 2 of 2)

- Presentation of STAIR Awardee Showcase
 - Planned for early-mid May, 2021
 - Presentation of approximately 10 minute presentation, with 5 minute Q&A
 - Overview of original project and project design
 - Experiments performed and results
 - Obstacles or unexpected developments that you addressed
 - Next steps for the project/technology
- Participation of Team in an Entrepreneurship Academy
 - Entrepreneurship academies are managed by UC Davis Institute for Innovation & Entrepreneurship or equivalent program

QUESTIONS?

Mike Lemcke

Program Manager – STAIR and DIAL Grants

mlemcke@ucdavis.edu

Contact stairgrant@ucdavis.edu with any questions about the program and application process

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Previous STAIR Grant Award Winners: 2018-19

	<p>Peter Havel, professor, Department of Nutrition and Molecular Biosciences “Validation and Development of Natural Products as Triglyceride Lowering and Cardiovascular Protective Therapeutics”</p>
	<p>Stuart Meyers, professor, Department of Department of Anatomy, Physiology and Cell Biology “A Novel Method to Improve Salmonid Aquaculture</p>
	<p>Alyssa Panitch, Edward Teller Professor, Department of Biomedical Engineering, and executive associate dean, College of Engineering “Therapeutic Development to Improve Outcomes Following Myocardial Infarction”</p>
	<p>Jamie Peyton, chief of service, Veterinary Medical Teaching Hospital “Novel Fish Skin Bandages for Treatment of Partial and Full Thickness Wounds”</p>
	<p>Venkatesan Sundaresan, professor, Department of Plant Biology and Department of Plant Sciences “Developing Clonal Hybrid Seeds in Maize”</p>
	<p>Allen Van Deynze, director of research at the Seed Biotechnology Center and associate director of the Plant Breeding Center, Department of Plant Sciences Enabling Mechanical Harvesting of Peppers</p>

Previous STAIR Grant Award Winners: 2017-18



Anne Britt, Professor, Plant Biology, College of Biological Sciences: “A novel method for rapid and efficient genome editing in tomato” (*funding provided by and UC Davis College of Biological Sciences*)



Robert Fairclough, Emeritus Associate Professor, Department of Neurology, School of Medicine: “Novel antigen-specific myasthenia gravis (MG) therapeutic biologics”



Soheil Ghiasi, Professor, Department of Electrical and Computer Engineering, College of Engineering: “Restoring the sense of bladder fullness for individuals living with spinal cord injury”



Chen Gilor, Assistant Professor, Department of Medicine & Epidemiology, School of Veterinary Medicine: “Oral delivery of insulin encapsulated in synthetic HepE nanoparticle”



Dennis Hartigan-O'Connor, Associate Professor, Department of Medical Microbiology and Immunology, School of Medicine: “Viral IL-10 deleted RhCMV vectors for cancer immunotherapy”



Yoshikazu Takada, Professor, Department of Dermatology, School of Medicine: “Development of antagonistic CD40L mutants as therapeutics for chronic inflammation”

Previous STAIR Grant Award Winners: 2016-17



Johnathon Anderson, Assistant Professor, Department of Internal Medicine, School of Medicine: “Novel Therapeutic Platform to Treat Inflammatory Diseases”



Paul Henderson, Associate Adjunct Professor, Department of Internal Medicine, School of Medicine: “Improvement of Chemotherapy with Oomnicoxib”



Lee Miller, Associate Professor, Neurobiology, Physiology and Behavior, College of Biological Sciences: “Clinical Feasibility of Patent-Pending EEG Assessment in Hearing Impaired Listeners”



David Olson, Assistant Professor, Chemistry, College of Letters & Science: “Dimethyltryptamine-Levoamphetamine Hybrids as Plasticity-Promoting Treatments for Neuropsychiatric Diseases”




Lin Tian, Assistant Professor, Biochemistry & Molecular Medicine, School of Medicine: “Illuminating Conformation Dynamics of GPCRs: A Novel GPCR Drug Discovery Paradigm”



Yu-Jui Yvonne Wan, Professor and Vice Chair of Research, Department of Pathology and Laboratory Medicine, School of Medicine: “Combined Retinoid and HDAC Inhibitors in Metabolic Disease Treatment”

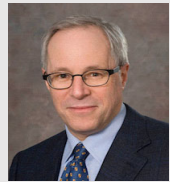
DIAL Grant Award Winners: 2016-17

	<p>Abhijit Chaudhari, Associate Professor, Department of Radiology, School of Medicine: <i>Development and Validation of a Texture Analysis for OsirisX</i></p>
	<p>Maurice Pitesky, Assistant Specialist in Cooperative Extension, Development of Population Health & Reproduction, School of Veterinary Medicine: <i>Linking Poultry Food Safety, Production Efficiency, Poultry Welfare and the Internet of Things via a Novel Web-App</i></p>
	<p>Petre Janata, Professor, Department of Psychology, College of Letters & Science: <i>Music-Evoked Autobiographical Memory Central (MEAMCentral)</i></p>
	<p>Nelson Max, Distinguished Professor, Department of Computer Science, College of Engineering: <i>Augmented Reality Multi-Player Quadcopter Game System</i></p>
	<p>Lisa Miller, Professor, Human Ecology, College of Agricultural & Environmental Sciences: <i>Gamification of an Educational Tool to Increase Nutrition Literacy Skills and Promote Healthy Food Choices</i></p>

Previous STAIR Grant Award Winners: 2015-16



Gino Cortopassi, Professor, Molecular Biosciences, School of Veterinary Medicine: “Small molecule Shc inhibitors to combat pediatric NAFLD and diabetes”



Richard Levenson, Professor and Vice Chair, Department of Pathology and Laboratory Medicine, School of Medicine: “Snap-shot spectral camera with applications in bio-medicine, agriculture, manufacturing and remote sensing”



Kai Liu, Professor, Department of Physics, College of Letters & Sciences: “Magnetic skyrmions for future nanoelectronics”

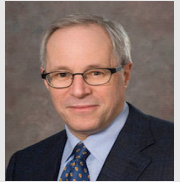


Tony Simon, Professor, Psychiatry & Behavioral Science, School of Medicine: “Expanding and evaluating the prototype of a neuro-therapeutic video game”

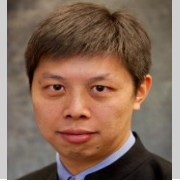
Previous STAIR Grant Award Winners: 2014-15



Wenbin Deng, Associate Professor, Department of Biochemistry and Molecular Medicine: “A Drug Candidate for the Treatment of Multiple Sclerosis”



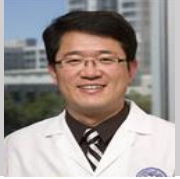
Richard Levenson, Professor and Vice Chair, Department of Pathology and Laboratory Medicine: “Deep UV Surface Excitation Microscopy (MUSE)”



Tingrui Pan, Assistant Professor, Department of Biomedical Engineering: “Wearable Pressure Sensor for the Management of Chronic Venous Disease”



John Voss, Professor, Department of Biochemistry and Molecular Medicine: “A Novel Approach for Early Detection of Alzheimer’s Disease”



Aijun Wang, Assistant Professor, Department of Surgery: “A Sutureless Artificial Graft for Arterial Replacement”

Previous STAIR Grant Award Winners: 2013-14



Kyria Boundy-Mills, Department of Food Science and Technology: “Structure and activities of biosurfactants produced through a renewable, yeast-based, reduced cost process”



Charles Hunt, Department of Electrical and Computer Engineering: “Low-Cost, High-Quality Energy-Efficient Light Sources using FEL”



Mark Mascali, Department of Chemistry: “Simple, High-Yield Production of Gasoline and Renewable Polymers from Biomass”



Jared Shaw, Department of Chemistry: “A New Class of Antibiotics for Treating Infections Resistant to Current Therapies”