## WYOMING NSF ART PROGRAM Seed Translational Acceleration Of Research Project Awards

#### Summary

Letters of Intent Due:	April 30 2025	Invitation for Proposal Due:	May 15, 2025	
Proposal Due Date:	June 12, 2025	Project Start Date:	July 18, 2025	
Maximum Award:	\$100,000			
Project Period:	Up to One (1) Year			
Number of Awards:	Up to Four (4)			
Commercialization:	Validated commercial potential and/or industry engagement required			
Letter of Support:	From either the technology transfer office or a corporate partner			
Detailed Instructions:	See Sections 3-10, plus attachments			

#### Synopsis

Funding for the Wyoming ART Seed Translational Acceleration of Research (STAR) Project awards is provided under the "Accelerating Research Translation" (ART) award from the National Science Foundation (NSF). The NSF seeks to accelerate the pace of translational research at U.S. Institutions of Higher Education (IHEs). The University of Wyoming is among the first cohort of NSF ART awardees.

Specifically, the goal of the ART program is to build translational research capacity and infrastructure for U.S. IHEs and to enhance their role in regional innovation ecosystems. STAR Projects are a core component of the ART program. STAR awards provide funding for projects with strong commercial potential and industry support that can be completed in one year and to serve as a mechanism for translational research training and capacity building.

The leadership and core project members of each STAR Project selected will be required to participate in the NSF ART Ambassadors program. NSF ART Ambassadors are advocates and mentors for research translation and will work together as a team to help build capacity, accelerate and scale translational and use-inspired research activities, and institutionalize a culture that recognizes and promotes such activities at the University of Wyoming.

#### **Program Requirements**

#### 1. Introduction

Early-stage innovations require sufficient development to determine and then attain translational viability. Funding for this type of development is difficult to obtain, and until the advent of the NSF ART program, was made available only at IHEs with sufficient financial capacity to provide internal funding.

The STAR program provides both funding and training **to accelerate the translation** of University of Wyoming (UW) innovations for public use and benefit.

STAR awards will provide UW's entrepreneurial and creative community with funds to support further

development of innovations having the potential to significantly impact society through utilization or commercialization. STAR funds can be used to prototype, scale, or otherwise advance or de-risk innovations, making them more attractive to potential commercial partners. As a note, "innovations" are broadly defined to include results from all fields of research, as well as creative and artistic works. Proposals will be evaluated on a competitive basis using on the criteria provided in Attachments B and D. STAR awards are time-limited, milestone-based, and awarded for applied projects designed to advance the innovation described in the proposal. A strong emphasis will be placed on innovations that have already made significant progress toward commercialization.

# Grant funds must be used to increase the technology readiness level of innovations or concepts with the goal that it be viable for industry or public use by the end of the funding period.

Guidance on the STAR application process will be provided by the UW Technology Transfer Office and/or designated ART Ambassadors.

### 2. Definitions

"**Competitive Advantage**" means a distinct trait or set of traits which set an innovation apart from competitors such as more efficient cost parameters, greater availability to target audience, high barriers to entry for competitors, or the ability to displace a clear market leader or enter a space with no clear market leader.

"**Proof-of-Concept**" means that the principal investigator has provided evidence that this innovation has moved past an abstract idea, and has made significant progress towards an actual product, where the evidence shows that the idea is feasible and may be used in its target marketplace for its stated purpose.

"**Societal Need**" means that an underserved market need or component of society would benefit from the furtherance of this innovation such that an element of service or altruism is added to the category of market size and may balance a smaller market share.

"**Technology Readiness Level (TRL**)" means the measurement system that assesses the maturity of a particular innovation. (See chart below.)

Technol	ogy Readiness Level Definition
TLR 1	Basic Research: Initial research conducted. Principles are qualitatively postulated
	and observed. Focus is on new discovery rather than applications.
TLR 2	Applied Research: Initial practical applications are identified. Potential of material or
	process to solve a problem, satisfy a need, or find application is confirmed.
TLR 3	Critical Function or Proof of Concept Established: Applied research advances
	and early-stage development begins. Studies and laboratory measurement validate
	analytical predictions of separate elements of the technology.
TLR 4	Lab Testing/Validation of Alpha Prototype: Design, development and lab testing of
	components/processes. Results provide evidence that performance targets may be
	attainable based on projected or modeled systems.
TLR 5	Laboratory Testing of Integrated/Semi-integrated System: System component
	and/or process validation is achieved in a relevant environment.
TLR 6	Prototype System Verified: System/process protypes demonstration in an

	operational environment (beta prototype system level).
TLR 7	Integrated Pilot System Demonstrated: System/process prototype demonstration in
	an operational environment (integrated pilot system level).
TLR 8	System Incorporated in Commercial Design: Actual system/process completed
	and qualifies through test and demonstration.
TLR 9	System Proven and Ready for Full Commercial Development: Actual system
	proven through successful operations in operating environment, and ready for full
	commercial deployment.

"Value Proposition" means the benefit to a potential consumer of this innovation that shows a dramatic improvement over the current state of the art such that the innovation will meet the consumer need in a more efficient or effective manner.

### 3. Eligibility

Who is eligible to apply:

• UW Innovators who are full time UW employees (this includes post-doctoral fellows) in any discipline.

Other eligibility information:

- UW innovators with existing STAR awards may not apply for additional STAR awards until the existing STAR awards have been closed and requirements completed.
- Proposals must include involvement of graduate students and/or postdocs in the research. Undergraduate students may be included in cases where no graduate students or postdocs are available.
- Proposals for basic research are *not eligible* for STAR funding.
- UW innovators may only submit one proposal as the PI per funding cycle.
- A proposal to develop a UW innovation that has been licensed is not eligible for a STAR award **unless the licensee commits to a cost share.**

#### 4. TTO Letter of Acknowledgement

Each invited applicant for STAR funding must include a letter from the Technology Transfer Office. The letter must contain:

- a. A statement regarding the disclosure status of the technology. Specifically, whether the innovation has or has not been disclosed to the Technology Transfer Office (*this does not diminish the likelihood of funding*)
  - i. If it has been disclosed, a statement that the technology is under active management and has not been abandoned or otherwise relinquished.

- b. A statement on the commercialization status of the technology:
  - i. Not Licensed if the innovation is not licensed, or is not the subject of negotiations for licensing, or otherwise encumbered in a manner that would prevent commercial utilization.
  - ii. Licensed or the Subject of Licensing Negotiations if the technology is licensed or the subject of licensing negotiations, indicate status and state the level of support that will be provided by the licensee (or potential licensee)
  - iii. Industry Collaborations if there is prior, current, or pending industry sponsored research provide details, including name of sponsor and amount of funding provided.
- c. Details on any materials that were used in the development of the innovation that were provided under a Materials Transfer Agreement or otherwise received from an entity outside of UW.
- d. A description of the steps that have been or will be taken protect intellectual property associated with the innovation.

### 5. Commercialization Requirements and Industry or TTO Letters of Support

All Proposals must be accompanied by an industry or TTO letter of support to validate commercial viability of the project, by indicating one or more of the following:

- a. Existing industry engagement via sponsored research or a license
- b. Industry interest in the outcomes of the proposed project and the applications of those outcomes in addressing a problem.
- c. Industry commitment to provide financial support to the project
- d. Commercial validation of the project by the TTO identifying potential commercial partners.

Proposals with an industry commitment will receive preference.

#### 6. Award Description

Number of Projects Funded:	Up to Four (4) new projects will be funded
Maximum Funding:	Up to \$100,000 for one year (inclusive of indirect costs)
Supplemental Equipment funding:	A separate request for equipment as a supplement should be attached to the proposal. A total of \$50,000 per year is available and will be allocated on a competitive need basis taking into account the availability of similar equipment on the campus. (Contact the TTO for more details.)
Allowable Costs:	<ul> <li>a. Supplies, travel, and professional services that can be justified as necessary for further support of development of the innovation.</li> <li>b. Salaries for post-doctoral fellows and salaries and tuition for</li> </ul>

	graduate research assistants. c. Salaries for principal investigator.
Unallowable costs:	F&A costs, graduate student tuition remission.
Disbursement of Funds:	Fifty percent (50%) of funds will be disbursed at the start of the award, with the remainder disbursed after receipt of the second quarter report and a determination of sufficient progress towards completion.
	The proposal must outline development milestones that will be achieved over the duration of the project.
Note:	If a substantial part of the budget is for salary and associated fringe support for the principal investigator, it <b>may</b> decrease the priority of the application for funding, depending on the

### 7. Application Process

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circumstances of a proposed project.

- a. Letter of Intent: A brief letter of intent describing the project needs to be submitted to the selection committee. The template for the letter of intent can be found in Attachment A. The selection committee will review the letters of intent received and will invite proposals to be submitted for funding.
- b. Info Ready Review: The proposal and the Budget to be uploaded to Info Ready Review and be submitted electronically through University of Wyoming's Research Services Office and the associated budgets must be reviewed and approved by the Research Services Office.

## 8. Duration of award

Each STAR project must be completed within a maximum of twelve (12) months. One no-cost extension will be considered only upon request with sufficient justification and documented evidence of continued progress towards defined project milestones. The extension must be requested prior to the expiration of the project period to be considered. Only in exceptional circumstances will an additional extension be allowed.

#### 9. Reports

Proposals should include milestones that will be achieved as detailed in the attached proposal template (Attachment B) and accompanied by a detailed budget (Attachment C).

Quarterly technical and financial progress reports are required. Reports should document progress towards the stated objectives of the proposal and milestones met.

#### 10. Proposal Review Process

- a. Letters of Intent and Proposals must be submitted on the dates identified above.
- Each LOI will be reviewed according to the scoring rubric in Attachment A. PIs submitting LOIs will be notified as to whether they are invited to submit full proposals within fourteen (14) business days of the submission deadline. Scores and comments will be shared with the PIs.
- c. Full proposal funding decisions and will be made and PIs notified within thirty (30) business days after the submission deadline.
- d. All proposals will be scored by external reviewers on criteria related primarily to commercial utilization, technical merit, and societal impact as outlined below. The scoring sheet is provided in Attachment D.
- e. The four (4) highest scoring projects will be funded.
- f. Should a proposal not be funded, the PI can choose to resubmit the proposal in subsequent funding rounds taking in to account the reviewers' comments in the next cycle of funding.

## Attachment A: Letter of Intent Template

#### Project Title Principal Investigator (PI) PI contact information: email and phone number

Section I: Identify the Project Team

Name	Position / Title	Expertise	Project Role

Section II: (500 words)

Explain your innovation or concept and, competitive advantage over what is currently available, and the unmet need that it will address.

Section III: (300 words)

To what extent does the proposed project address a critical step or milestone needed to advance a research discovery toward commercial development?

Section IV: (300 words)

How strong is the likelihood that the innovation or concept will be advanced sufficiently in order to be utilized, licensed, or deployed at the end of the funding period?

Section V: (300 words)

Provide details about industry engagement or interest in the development of the product.

#### Scoring for the Letter of Intent

	Low		Maximum
	(0 Points)		(10 Points)
Section I			
Team Capabilities			
Section II			
Innovation			
Description &			
Unmet Need			
Section III			
Likelihood of			
Increased TRL			
Section IV			
Likelihood of			
Utilization or			
Licensing			
Section V			
Level of industry			
engagement			

## Attachment B: Proposal Template

#### Page 1: Cover Sheet

Proposal Cover Sheet

- a) Project Title:
- b) UW Tech ID (if available):
- c) Principal Investigator(s):
- d) Research Team Members:
- e) Department:
- f) Phone Number:
- g) Email:
- h) Funds Requested: \$

### Abstract (250 words maximum):

Provide a clear description, in lay terms, of the essential research that will be performed to prove the concept, along with the potential impact of the innovation if successfully completed. This section should highlight the steps needed to increase the likelihood commercial utilization.

### Page 2: TTO Letter

Letter of Acknowledgement from Campus Technology Transfer Officer, 1 page maximum, see Section 4 above for required details.

#### Page 3: Industry Letter of Support

Provide a letter of support from industry. Alternately, a letter of commercial viability may be provided by the TTO

#### Pages 4-9: Project Plan

- a) 6 pages maximum
- **b)** It is strongly advised to follow this format in drafting the Proposal. All confidential items should be marked "Confidential."

#### **Opportunity – 50 points possible**

- a. Technology Readiness Level: What is the current TRL and what level is projected at the conclusion of the project period?
- b. Market Need: Is there an obvious need for products derived from the technology?
- c. Value Proposition: does the proposal accurately describe the advantages over currently available products, (e.g. faster? better? cheaper?) and how this product will benefits users?
- d. Societal Impact: What is the putative product's potential societal impact or benefit?
- e. Competition: Are competitive technologies or products already available in the marketplace?

#### Technical Merit – 40 points possible

- a. Proof of Concept or Prototype: is achieving proof of concept or creating a prototype attainable and does the budget appear to be sufficient to fulfill the project goals during the project period?
- b. R&D Plan: Is the R&D plan, i.e. scope of work, aims, and milestones feasible?
- c. Product Viability: Will additional technologies have to be invented/acquired in order to enable and productize the innovation?

#### Marketability – 50 points possible

- a. Range of Applications: will the innovation give rise to one product or have the potential to result in several products? Does the proposal describe such products?
- b. Market size: what is the market size worldwide? In the US?
- c. Market Timeline: does the proposal describe a realistic timeline for introducing a product into the marketplace?
- d. Potential Partners: Has an industry partner or potential licensee been identified? Does the proposal contain details of this?
- e. Who will be the ultimate buyer/user of the innovation?

#### Outcomes - 30 points possible

- a. Time to Prototype or Proof of Concept: Can the innovation be prototyped and/or the concept proven during the project period?
- b. Barriers to Acceptance: Does the proposal discuss what barriers to commercialization may exist, e.g. reluctance to adopt new products or technologies? High cost of converting or building manufacturing facilities? Can the product be manufactured and priced so a company can make a profit?
- c. Next steps on the path to commercialization: Does the proposal indicate what the next steps toward creating a product are, e.g. optimization, scale-up, manufacturing, regulatory, pre-clinical/clinical studies?

#### Page 10: Biosketch(es)

Biographical sketch, 1 page maximum for each key person.

#### Final 2 Pages: Budget and Budget Justification

Use template in Attachment C.

#### NOTE: THE APPLICATION MUST BE SUBMITTED AS ONE PDF FILE

## Attachment C: Budget and Budget Justification

Project Duration: 12 Months

All budgets must be reviewed and approved by University of Wyoming Research Services

Project Title:

Tech ID:

Principal Investigator(s):

### Requested Funds

Α.	Supplie	Supplies		
В.	Equipr	Equipment		
C.	Travel	Travel		
D.	Profes	Professional Services		
	1.	Subcontracts		
	2.	Consultants		
	3.	Other Services		
E.	Other Charges			

- F. Salaries and Wages
- G. Fringe Benefits
- H. Total Project Costs

Authorized Representative Research Services Date

## **Budget Justification**

Attach Detailed Budget Line-Item Justification and Vendor Quotes

## Equipment Budget and Justification

The equipment budget and justification must be submitted separately from the project budget.

### Attachment D: Scoring Rubric for Reviewers

#### **Opportunity – 50 points possible**

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