

# UNLV Sports Research & Innovation Initiative

## Catalyst Grants Request for Proposals (RFP)

### FALL 2020 – Timeline & Deadlines

PI Letter of Intent Submission Deadline	Tuesday, September 1, 2020
Letter of Request to PI to Provide Full Submission	Friday, September 11, 2020
Full Proposal Submission Deadline	Thursday, October 8, 2020 (12:00 Noon PT)
Expected Notification of Awards	Thursday, October 22, 2020
Award Period	Target Beginning January 1, 2021

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Questions about the Sports Research & Innovation- Research Catalyst Grant Program should be directed to the UNLV Office of Economic Development: Zach Miles, [zach.miles@unlv.edu](mailto:zach.miles@unlv.edu), 702-895-5200

## 1. Sports Research & Innovation Initiative- Catalyst Grant Overview

The UNLV Office of the Vice President of Research and Economic Development (“VPR”) is pleased to announce a call for proposals in the Sports Research & Innovation- Catalyst Grant Program (the “Catalyst Grant” or the “Program”). This Program is supported by the Nevada Governor’s Office of Economic Development (“GOED”) through its Knowledge Fund initiative. During Fall 2020, there will be two different types of awards as detailed in this RFP. These funding awards will be made to seed promising research and development in areas of sports research and innovation where UNLV has the greatest potential to impact the local economy through research, development, and commercialization activities.

The Sports Research and Innovation Initiative’s purpose is to: 1) generate new products and services to the sports industries using interdisciplinary approaches; 2) partner with and grow Nevada-based companies with real-world opportunities for UNLV faculty, students and graduates; 3) attract new companies to Nevada to diversify the economy with sports and its parallel industries; and 4) conduct cutting-edge interdisciplinary research with UNLV with the translation of research to improve population health outcomes and reduce health disparities in Nevada and beyond. All grants provided under this program support these purposes.

## 2. Award Types

The Catalyst Grant program may award two different types of awards under this round of the program. The Proof of Concept Grants (“POC Grants”) are intended to fund earlier-stage projects with existing intellectual property (“IP”) that is created at and owned or controlled by UNLV. The Product & Service Development Grants (“PSD Grants”) are intended to support and to foster development of products and services further along the continuum toward commercialization and requires an industry partner. PSD Grant proposals may focus on products and services already under development by an Industry Sponsor.

The Catalyst Grant Program was created with an understanding that many projects initially seeded by these catalyst grants, as well as other opportunities, may benefit from funds focused on development. While catalyst grants rely on both internal and external scientific review, PSD Grant awards may utilize serial entrepreneurs and investors, in addition to scientific reviewers, to help judge projects most appropriate for grant funds.

Proposals may span research from proof-of-concept (with existing IP) through market development stages. Two award types are offered under this program: POC Grants and PSD Grants, as described below:

	<b><i>Proof of Concept Grants</i></b>	<b><i>Product &amp; Service Development Grants</i></b>
<b>Objective:</b>	Proof of concept	Prototype or commercial milestone
<b>Review:</b>	Review by leading scientists (internal and external)	Reviewers include industry/investors
<b>Intellectual Property:</b>	Potential or existing IP	Preferred but not required
<b>Emphasis:</b>	Scientific aims that support commercial case	Business case
<b>Commercial:</b>	Strong commercial potential	Go-to-market plan
<b>Award Amounts:</b>	Typically \$25,000 to \$50,000	Up to \$100,000
<b>Industry Match</b>	Not Required	Required 1:1 cash match

## A. Proof of Concept Grants (POC Grant)

Proof of Concept Grant projects must propose research and development activities for technologies or products on the brink of commercialization or licensing that must overcome a specifically identified hurdle. *It is a requirement of the program that the proposed work be directly related to an active intellectual property matter with the UNLV Office of Economic Development (“OED”).* Such a requirement is supported as a statutory metric of the Knowledge Fund program. This may include an invention disclosure already submitted to OED, a new invention disclosure related to the proposal (new disclosures should be submitted in advance of the proposal submission deadline), an active patent application (provisional or utility application), an issued patent managed by OED or an active copyright matter.

New invention disclosures should be submitted to OED on an approved form that can be found at <https://www.unlv.edu/econdev/disclose-invention>

### Focus Areas & Funding Priorities:

- Biomedical Engineering – including biomedical imaging
- Military Health & Performance
- Sports Betting
- Sports Performance & Recovery
- Sports Psychology
- Gender-Based Performance & Training
- Sports Safety – including software, devices, and sensors
- Materials – including advanced nano-materials
- Nutrition & Supplements
- Physical therapy and rehabilitation
- Healthcare – including software applications
- Esports
- Innovation Accelerator Partnerships – projects that leverage the resources of the newly opened Black Fire Innovation
- Other – other program areas may be considered based on well demonstrated commercial partnerships and ability to advance sports innovation and economic development regionally.

The successful outcome of the proposed activities should result in the technology being licensed or spur the development of a startup company. In addition to appropriate technical details, applicants must describe a clear path to commercial development, market potential and significant impact of funding on advancement to commercialization for their projects.

Projects solicited under this program may include:

1. The building of a prototype or second iteration prototype to prepare for commercialization.
2. Commercial feasibility tests.
3. Research to demonstrate mitigation of risk for potential licensees.
4. Research to address a specific gap identified by an industry that impairs the ability to attract capital.

A POC Grant:

- Provides funding for projects where IP related to the proposal has been disclosed to the OED.
- Is awarded on a one-time basis only.
- Provides funding for up to one-year maximum.
- Provides funding for work that is not currently supported by, or not eligible for, other sources of funding.

## **B. Product & Service Development Grants (PSD Grant)**

Product & Service Development Grants provide funding through a competitive process that is a simple mechanism intended to support new collaborations between UNLV faculty and an industry partner (an “Industry Sponsor”) for a one-year period. UNLV researchers will apply to receive matching funds, up to \$100,000, to conduct research with, or on behalf of, the Sponsor, dollar-for-dollar to those cash funds supplied by an Industry Sponsor. Priority is given (a) to proposals focused on a product or service that can deploy within one year of the completion of the project, and (b) include Industry Sponsors that have a business presence in Nevada.

A PSD Grant:

- is awarded on a one-time basis only; and
- is supported by a sponsored research agreement with, one or more eligible Industry Sponsors.

The maximum total cash amount of the PSD grant is \$100,000. The minimum allowable Industry Sponsor cash contribution for grants is \$20,000. For clarity, this PSD Grant only matches financial/cash committed by an Industry Sponsor. Industry Sponsor in-kind matches or commitments will **not** be considered.

## **3. Focus Areas**

The Program is designed to focus on areas where UNLV has the greatest potential to impact the local economy through research, development and commercialization activities including science, psychology, athletics, engineering, and many additional disciplines related to sports and sports innovation. The program seeks to emphasize research areas that complement regional capabilities, including:

- Biomedical Engineering – including biomedical imaging
- Military Health & Performance
- Sports Betting
- Sports Performance & Recovery
- Sports Psychology
- Gender-Based Performance & Training
- Sports Safety – including software, devices, and sensors
- Materials – including advanced nano-materials
- Nutrition & Supplements
- Physical therapy and rehabilitation
- Healthcare – including software applications
- Esports

- Innovation Accelerator Partnerships – projects that leverage the resources of the newly opened Black Fire Innovation
- Other – other program areas may be considered based on well demonstrated commercial partnerships and ability to advance sports innovation and economic development regionally.

#### 4. Catalyst Grant Outcomes

The success of the Catalyst Grant Program is measured in five areas: research and scholarship, intellectual property, corporate partnerships, startup companies, and general economic indicators. These areas provide both leading indicators and final outcome measures related to economic development.

- **Research and Scholarship** – measures include peer-reviewed publications and the ability to attract follow on funding. These measures demonstrate the basic strength of UNLV’s research program which is important to attracting partner companies as well as the best and brightest faculty and students.
- **Intellectual Property** – Intellectual property measures (including invention disclosures, patent applications and issued patents) provide a measure of the generation of ideas which are a key driver for economic development.
- **Corporate Partnerships** – measured through partner meetings and corporate sponsored research contracts that are fostered by catalyst grants.
- **Startups** – measures include business plans, option agreements, license agreements, and small business innovative research (SBIR) grant applications.
- **Economic Indicators** – Economic measures indicate the impact on our community and region and include:
  - Companies relocating to Nevada as a result of a funded project
  - Total number of jobs created
  - Degree of workforce training and development
  - Number and revenue of products or services commercialized

#### 5. Eligibility Criteria

Catalyst Grants are open to all fields of research in which the proposed project fulfills the goals and funding priorities of the program outlined above, and which are identifiable to the VPR as commercially relevant to sports innovation. Applicants are encouraged to consult with the UNLV OED about the project’s appropriateness and eligibility for this opportunity.

*Proposals to fund pharmaceutical/drug clinical trials are not eligible.* Medical device/technology testing, if feasible within program funding limits, timelines, and other guidelines, may be proposed.

The following are not eligible for funding under this program:

- Proposals to fund basic research or theoretical development, or to generate models, new data, or assess the feasibility of a technology
- Projects requiring more than one year
- Renewals for projects funded in the last Catalyst Grant cycle

## Applicant Eligibility

Any researcher, faculty or staff member at the University of Nevada, Las Vegas is eligible to apply.

### **A. Additional Eligibility Requirements – POC Grants**

#### Intellectual Property

*It is a requirement of the program that the proposed work be directly related to an active intellectual property matter with the OED.* Such a requirement is supported as a statutory metric of the Knowledge Fund program. This may include an invention disclosure already submitted to OED, a new invention disclosure related to the proposal (new disclosures should be submitted in advance of the proposal submission deadline), an active patent application (provisional or utility application), an issued patent managed by OED or an active copyright matter.

All intellectual property (IP) related to the proposal must have been disclosed to the UNLV OED and must be identified in the proposal by UNLV Tech ID and title. During the review of proposals, the OED may provide information to reviewers describing any marketing efforts for the IP, any prior obligations that might encumber the IP, and include a statement indicating that project completion would overcome a barrier towards commercialization. This information will be considered, along with the rest of the application materials, in the review and evaluation of the proposals.

IP related to the proposal must be assigned to UNLV and be available for licensing (i.e. not subject to prior obligations, such as existing license, sponsored research agreement, ongoing collaboration with an industrial partner, or ongoing licensing negotiation). Existing IP cannot be jointly owned with a commercial entity. If IP is jointly owned with an academic institution or non-profit, there must be an inter-institutional agreement in place and UNLV must have the lead role in commercializing the technology.

Intellectual property resulting from the research must be assignable to UNLV.

### **B. Additional Eligibility Requirements - PSD Grants**

#### Industry Sponsor Participation Criteria

In order to participate in the PSD Grant program, Industry Sponsors must meet both the eligibility criteria and application requirements outlined below. Please note specific guidelines for start-up companies.

#### **I. Industry Sponsor Eligibility**

A participating Industry Sponsor must be a *for-profit company* and must satisfy the requirements for at least one category described below.

##### Category 1. Nevada Headquartered

A for-profit company headquartered in Nevada and registered with the Secretary of State.

##### Category 2. Nevada R&D or Manufacturing Division

A division of a for-profit company located in Nevada that performs research and development or manufacturing relevant to the proposed project and is registered with the Nevada Secretary of State.

**Category 3. *Proposed Research of Potential Demonstrable and Unique Benefit to Nevada***

A for-profit company (to which criteria 1 or 2 do not apply) proposing to sponsor research that holds strong potential to demonstrably and uniquely benefit the Nevada economy, its industry, and its public. To demonstrate this criterion, applicants may provide, for example, a letter of endorsement of the research project from a Nevada industry-specific or regional economic development group.

**Start-up Companies -- Additional Application Requirement:**

Start-up companies must provide a detailed business plan demonstrating their intent to develop research and development or manufacturing operations in Nevada.

**II. Industry Sponsor Application Requirements:**

As part of the application, Industry Sponsors must provide a Letter of Intent. The amount of the company's cash contribution and a commitment to execute UNLV's standard commercial sponsored research agreement as described in the Application Instructions (Appendix A) and must designate the following personnel to the project:

1. A Technical Liaison who is the Industry Sponsor's scientific counterpart to the UNLV principal investigator (PI), and whose expertise and role in the sponsoring company is relevant to the proposed project. The Industry Sponsor technical liaison may not be a member of the proposed UNLV project team.
2. A Financial Liaison who has the authority to make the financial commitment to the proposal and who acts as the Industry Sponsor's financial contact.
3. A Research Agreement/Gift Liaison who will serve as the point of contact with UNLV for execution of a standard Corporate Sponsored Research agreement or Gift Agreement in support of the grant.

## **6. How to Apply**

Submit all documentation, applications, and materials related to Catalyst Grants via email to [innovation@unlv.edu](mailto:innovation@unlv.edu). The subject line of the email must contain the PI Name and type of grant sought.

During Fall 2020, the POC Grant, the application process consists of two steps (steps 1-2 below). For the PSD Grant, the application process consists of three steps (step 1-3 below):

1. Submission of a Letter of Intent ("LOI"): Submission and approval of an LOI is required in order to submit a full proposal. LOI's are non-binding and used for administrative and review planning purposes. For this grant cycle, LOIs may be submitted beginning through Tuesday, September 1, 2020.

2. **Proposal Submission:** Upon approval of the LOI, applicants need to submit the full application. For Fall 2020 Cycle 1 applications, complete applications must be submitted by the deadline Thursday, October 8, 2020 (12:00 Noon PT). Applicants must adhere to the Application Instructions and guidelines. By submitting a proposal, the PI is attesting that the technology is unencumbered by prior obligations (e.g., obligations assumed under a consulting agreement).
3. **Industry Sponsor Letter of Intent to Fund:** An Industry Sponsor letter of intent must be submitted with the proposal. The amount of the company's cash contribution and a commitment to execute UNLV's standard commercial sponsored research agreement must be included. In cases of more than one industry sponsor, each sponsor must submit a letter of intent, the amount of the company's cash contribution and commitment to execute UNLV's standard commercial sponsored research agreement.

Full schedule and timeline for each grant cycle is as follows:

### Fall 2020 – Timeline & Deadlines

PI Letter of Intent Submission Deadline	Tuesday, September 1, 2020
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Zach Miles, [zach.miles@unlv.edu](mailto:zach.miles@unlv.edu), 702-895-5200

## 7. Review Criteria

Full proposals will be reviewed by internal and external reviewers as described above. Final recommendations for funding will be submitted to the UNLV Vice President for Research and Economic Development and will be made based on internal and external assessments and commercial assessment by the OED.

**Qualification Criteria:** Qualifying proposals must meet the following criteria:

- **Fields of Study** – As related to sports innovation; sciences, engineering, psychology, medicine, healthcare, or other areas identified above;
- **UNLV researchers** – the project is for UNLV-based research;
- **Funding period** – funding period shall be for up to one year;
- **Amount of funding** – project funding between \$25,000 and \$50,000 for POC Grants and up to \$100,000 for PSD Grants;
- **Intellectual property (POC Grants Only)** – research must relate to an active intellectual property matter with the UNLV OED (disclosure, patent application, or issued patent). Investigators who do not currently have an active matter should submit an invention disclosure in advance of the abstract submission.

- **Industry Sponsor Match (PSD Grants Only)** – a PSD Grant proposal must include a cash contribution from an Industry Sponsor supported with a Letter of Intent including the amount of the company’s cash contribution and a commitment to execute UNLV’s standard commercial sponsored research agreement.

**Programmatic/Commercial Criteria:** Qualifying proposals will be reviewed by the OED based on programmatic and commercial criteria. In keeping with the program’s goal of fostering economic development, review of the full proposal will be made based on the following criteria:

- **Intellectual Property** – current intellectual property (disclosure, copyright matter or patent application), the potential for future patents, freedom to operate, strength of potential intellectual property claims;
- **Market Assessment** – total market size, addressable market, other market dynamics including a well-defined path to market;
- **Licensing Potential** – potential licensees, assessment of license revenue potential;
- **Corporate Partnerships** – the potential for corporate partnerships and/or startups, tie-in with regional industrial clusters.

**Scientific Evaluation Criteria for Grant Applications:** Complete proposals will undergo scientific evaluation by both internal and external reviewers using criteria established for the UNLV Faculty Opportunity Awards program. Scientific reviewers will be asked to prioritize all reviewed proposals and rank proposals against national standards (top 10%, next 40%, bottom 50%).

- **Quality** – Excellence and novelty of the concept, approach, and methodology; clarity and appropriateness of project plans; desirability and impact of potential results on the national and international scholarly community;
- **Return** – Return on investment (ROI) through follow-on extramural funding or commercialization [expectation: 3X requested seed funding from external sources, the potential for intellectual property, licensing revenue, corporate partnerships, startup companies, and other commercial return measures];
- **Risk** – Availability of necessary skills and experience, the likelihood of achieving the intended outcomes; probability of securing extramural funding or engaging in commercialization; and potential for self-sustainability after the seed investment phase

**Nevada Benefit:** Complete applications will be reviewed for intended economic development impacts within Nevada as demonstrated by:

- Accelerating innovation and creating a path to commercialization of new technologies and products
- Increasing competitiveness of Nevada companies, by attracting greater investments and retaining jobs in Nevada
- Establishing the basis for founding new Nevada companies
- Identifying new solutions to problems critical to Nevada
- Creation of new jobs

**Investor Evaluation Criteria:** Complete applications may be reviewed by entrepreneurs, investors and/or scientific reviewers. These reviewers will be asked to rank the proposals based on the following criteria:

- **Commercial Return** – Ability of the project to advance a technology toward commercialization – through a key proof of concept, prototype development, cooperative research effort with a company or other means. Commercialization may be measured by the completion of a license agreement, the launch of a startup company or ability to secure outside investment.

## 8. Review of Proposals and Funding Decisions

Proposals will be reviewed in multidisciplinary panels including scientists as well as business experts and may include members of the investment community and/or Representatives of GOED. Review of proposals and technical and commercial progress made with Catalyst Grant awards may utilize serial entrepreneurs and investors in addition to scientific reviewers to help judge projects most appropriate use for grant funds.

Protected and confidential information should not be included in proposals. Although reviewers are required to sign a confidentiality agreement prior to the review, protected or proprietary information should not be included in proposals. Applicants are encouraged to avoid jargon and to prepare their proposals in a manner comprehensible to a general audience.

Applicants may submit the names of potential reviewers who are not affiliated with the applicant's laboratory. Applicants may request the exclusion of certain reviewers, and such requests must include a brief explanation/justification for such exclusion. The UNLV Office of Economic Development, will constitute the panels, assign reviewers, and make final determinations regarding panel composition. Reviewers will be asked to protect the confidentiality of proposals and are expected to disqualify themselves in cases of potential conflict of interest.

Review panels will evaluate proposals based on the scoring criteria and generate a rank-ordered list of applications that are recommended for funding.

Awards are subject to final approval by the Associate Vice President for Economic Development and are contingent on the availability of funding. Applicants can expect to receive notification of review outcome on Full Proposal Submissions on or around October 22, 2020.

Awards are contingent on the availability of funding.



## Project Deliverables:

*List technical milestones and scholarly and extramural deliverables. Include prototype development, key proof of concept tests, anticipated submissions of extramural funding applications, commercial partnership, invention disclosures and/or potential patent filing.*

- 1.
- 2.
- 3.

## Return on Investment:

**For Proof of Concept Grant Applications:** *Include any commercialization opportunities and potential for related sponsored research projects from corporate sponsors. List and barriers to commercialization that can be overcome with POC Grant funding. List sources of extramural funding (including agency title/type, total dollar amount, anticipated submission date) that will be enabled by this research.*

**Product and Service Development Grant Applications:** *Describe how the project will advance a technology toward commercialization – through a key proof of concept, prototype development, and cooperative research effort with an industry partner or other means. Commercialization may be measured by completion of a license agreement, launch of a startup company or ability to secure outside investment.*

## Intellectual Property: \_\_\_ - \_\_\_\_\_ UNLV Matter Number (5 digits. e.g., 19-022)

*Provide title (and four-digit OED reference) for the related Intellectual Property matter. If appropriate, please also provide a description of patent filing and status of intellectual property.*

**For POC Grant Applications:** *Existing IP matter is required. Emphasis is on potential or existing intellectual property.*

**For PSD Grant Applications:** *Existing IP matter is NOT required. However, preference will be given to those applicants with an existing related UNLV IP matter.*

## Customer Discovery and Commercialization:

*Provide a summary of customer discovery which may include the following information: who do you hypothesize is the customer for your technology (customer definition), what value do you potentially bring to that customer (value proposition), how do you define market segments and/or your archetype customer, which potential customers have you spoken to, and what did you learn from those conversations.*

*In addition to the customer discovery process, applicants may wish to describe the potential for commercialization through corporate partnerships, licensing, or start-up company. **For POC Grant Applications:** Emphasis may be on commercial potential. **For PSD Grant Applications:** Emphasis should be on discrete steps toward commercialization.*

## Budget:

[Insert OSP Budget form here]

## Budget Justification:

**For Catalyst Grant Applications:** *Describe the amount requested and provide a short rationale for type and amount of expenditures – including salary (RA's, graduate students, and summer salary), major purchases. Requests for summer salary must include strong justification. Note that tuition and fringe benefits must be included where appropriate. Overhead charges will not apply. A complete budget is required for this proposal; see budget instructions.*

## References:

NOTE: All Product and Service Development Grant Applications must include an “Industry Sponsor Letter of Intent to Fund”.

## Appendix B. PSD Grant Award Calculation

The Sports Research & Innovation- PSD Grant Program was developed as a mechanism to enable the University to share the direct costs of a meritorious research project with the private Industry Sponsor(s). PSD Grant awards support Industry Sponsored research and development of products and services.

Proposed In-kind contributions will **not** satisfy the required cash commitment of an Industry Partner.  
Industry Sponsor Cash Contributions

Allowable cash matching contributions:

- will be committed by an eligible Industry Sponsor specifically for the approved project and do not represent funds that would have come to UNLV under other programs or for other purposes. For example, funds awarded to UNLV for membership in an industrial affiliate or liaison program for research centers are ineligible as a matching contribution;
- must be expended within the period of the proposed project; and
- may not include state or federal flow-through fund sources.

The PSD Grant program will not award PSD grants that involve previous Industry Sponsors cash contribution currently in arrears for any ongoing or past Catalyst Grant(s) or any other sponsored research agreements with any NSHE institution.

## **Appendix C. Research Agreements and University Research Policy**

Central goals of the Catalyst Grant program are to incentivize new research partnerships and facilitate the prompt transfer of University-developed technology to the marketplace for public benefit. The University uses a standard Commercial Sponsored Research Agreement to accomplish these goals.

The Research Agreement will ensure that the Industry Sponsor contribution, when committed in the form of a grant or contract, is dedicated to the proposed research and that the matching contribution is not contributed as a subcontract that may carry obligations to a third party.

Research agreements in support of the proposal will be executed by the UNLV Office of Sponsored Programs.

Applicants are strongly encouraged, at the earliest possible time, to consult with the UNLV Office of Sponsored Programs (email: [ospcontracts@unlv.edu](mailto:ospcontracts@unlv.edu)) or the UNLV OED on the Commercial Sponsored Research Agreement.