



UNIVERSITY OF WISCONSIN-MILWAUKEE RESEARCH FOUNDATION
CATALYST GRANT PROGRAM
CALL FOR ABSTRACTS

JANUARY 30, 2023

The UWM Research Foundation is pleased to announce a call for proposals in the latest round of the Catalyst Grant Program. To date, this program has awarded more than \$5.58 million in grants thanks to support from the Lynde and Harry Bradley Foundation, the Richard and Ethel Herzfeld Foundation, the Rockwell Automation Charitable Corporation and GE Healthcare. These same projects have gone on to receive an additional \$29.8 million in additional follow-on funding. New this year is a focused gift from Clarios in the energy space.

Abstracts must be submitted to the UWM Research Foundation by **5:00 PM on Monday, February 28, 2023**. Summary of the program and an abstract template are available on the UWM Research Foundation website at <https://uwmrf.org/catalyst-grant-program/>.

Questions should be directed to the UWM Research Foundation:

Jessica Silvaggi jessica@uwmrf.org 414-906-4654

Erin Puro, erin@uwmrf.org 414-906-4659

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CALL FOR ABSTRACTS

Overview: The UWM Research Foundation is pleased to announce the latest call for proposals in the Catalyst Grant Program. This round is supported by the Lynde and Harry Bradley Foundation and the Richard and Ethel Herzfeld Foundation. These awards will be made to seed promising research and development in areas where UWM has the greatest potential to impact local economy through commercialization activities. Greater preference will be given to projects with a more accurate assessment of the submitted intellectual property’s market potential. Such information can be obtained through customer discovery processes such as NSF I-Corps (Innovation Corps), are sponsored by the UWM and UWM Research Foundation to assist researchers with their evaluations. Researchers that completed or are currently participating in the I-Corps site program using their Catalyst grant project idea will be automatically invited for a full Catalyst proposal.

The Milwaukee I-Corps site is currently accepting applications for the next cohort starting February 20th, 2023 (see <http://icorpsmilwaukee.org>). Researchers that have not participated in the I-Corps site, can learn about the process through seminars offered by the UWM Research Foundation; however, the site program will help researchers to conduct a more rigorous and in-depth look at the market. Applicants receiving a Catalyst Grant will be required to complete the I-Corps local program within one year of funding if they have not yet participated.

Award Types: The Catalyst Grant Program offers two different types of funding under this round of the program. In addition to catalyst projects to foster projects at their earlier stages, this round of the program may also make “Gap Fund” awards to foster development of projects further along the continuum toward commercialization. The different types of awards will be as follows:



	<i>Catalyst Grants</i>	<i>Gap Fund Awards</i>
Objective:	Proof of concept	Prototype or commercial milestone
Review:	Review by leading scientists	Reviewers include industry/investors
Intellectual Property:	Potential or existing IP	Existing IP with license potential
Emphasis:	Scientific aims	Business case
Commercial:	Commercial potential	Go-to-market plan
Award Amounts	Up to \$50,000	Typically, \$10,000 to \$30,000 Matching funds a strong plus

The Gap Fund Awards were created with an understanding that many projects initially seeded by catalyst grants, as well as other opportunities, may benefit from funds focused on development. While catalyst grants rely on external scientific review, gap fund awards may utilize serial entrepreneurs and investors in addition to scientific reviewers to help justify projects most appropriate for gap funds.

Focus Areas: The Program is designed to focus on areas where UWM has the greatest potential to impact the local economy through commercialization activities including science and engineering. The program seeks to emphasize research areas that complement regional capabilities, including:

- **Biomedical Engineering** – including biomedical imaging,
- **Advanced Automation** – including software, devices, and sensors,
- **Connected Systems and Internet of Things**
- **Data Science**



- **Materials** – including advanced nanomaterials, sustainable materials
- **Biochemistry and Drug Discovery**,
- **Water** – including advanced sensors, point-of-use technologies, and sustainable solutions,
- **Energy** – including novel techniques for energy generation, storage, and sustainable designs,
 - **NEW 2023: Clarios has donated \$30,000 specifically to support the Energy category.**
Sub-categories include:
 - Clean energy
 - Energy storage
 - Battery recycling
 - Renewable energy generation
 - Power distribution,
- **Healthcare** – including software applications and medical devices,
- **Other** – other program areas based on well demonstrated commercial potential.

Commercialization and Intellectual Property: The main goal of the program is to foster the development of projects with commercial potential. It is a requirement of the program that the proposed work be directly related to an active intellectual property matter with the UWM Research Foundation. This may include an invention disclosure already submitted to UWMRF, an invention disclosure related to the proposal (new disclosures should be submitted in advance of the abstract deadline), an active patent application (provisional or utility application), an issued patent managed by UWMRF or an active copyright matter.

New invention disclosures should be submitted through the UWMRF Inventor Portal at:
<https://uwmrf.org/inventor-portal/>

Process: Investigators will be asked to submit a short abstract of one to two pages (**documentation to demonstrate commercial viability through customer discovery via I-Corps or similar program, max 2 pages overview is permitted**). A limited number of full proposals will be invited based on assessment commercial viability and intellectual property potential by the UWM Research Foundation. Full proposals will be reviewed by external reviewers as described above. Final recommendations to the funding organization(s) will be made based on external assessments and commercial assessment by the UWM Research Foundation.

Qualification Criteria: Qualifying abstracts must meet the following criteria:

- **Field of Study** – sciences, engineering, healthcare, or other areas identified above;
- **UWM researchers** – project is for UWM-based research;
- **Funding period** – funding period shall be for up to one year;
- **Amount of funding** – project funding up to \$50,000 for catalyst grants and \$10,000 to \$30,000 for gap fund awards;
- **Intellectual property** – research must relate to an active intellectual property matter with the UWM Research Foundation (disclosure, patent application, or issued patent). Investigators who do not currently have an active matter may submit an invention disclosure along with the abstract.

Programmatic/Commercial Criteria: Qualifying grants will be reviewed by the UWM Research Foundation based on programmatic and commercial criteria. In keeping with the program’s goal of fostering economic development, invitations for a full proposal will be made based on the following criteria:

- **Intellectual Property** – current intellectual property (disclosure, copyright matter or patent application), 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** – potential for corporate partnerships and/or startups, tie-in with regional industrial clusters.



Scientific Evaluation Criteria for Catalyst Grant Applications: Complete catalyst proposals will undergo scientific evaluation by external reviewers using criteria established for the RGI 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 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 extramural funding or commercialization [expectation: 3X requested seed funding from external sources, potential for intellectual property, licensing revenue, corporate partnerships, startup companies and other commercial return measures]
- **Risk** – availability of necessary skills and experience, 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

Investor Evaluation Criteria for Gap Fund Applications: Complete gap fund applications will 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 completion of a license agreement, launch of a startup company or ability to secure outside investment.

Timeline:

1/30/23:	Call for abstracts
2/28/23:	Deadline for submission of abstracts – by 5:00 PM
3/27/23:	Invitations for full proposals issued
4/21/23:	I-Corps Customer Discovery Mini-Course Date 1
4/27/23:	I-Corps Customer Discovery Mini-Course Date 2
4/28/23:	Deadline for full proposals – by 5:00 PM
May 2023:	Scientific review of full proposals
Mid-June 2023:	Final selection of proposals and donor approval.
Late July 2023:	Target for notification of awards
Award period:	Target beginning 8/1/23

Application Process: Application materials are available online at the UWM Research Foundation website, <https://uwmrf.org/catalyst-grant-program/>.

Abstracts should be submitted in PDF form to: catalystgrant@uwmrf.org. This short abstract should follow the template available on the UWMRF site and should not exceed two total pages. Budget, CV and WISPER record are not required at the abstract stage. Note budget instructions are available for guidance, but a complete budget is not required at this stage.

Confirmation: You should receive a confirmation that your abstract has been received within one business day of submitting it. If you do not receive a confirmation email, you should contact the UWM Research Foundation immediately.

Questions should be directed to the UWM Research Foundation:

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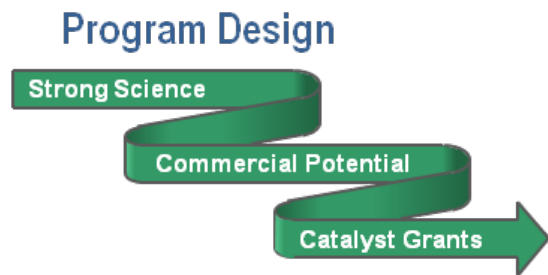
CATALYST GRANT PROGRAM OVERVIEW

The UWM Research Foundation’s Catalyst Grant Program is designed to seed promising early-stage research and foster commercialization in key areas. Supporters of this important program include the Rockwell Automation Charitable Corporation, the Lynde and Harry Bradley Foundation, the Richard and Ethel Herzfeld Foundation and GE Healthcare. Within the framework of the Catalyst Grant Program, the UWM Research Foundation has tailored the program to meet the desires of each supporting organization, while employing a proven model to identify the best opportunities and measure success of the program. To date, the program has awarded over \$5.58 million in grants while demonstrating important successes.

Catalyst Grants Emphasize Strong Science and Commercial Potential

The Catalyst Grant Program uses a competitive process to select the projects with the highest potential for results based on strong science and commercial potential. Awards are made to researchers working at the University of Wisconsin-Milwaukee.

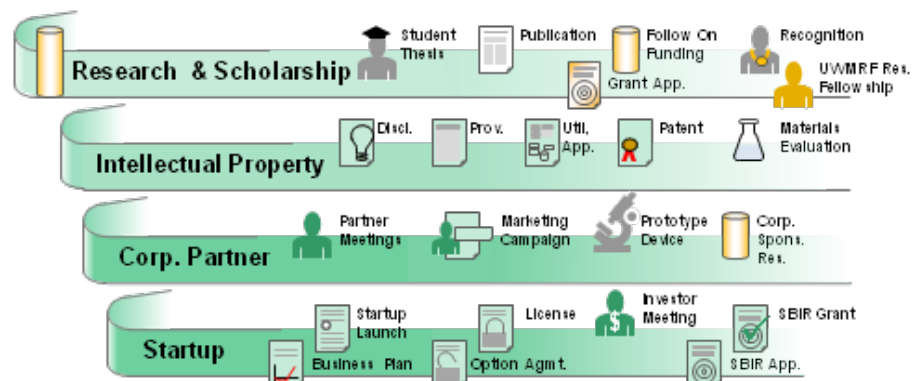
External scientific reviewers from leading institutions around the world are recruited to review proposals in their areas of expertise. Commercial potential is assessed based on existing or potential intellectual property, corporate partnerships and the potential for startup companies. The scientific and commercial assessments are combined to select the best projects for funding. Final selections are made by a committee that includes representatives from industry, the University and the UWM Research Foundation Board of Directors.



Catalyst Grant Outcomes: The success of the Catalyst Grant Program is measured in four areas: research and scholarship, intellectual property, corporate partnerships and startup companies. 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 UWM’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.

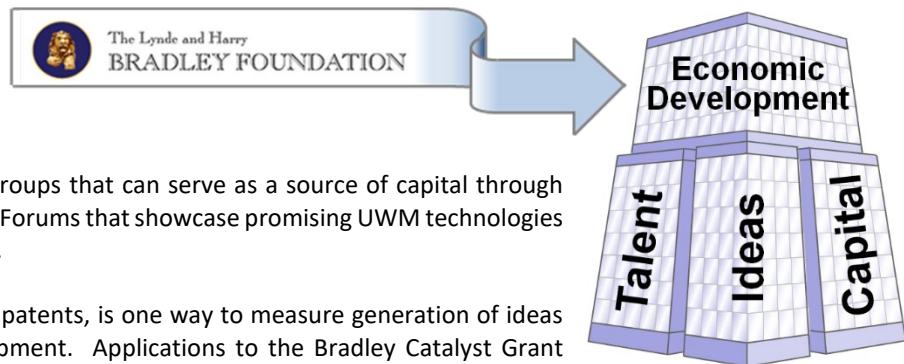
Measuring Success



BRADLEY-HERZFELD CATALYST GRANTS

Catalyst Grants supported by the Lynde and Harry Bradley Foundation and Richard and Ethel Herzfeld Foundation are helping UWM to foster the talent and ideas that drive economic development. The Bradley and Herzfeld Foundations have previously provided over \$5.58 million over fifteen years which has helped to fund one hundred and five promising projects. These grants are linked with the other activities of the UWM Research Foundation including protecting intellectual property, marketing technologies and helping build connections with companies.

Strong ideas and talent will ultimately draw capital needed to drive economic development. The UWM Research Foundation is building ties with investment groups that can serve as a source of capital through initiatives such as the First Look Forums that showcase promising UWM technologies to investors and entrepreneurs.



Intellectual property, including patents, is one way to measure generation of ideas that support economic development. Applications to the Bradley Catalyst Grant Program must be associated with an active intellectual property matter managed by the UWM Research Foundation such as an invention disclosure (the first step toward a patent), a patent application, an issued patent or a copyright matter. This requirement has proven to be a strong incentive for driving faculty to disclose new ideas. The Catalyst Grant Program is also closely tied with patent investments made by the UWM Research Foundation. In many cases, catalyst grants help provide important "reduction to practice," or proof of concept data needed for patent applications. This has made the Catalyst Grant Program a powerful tool for strengthening UWMRF's intellectual property portfolio.

Catalyst grants are also helping create a culture of innovation at UWM. Coupling grants with support for business development and partnering with companies is helping researchers find ways to bring discoveries to market.

Details of previous awards can be found on the UWM Research Foundation website at <https://uwmrf.org/catalyst-grant-program/>.

INTELLECTUAL PROPERTY MANAGEMENT

Intellectual property management, including protecting intellectual property through patents and copyrights, marketing technology and licensing technology is intended to be linked with the Catalyst Grant Program.

The image displays the UWM Research Foundation Inventor Portal interface and a detailed flowchart of the UWMRF IP Management Process. The portal shows a 'My Disclosures' table with columns for ID, Title, Entered By, Created, Status, and Manage. A sample entry shows a disclosure entered on 2/5/2010 with a status of 'Approved - In Review'. The flowchart, titled 'UWMRF IP Management Process', is a circular diagram with 10 numbered steps: 1. Disclosure, 2. Equity Review, 3. Evaluation/Disposition, 4. Provisional Patent, 5. Utility Application, 6. Prosecution, 7. Marketing, 8. Licensing, 9. Copyright, and 10. Know-how. The process is divided into four phases: I. Active (steps 4-6), II. On Hold - Active (steps 2-3), III. Pre-Invention (steps 1-3), and IV. Returned (step 10). Each step includes specific tasks and roles involved, such as 'Researching Inventor' for disclosure and 'IP Counsel' for patent applications.

UWMRF IP Management Process now includes a new online Inventor Portal and detailed process documents.

Process and Infrastructure

The UWM Research Foundation has created an inventor portal to allow researchers to submit invention disclosures and interact with the Research Foundation on management of their intellectual property. The inventor portal couples with UWMRF's Inteum tools for marketing activities and portfolio management.

Requirements for the Catalyst Grant Program

One of the goals of the program is to foster the development of intellectual property and the commercialization of UWM technologies. It is a requirement of the program that there be an active intellectual property matter with the UWM Research Foundation related to the grant application. This may include an invention disclosure already submitted to UWMRF, a new invention disclosure related to the proposal (new disclosures should be submitted in advance of the abstract deadline), an active patent application (provisional or utility application), an issued patent managed by UWMRF, or an active copyright matter.

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