Third Frontier Research Incentives
Request for Proposals
Submission

I.   Program Overview

Section 381.250 **(Research Incentive Third Frontier)** of Amended House Bill Number 166 of the 133rd Ohio General Assembly authorizes the Chancellor of Higher Education to use appropriated funds under this section to advance collaborative research at institutions of higher education and support programs and initiatives specifically identified in this section. Research areas, programs, and initiatives eligible for funding pursuant to this Request for Proposal (RFP) include:

A. Research Areas[1]
1. Research regarding the reduction of infant mortality
2. Research regarding opiate addiction issues in Ohio
3. Research and programming regarding the advancement of cybersecurity initiatives in Ohio

B. Programs and Initiatives
1. Ohio Manufacturing and Innovation Center
2. I-Corps@Ohio program
3. Ohio Innovation Exchange

II.   About Third Frontier Funding

Use of funds appropriated through the Ohio Third Frontier Initiatives is governed by the Ohio Constitution. Specifically, funds appropriated via section 321.250 are governed by Article VIII.02p **(Issuance of bonds for economic and educational purposes and local government projects)**. Section 2p (A) (2) of this article authorizes bonds to be issued for "research and development purposes". **Pursuant this section, research and development funded under this article must be in support of Ohio industry, commerce, and business.** Projects or initiatives supported pursuant to this article include:

A. General research meeting the intent of this section
B. Product innovation
C. Development and commercialization through efforts by and collaboration among:
   1. Ohio business and industry
   2. State and local public entities and agencies

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[1] **Section 381.250 of house bill 166 also includes as focus areas "Research regarding the improvement of water quality" and "Research regarding spinal cord injury." The request for proposal process for Improvement of Water Quality will administered by the Ohio Sea Grant program at The Ohio State University Ohioseagrant.osu.edu. The Water Quality Requests for Proposals is expected to be released by September 30, 2019. The request for proposal process for Spinal Cord Injury will be administered through the Oho Department of Higher Education later in 2019.**

3. Public and private education institutions, or research organizations and institutions

Applicants will be required to demonstrate how their proposed project meets the intent of Article VIII.02p of the Ohio Constitution.

III. **Eligible Applicants**
   A. State universities as defined in section 3345.011 of the Revised Code
   B. A community college established under Chapter 3354 of the Revised Code
   C. A state community college established under Chapter 3358 of the Revised Code
   D. A non-profit private institution of higher education
   E. Non-profit organizations whose primary missions is to engage in research working in collaboration with eligible institutions of higher educations
   F. Economic Development organizations working in collaborations with eligible institutions of higher education
   G. Ohio industry and business organizations working in a public/private partnership with an eligible Ohio institution of higher education
   H. State agencies working in collaborations with Ohio institutions of higher education
   I. Administrators of the Ohio Manufacturing and Innovation Center
   J. Administrators of the I-Corps@Ohio program
   K. Administrators and collaborators in the Ohio Innovation Exchange project
   L. Entities and organizations engaged in advancing cybersecurity initiatives, cyber security product development and cyber education in the state of Ohio

   Eligible applicants are encouraged to form collaborative partnerships in order to leverage the collective capabilities of participating entities and increase the statewide impact of project awards.

IV. **Anticipated Awards**
The Chancellor has discretion in each fiscal year to award up to:

   A. $1,000,000 for Infant Mortality Research
   B. $1,000,000 for Opiate Addiction Research
   C. $750,000 for Cyber Security Initiatives
   D. $500,000 for the Ohio Manufacturing and Innovation Center
   E. $300,000 for the I-Corps@Ohio program
   F. $200,000 for the Ohio Innovation Exchange

V. **Eligible Expenses and Project Term**
All award expenditures must be properly documented following Ohio Revised Code and Administrative rules.

It is anticipated that awards pursuant this RFP will be issued beginning November 18, 2019, and will continue through June 30, 2020, with an option to renew the award through June 30, 2021. This time period covers academic years 2019-2020 and 2020-2021. Successful applicants will be required to submit final expense reports on a schedule determined by the Ohio Department of Higher Education.

VI.   Award Recommendations

The Chancellor, after considering the recommendations of independent reviewers shall make the final determination about which proposals, if any, shall receive an award. **Applicants should pay particular attention to enclosed instructions on where to submit proposals as the independent review process will not be the same for all focus areas.**

VII.   Proposal Review Process and Timeline

Proposals can be submitted beginning September 18, 2019 and are due no later than October 18, 2019. They must be submitted in the following manner:

A. For proposals related to Infant Mortality research, Opiate Addiction research, Cyber Security initiatives, Ohio Manufacturing and Innovation Center, and the Ohio Innovation Exchange, one electronic PDF file sent to https://icorpsohio.org/apply/

B. For proposals related to the I-Corps@Ohio program, one electronic PDF file sent to https://www.ohiohighered.org/grants-rfps.

Applicants are responsible for timely submissions of proposals. Proposals become property of ODHE and are subject to public record laws of the state. Proposals containing all the required elements will receive careful consideration but cannot be guaranteed funding. Accepted proposals will be evaluated by an independent review team selected by the Chancellor. The Chancellor will make final decisions based upon the quality of the proposal in addressing the RFP criteria and its required elements and the recommendation of the independent review process. The schedule below may be revised by ODHE due to circumstances and any changes will be communicated to the applicants via e-mail and posted on https://www.ohiohighered.org/grants-rfps.

Request for Proposals Released	September 18, 2019
Proposals Submission Window	September 18 - October 17, 2019
Proposal Review begins	October 19, 2019
Notification of Awarded Proposals	Beginning November 18, 2019

* Funds will be available to awardees after execution of a Memorandum of Understanding with ODHE.

ODHE will provide an opportunity for potential applicants to seek assistance regarding their application through technical assistance. Applicant questions are to be submitted in writing via email to csee@highered.ohio.gov. Responses to questions will be posted online at https://www.ohiohighered.org/grants-rfps to provide the information to interested parties.

VIII.   Proposal Review Process and Timeline
 Proposal Requirements
A. Format
Proposals must be submitted in Arial font, 11 points or larger; there is an exception for tables and images. Please see below for page allocations and directions for each section of the proposal.

1. **Cover Letter (one page):** Title of project; identify the primary contact plus the fiscal agent by name, title, address, phone number, and email address.
2. **Executive Summary (1 page maximum):** Include: 1) brief overview of the research to be conducted or the initiative or program to be supported; 2) a synopsis of how the research will be conducted or the plan to support the initiative or program will be executed; 3) a description of the anticipated conclusions of the research or outcomes of the program or initiative; 4) a description of any potential development of new products or innovative advances based upon the research being conducted or program or initiative being advanced; 5) a description of how the research or initiative will support Ohio business, industry, or commerce.
3. **Project Narrative (12 pages maximum):** Should address the proposal criteria in order.
4. **Budget Narrative & Budget Table (2 pages maximum)**: The budget narrative will provide background related to the costs of the project and its deployment.
   a. The budget narrative should include:
      i. One to two paragraph descriptions of the activities and expenses included in each budget line.
      ii. Prioritization of activities in order of most critical to project completion or success.
      iii. Explanation of how the program's costs were calculated.
      iv. Description of any matching funds that will be leveraged clearly labeled.
      v. Note: indirect cost are capped at a maximum of 8%.
5. **Attachments:** Proof of commitment from all parties responsible for the implementation of the research or project initiative is required: this includes letters of commitment and/or agreements from collaborative partners if applicable.

B. General Principles for Project Focus Areas
Applicants are not limited with respect to the subject matter they propose to address within each identified focus area, however preference will be given to proposal focusing on the following themes and general principles:

1. **Research Regarding Infant Mortality**
Infant mortality is the mark of the health of a state or city. Ohio does not fare well, particularly as African -American babies are almost three times more likely to not reach their first birthdays compared to Caucasians.[2] While many research and community efforts are underway to address the concerns, this opportunity focuses on putting tools directly in the hands of those affected that may unleash additional patient and community innovative strategies to impact such distressing health outcomes. To this end, preferred proposals will include research and other solutions that:

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[2] https://odh.ohio.gov/wps/portal/gov/odh/media-center/odh-news-releases/2017-ohio-infant-mortality-report

a. Develop tools that accurately identify women at risk and risk for poor infant outcomes with a focus on African-American women and other high risk populations using predictive modeling including:
  i. Tools that could be linked to clinical decision support, guiding the ideal health care associated with best outcomes. Such tools empower women and families, creating a platform for better communication and teamwork, which improve the patient experience and reduce total costs of care.
  ii. Tools that could be incorporated into pregnancy education apps and made available for smart phones.
  iii. Tools that could be part of the electronic health record for use by hospitals and providers to demonstrate system or population health improvement.
b. Identify and incorporate into their research and solutions – community and business organizations that offer navigation, coordination, home visiting, and other support services for pregnant women that could utilize tools to improve health equity.
c. Advance accurate population modeling to incorporate social determinants of health and other factors unique to Ohio.
d. Develop local mapping tools that could be used by community business organizations to improve health equity.

2. **Research Regarding Opiate Addition Issues**

Over 90% of individuals who have opioid use disorder do not think they have a problem that requires treatment. Developing tools for both individuals, families, and treatment providers to identify risk of fatal and non-fatal overdose as well as best opportunities to initiate evidence-based care may raise awareness. To this end, this proposal will focus on research and other solutions that:
a. Develop tools that accurately identify persons at risk of opiate abuse issues using predictive modeling.
b. Develop employer and employee-facing apps to monitor effective treatment progress and risk for relapse which could address both treatment and workforce retention issues.
c. Advance population modeling to incorporate social determinants of health and other factors unique to Ohio.
d. Develop local mapping tools that could be used by community and business organizations to improve health equity.
e. Develop local mapping tools that could be used by state, regional and local policymakers to develop targeted interventions in areas of highest need.

3. **Research and Programing regarding Cybersecurity Initiatives**

As society has become more reliant on technology, the need for both business, and consumer to have confidence in the security of the systems that house its data and personal information is ever increasing. For business, and government cybersecurity breaches result in economic loss and loss of reputation. For consumers, cyber security breaches can result in the theft of their identity. To meet the persistent challenge that cybersecurity presents, the state will need to engage in multiple strategies across multiple sectors. To this end, this opportunity will focus on programming and initiatives that:
a. Advance cybersecurity education and programming to K-12 students and teachers.

b. Develop virtual and physical environments where Ohio citizens, students and cyber professionals have access to cybersecurity curriculum, programming and advanced training opportunities.
c. Advance strategies that systemically foster cybersecurity awareness and training initiatives statewide.
d. Develop Cybersecurity Centers of Excellence.
e. Work in collaboration with governmental agencies and other organizations to develop processes to rapidly address cybersecurity breaches at Ohio businesses and governmental entities.
f. Develop products and other tools that advance how cybersecurity threats can be efficiently detected and remediated.

4. **Ohio Manufacturing Innovation Center**
Ohio's manufacturing industry remains an important component of the state's economy. As June of 2018, the industry accounted for approximately 700,000 Ohio jobs and an annual payroll of $40 billion. Ensuring the continued health of the industry is vital to ensuring the future economic prosperity of the state. Innovation within the industry will be key to ensuring that Ohio manufacturing remains relevant well into the future. This opportunity focuses on programming and initiatives in support the Ohio Manufacturing Innovation Center which:
a. Create comprehensive commercialization support to assist Ohio companies in their innovation efforts in order to accelerate and matriculate new products to market to meet their development and manufacturing needs.
b. Create Experiential Learning opportunities for future entrepreneurs and related activities.
c. Develop environments which support prototyping of new technologies
d. Assist companies in deferring the cost of new product and technology development.

5. **I-Corps@Ohio Program**
The I-Corps@Ohio is a statewide program that was developed to assist faculty, staff and students from Ohio universities, colleges and community colleges in validating the market potential of technologies and launching start-up companies. I-Corps@Ohio is modeled after the National Science Foundation's (NSF) successful I-Corps (Innovation Corps) program, which has been proven to increase innovation, entrepreneurship, and industry collaboration. The I-Corps@Ohio program incorporates lean launch, customer discovery and business model innovation methodologies to assess technologies and enhance the business acumen and networks of research faculty and students across the state. The long-term objective is to drive sustainable technology-based, entrepreneurial economic development in Ohio. The primary goal of the I-Corps@Ohio program is to advance the translation of fundamental research to innovative products and services that drive scalable business models that serve as the basis for startup companies. This opportunity focuses on programming and initiatives in support of I-Corps@Ohio which:
a. Establish programing that enables faculty, staff, and students from Ohio's institutions of high education to determine the market viability of technology concepts.
b. Establish programming that educates Ohio faculty, staff and postsecondary students on best practices for advancing research to product and technology development and commercialization.

c. Establish programing that assists present and aspiring entrepreneurs from Ohio institutions of higher education in connecting to Ohio resources that support the advancement   of new product development and new technologies.

6. **Ohio Innovation Exchange**

The Ohio Innovation Exchange (OIEx) connects industry and business with professors, students, equipment and facilities available at Ohio research universities. OIEx provides access to more than 13,000 faculty and 600 resources from campuses and laboratories around the state, with a mission to facilitate collaboration between Ohio's leading academics & business minds. This opportunity focuses on programming and initiatives in in support of OIEx which provide:

   a. Programming and products that will improve the functionality of the Ohio Innovation exchange.
   b. Initiatives that will improve awareness and use of the Ohio Innovation Exchange by Ohio industry and higher education institutions.

All proposals where applicable should build upon existing work in Ohio that has advanced understanding in these fields and should take into account Ohio's unique challenges and characteristics.

C. Project narratives are required to address the following criteria:
   1. **Project Rationale and Area Focus**
      a. Describe the research area of focus, initiative or project to be undertaken.
      b. Provide relevant baseline data or other information used to identify the proposed area of research or program initiative.
      c. Describe prior research or work performed in the area of focus, conclusions reached, and why additional research or work is being proposed.
      d. Describe how the research or execution of the program or initiative will be conducted, and how the chosen method will lead to actionable results.
      e. Describe preliminary assumptions regarding research outcomes or program or initiatives goals (What are you trying to accomplish).
      f. Attach any exhibits, maps, data tables, or other relevant information.
      g. Applicants should identify if the proposed project is part of an existing effort or if the proposal is a new project. If the proposals is part of an existing effort, the applicant should describe:
         i. Previous funding for the existing project.
         ii. Available funding at the time of the proposal.
         iii. How funds, if awarded through this process, will advance the current work.
         iv. How activities described in this proposal are new and distinguishable from activities previously funded.

2. **Partnerships and Collaborations -** List and describe any collaborations that will be part of the proposed research, program or initiative. Describe the specific roles and responsibilities of each project collaborator. Collaborations must be documented in a letter of commitment from each anticipated collaborator.
3. **Support of Ohio Industry -** Describe how the research, program or initiative will support Ohio industry, business or commerce, specifically describe where applicable[3]:
   a. The specific industry potentially impacted by the research, program or initiative.
   b. The size of the potential market impact of the research, program or initiative.
   c. The specific industry problem being addressed.
   d. The specific customer segment targeted by the research, program or initiative
   e. Any products or technologies being developed.
   f. The potential economic impact of the research, program or initiative.
4. **Sustainability -** Describe how the research or initiative <u>will be sustained beyond the funding period</u> and what potential the research, program or initiative has for long-term and lasting impact. **Note: Applicants should provide evidence of a commitment to project sustainability after the funding period.**
5. **Project Plan -** This section should provide a clear description and timeline for activities to be undertaken.
   a. Outline the roles and responsibilities of key staff members and provide brief biographies.
   b. Provide a GANNT chart for the entire project with proposed activities, dependencies, and estimated completion milestone for each activity.
6. **Project Evaluation -** Explain how project success will be measured. The evaluation plan should include both formative and summative measurements where applicable. Project evaluation must include a system to measure, the success of the research, program or initiative and the impact on Ohio business, industry or commerce. Specifically:
   a. Describe the evaluation design.
   b. Describe the ongoing evaluation process, including collecting data, analyzing data, responding to data.
   c. Provide a timeline for the evaluation process, including formative and summative evaluations complementing the project GANTT chart.

IX. Reporting Requirements

The Ohio Department of Higher Education will monitor each project for which an award is granted to ensure that there is fiscal accountability and operating progress, and that the desired outcomes are achieved. Regular reports will be required from all awardees through a standard reporting template or system.

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[3] Applicants pursuing funding for research regarding Reduction in Infant Mortality and Issues Regarding Opiate Addiction, may consider how any proposed research, program or initiative impacts Ohio's Healthcare Industry irrespective of potential economic impact.

X. Legal Notices

The applicant understands that if its application is accepted by the State, the applicant shall enter into an agreement with the State governing the use of the awarded funds. The applicant agrees to comply with all applicable federal, state, and local laws and regulations in the conduct of the work hereunder.

The State reserves the right to fund any application in full or in part, to request additional information to assist in the review process, to require new applications from interested parties, to reject any or all applications responding to this announcement, or to reissue the announcement if it is determined that it is in the best interest of the State of Ohio. Issuing this announcement does not bind the State to making any awards. The State reserves the right to adjust the dates for this announcement for whatever reasons are deemed appropriate. The State reserves the right to waive any non-substantive infractions made by an applicant, provided that the applicant cures such infraction upon request.

All costs incurred in preparation of an application shall be borne by the applicant. Application preparation costs are not recoverable under an award. The State of Ohio shall not contribute in any way to recovering the costs of application preparation.

The funding decisions are final. Applicants will be notified of the outcome of their application(s) at the conclusion of the review process.

The applicant understands that the information provided herein is intended solely to assist the applicant in submittal preparation. To the best of the State's knowledge, the information provided is accurate. However, the State does not warrant such accuracy, and any errors or omissions subsequently determined will not be construed as a basis for invalidating this solicitation. Interested parties bear the sole responsibility of obtaining the necessary information to submit a qualifying application. The State retains the right to modify or withdraw this solicitation at any time. By submitting an application, applicants expressly agree to these terms.

XI. Trade Secrets

All lead applicants are strongly discouraged from including in a proposal any information that the lead applicant considers to be a "trade secret," as that term is defined in Section 1333.61(D) of the Ohio Revised Code. All information submitted in response to this RFP is public information unless a statutory exception exists that exempts it from public release under the Ohio Public Records Act in Section 149.43 of the Ohio Revised Code.

If any information in the proposal is to be treated as a trade secret, the proposal must:
  A. Identify each and every occurrence of the information within the proposal with an asterisk before and after each line containing trade secret information, and underline the trade secret information itself;
  B. Identify that the proposal contains trade secret information in the cover letter; and
  C. Include a summary page immediately after the cover letter that lists each page in the proposal that includes trade secret information and the number of occurrences of trade secret information on that page.
  D. To determine what qualifies as trade secret information, refer to the definition of "trade secret" in the Ohio Revised Code at 1333.61(D), which is reproduced below for reference:

     1. "Trade Secret" means information, including the whole or any portion or phase of any scientific or technical information, design, process, procedure, formula,

pattern, compilation, program, device, method, technique or improvement, or any business information or plans, financial information, or listing of names, addresses, or telephone numbers that satisfies both of the following:

a. It derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

b. (2) It is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

  i. The Ohio Department of Higher Education requires non-disclosure agreements from all non-ODHE persons who may have access to proposals containing trade secret information, including evaluators.

  ii. If the applicant claims that a record is not subject to disclosure under the Ohio Public Records law based on trade secret, it will bear costs of defending this claim.

XII. Exhibits
A. Proposal Cover Letter –Template Example

Name of Lead Institution (only one)	
Project Start Date	
Lead Applicant –	Name and Address of Postsecondary Institution
Chief Contact Individual must be authorized to sign agency grant contract and legally responsible as agency representative.	Name/Title of legal representative Address, Telephone, and E-Mail
Project Director(s)- Key Personnel(s)	Name/Title, Address, Telephone, and E-Mail
Amount of state money requested	$
Leveraged funds	$

Brief project description	

XIII.   Legal Applicant

Name:_____

Address:_____

City: _____ Zip: _____

Phone: _____ E-Mail: _____

CEO Name: _____

A.   Certification by Authorized Official

To the best of my knowledge and belief, data contained in this application are true and correct. The document has been duly authorized to comply with the required assurances.

Signature of Authorized Official: _____

Typed Name and Title: _____

Date:_____

B.   Administering Entity

Address:_____

City: _____ Zip: _____ Phone: _____

Contact Person: _____

Title: _____E-Mail: _____

C.   Collaborating Partners (please submit separate information for each partner)

Company Name:_____

Address:_____

City: _____ Zip: _____ Phone: _____

Contact Person: _____

Title: _____ E-Mail: _____

D.   Service Provider and Program Partners (please submit separate information for each partner)

Name:_____

Address:_____

City: _____ Zip: _____

Phone: _____

E-Mail: _____

President/CEO/Director Name: _____

Attachment A: SECTION 381.520. RESEARCH INCENTIVE THIRD FRONTIER
The foregoing appropriation items 235634, Research Incentive Third Frontier, and 235639, Research Incentive Third Frontier-Tax, shall be used by the Chancellor of Higher Education to advance collaborative research at institutions of higher education. Of the foregoing appropriation items 235634, Research Incentive Third Frontier, and 235639, Research Incentive Third Frontier - Tax, up to $2,000,000 in each fiscal year may be allocated toward research regarding the improvement of water quality, up to $1,500,000 in each fiscal year may be allocated for spinal cord research, up to $1,000,000 in each fiscal year may be allocated toward research regarding the reduction of infant mortality, up to $1,000,000 in each fiscal year may be allocated toward research regarding opiate addiction issues in Ohio, up to $750,000 in each fiscal year may be allocated toward research regarding cyber security initiatives, up to $500,000 in each fiscal year may be allocated to the Ohio Manufacturing and Innovation Center, up to $300,000 in each fiscal year may be allocated toward the I-Corps@Ohio program, and up to $200,000 in each fiscal year may be allocated toward the Ohio Innovation Exchange program.

Note: The request for proposal process for Improvement of Water Quality will administered by the Ohio Sea Grant program at The Ohio State University. The Water Quality Requests for Proposals is expected to be released by September 30, 2019. Please refer to (Ohio Sea Grant Website) for further information regarding this opportunity.

Note: The request for proposal process for Spinal Cord Injury will be administered through the Oho Department of Higher Education later in 2019.