



Department of
Higher Education

Mike DeWine, Governor
Randy Gardner, Chancellor

Research Incentive - Brain Health - Request for Proposal

Timelines

Request for Proposals Released	March 1, 2022
Proposals Submission Window	March 1 - March 21, 2022
Proposal Review begins	March 22, 2022
Notification of Awarded Proposals	April 11, 2022

Submissions

One electronic PDF copy sent by the submission date to <https://icorpsohio.org/apply/>



Research Incentive – Brain Health – Request for Proposal

Table of Contents

I.	Program Overview.....	1
II.	About Third Frontier Funding.....	1
III.	General Principles Brain Health Research.....	2
IV.	Eligible Applicants.....	3
V.	Anticipated Awards.....	4
VI.	Award Recommendations.....	4
VII.	Request for Proposal Submission Process, and Notification Timeline.....	4
VIII.	Proposal Requirements.....	5
A.	Format.....	5
IX.	Reporting Requirements.....	7
X.	Legal Notices.....	7
XI.	Trade Secrets.....	8
XII.	Exhibits.....	10
XIII.	Legal Applicant.....	11

**Third Frontier Research Incentives
Request for Proposals
Brain Health Research**

I. Program Overview

Section 381.520 (**Research Incentive Third Frontier**) of Amended Substitute House Bill Number 110 of the 134th Ohio General Assembly authorizes the Chancellor of the Ohio Department of Higher Education (ODHE) to use appropriated funds under this section to advance collaborative research at institutions of higher education. Consistent with this authority, the Chancellor has identified research related to Brain Health as a priority for funding. The Chancellor has committed \$2 million in funding over the biennium (\$1,000,000 per fiscal year) to support research in this area.

II. About Third Frontier Funding

Use of funds appropriated through the Ohio Third Frontier Initiatives are governed by the Ohio Constitution. Specifically, funds appropriated via section 321.520 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 to 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
 - 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.

As a condition of receiving Third Frontier funding under Ohio Revised Code §3345.45, **submitting institutions are required to** confirm that it has multiple pathways for faculty tenure which includes either a research or commercialization pathway, or both.

III. General Principles for Brain Health Research

Ohio is a strong investor in health care research. Ohio is looking to increase longevity and create healthier economies of scale with the goal to being the healthiest place to age. Longevity is dependent not only on healthier lifestyles, but also focusing on brain health. This research incentive will award funds to one or more brain health related-projects in the area of prevention, early intervention, and slowing the progression of disease and disorders. Brain disease affects 1 in 6 people worldwide and includes a wide spectrum of diseases and disorders—from **stroke and Alzheimer’s to multiple sclerosis, epilepsy, traumatic brain injury**, and more. The risk of Alzheimer’s disease alone is 17% at 75 years of age and 33% at 85.

Brain disorders and diseases cost U.S. economy over \$1.5 trillion, underscoring scale of opportunity for greater research and innovative new treatments to improve health and drive prosperity - a ITIF study finds¹.

According to the report, more than 50 million American adults—21.8 percent of the adult population—experienced a brain disease or disorder in the past year. This includes neurodegenerative diseases such as Alzheimer’s and Parkinson’s, psychiatric disorders such as anxieties, bipolar disorder, major depression, and schizophrenia, as well as diseases such as autism.

Further, according to the Alzheimer’s Association, 1 in 3 seniors die with Alzheimer’s or another dementia, it kills more than breast cancer and prostate cancer combined. Further, between 2000 and 2019, deaths from heart disease have decreased 7.3%, while deaths from Alzheimer’s have increased 145%. The costs of health care and long-term care for individuals living with Alzheimer’s or other dementia is one of the costliest conditions to society.

¹ [A Trillion-Dollar Opportunity: How Brain Research Can Drive Health and Prosperity \(itif.org\)](https://itif.org/publications/2020/07/14/a-trillion-dollar-opportunity-how-brain-research-can-drive-health-and-prosperity/)

The brain health research should result in increased independence, longevity, and vitality for Ohioans.

The brain health research should develop life-changing interventions for brain disease and disorders, including the following:

- New methods to reduce damage immediately following diagnosis.
- New methods to stop or slow the progression of deterioration of the brain.
- New methods to repair trauma to the brain.
- New methods to slow or reverse the degeneration after diagnosis and or injury.
- New strategies in treatment, care, prevention, diagnosis, and detection as well as caregiving to Ohioans.

The brain health research may occur in any field of research identified below.

- Physical exercise.
- Food and nutrition.
- Medical health.
- Sleep and relaxation.
- Mental fitness.
- Social interaction.
- Socioeconomic.
- Other key relevant drivers impacting and promoting brain health.

This grant initiative may fund research that will either begin after receiving funds or to continue research that is already in progress.

The research funded through this process is specifically targeted to advance and accelerate the development of innovative treatments, product innovation, and rehabilitative efforts that lead to the functional improvement of people living with brain diseases and disorders. Preferences may be given to transformational research that seek to change the nature and course the disease and result in life-changing interventions.

IV. 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 technical college under ORC 3357.
- D. A state community college established under Chapter 3358 of the Revised Code
- E. A non-profit private institution of higher education with a Certificate of Authorization issued pursuant to Chapter 1713 of the Ohio Revised Code
- F. Non-profit organizations whose primary missions is to engage in research working in collaboration with eligible institutions of higher education
- G. Economic Development organizations working in collaborations with eligible institutions of higher education

- H. Ohio industry and business organizations working in a public/private partnership with an eligible Ohio institution of higher education
- I. State agencies working in collaborations with Ohio institutions of higher education

Lead applicants must demonstrate the skills, knowledge, and resources necessary to carry out the proposed research. The application must identify the principal investigator that will lead the research. Postdoctoral fellows and residents will not be considered as lead principal investigators. Post-doctorates, residents, or other individuals are eligible to be listed as key personnel or consultants.

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

V. Anticipated Awards

There will be one proposal award covering both fiscal year 22 and fiscal year 23. The total award amount will be \$2 million. Funds will be distributed on a per fiscal year basis with \$1 million dollars distributed each fiscal year. Proposals will be required to budget anticipated activities for each fiscal year. A project progress report must be submitted prior to the end of fiscal year 22. Fiscal year 23 funds will be released upon the Chancellor’s determination that satisfactory progress is being made toward proposal deliverables.

VI. Award Recommendations

The Chancellor has identified an advisory committee that will make recommendations on which proposals the Chancellor should consider for funding. The advisory committee may require applicants to appear before the committee to provide an overview and answer other questions regarding their proposal. After considering the recommendations of the advisory committee, the Chancellor shall make the final determination on which proposals, if any, shall receive an award. The Chancellor’s decision regarding awards is final. Funds will be available to awardees after execution of a Memorandum of Understanding with ODHE.

VII. Request for Proposal Submission Process, and Notification Timeline

The RFP will be released on the schedule below. The schedule is subject to revision by ODHE and any changes will be will be posted at <https://www.ohiohighered.org/grants-rfps>.

Request for Proposals Released	March 1, 2022
Proposals Submission Window	March 1 - March 21, 2022
Proposal Review begins	March 22, 2022
Notification of Awarded Proposals	April 11, 2022

All proposals should be submitted in the following manner:

- A. One electronic PDF file uploaded to <https://icorpsohio.org/apply/>

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. Late proposals, or proposals missing any of the required submission criteria listed below will not be considered.

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 and mdunn@highered.ohio.gov. Responses to questions will be posted online at <https://www.ohiohighered.org/grants-rfps>.

VIII. 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/Project Abstract (one 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.

The Program Abstract MUST be written in lay-person terms and be understandable by a reviewer with little-to-no scientific knowledge.

3. **Project Narrative (ten pages maximum Arial 11-point font):** The narrative must address the proposal criteria in order as listed in section B.
4. **Budget Narrative & Budget Table (two 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 costs 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. Project narratives are required to address the following criteria:

1. **Project Rationale**

- Describe the research to be undertaken.
- Provide relevant baseline data or other information used to identify the proposed area of research.
- Describe prior research or work performed in the area of focus, conclusions reached, and why additional research or work is being proposed.
- Describe how the research or execution of the program or initiative will be conducted, and how the chosen method will lead to actionable results.
- Describe preliminary assumptions regarding research outcomes or program or initiatives goals (What are you trying to accomplish).
- Attach any exhibits, maps, data tables, or other relevant information.
- **Applicants should identify whether the proposed project is part of an existing effort or if the proposal is a new project. If the proposal 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 project. 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 or initiative will support Ohio industry, business or commerce, specifically describe where applicable

- a. The specific industry potentially impacted by the research;
- b. The size of the potential market impact of the research;
- c. The specific industry problem being addressed;
- d. Any products or technologies being developed; and
- e. The potential economic impact of the research.

4. **Sustainability** - Describe how the research or initiative will be sustained beyond the funding period and what potential the research 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 and should:
 - 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. **Biographical Sketch** - Principal Investigator and Senior/Key Personnel including his/her bibliographies (four page maximum for each individual).
7. **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, and 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. All award expenditures must be properly documented following Ohio Revised Code and Administrative rules.

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. It is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.
 - i. The Ohio Department of Higher Education requires nondisclosure 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: Ohio Constitution Section VIII.02p

Issuance of bonds for economic and educational purposes and local government projects.

§2p (A) It is determined and confirmed that the development purposes referred to in this division, and provisions for them, are proper public purposes of the state and local governmental entities and are necessary and appropriate means to create and preserve jobs and enhance employment and educational opportunities; to improve the quality of life and the general and economic well-being of all the people and businesses in all areas of this state, including economically disadvantaged businesses and individuals; and to preserve and expand the public capital infrastructure; all to better ensure the public health, safety, and welfare.

Those purposes are:

- (1) Public infrastructure capital improvements, which shall be limited to roads and bridges, waste water treatment systems, water supply systems, solid waste disposal facilities, and storm water and sanitary collection, storage, and treatment facilities, including real property, interests in real property, facilities, and equipment related to or incidental thereto, and shall include, without limitation, the cost of acquisition, construction, reconstruction, expansion, improvement, planning, and equipping;
- (2) Research and development in support of Ohio industry, commerce, and business (hereinafter referred to as “research and development purposes”), which shall include, without limitation, research and product innovation, development, and commercialization through efforts by and collaboration among Ohio business and industry, state and local public entities and agencies, public and private education institutions, or research organizations and institutions, all as may be further provided for by state or local law, but excluding purposes provided for in Section 15 of Article VIII, Ohio Constitution; and
- (3) Development of sites and facilities in Ohio for and in support of industry, commerce, distribution, and research and development purposes.

(B) The General Assembly may provide by law, in accordance with but subject to the limitations of this section, for the issuance of general obligation bonds and other obligations of the state for the purpose of financing or assisting in the financing of the cost of projects implementing those purposes.

- (1) Not more than one billion three hundred fifty million dollars principal amount of state general obligations may be issued under this section for public infrastructure capital improvements. Not more than one hundred twenty million dollars principal amount of those obligations may be issued in each of the first five fiscal years of issuance and not more than one hundred fifty million dollars principal amount of those obligations may be issued in each of the next five fiscal years of issuance, plus in each case the principal amount of those obligations that in any prior fiscal year could have been but were not issued within those fiscal year limits. No infrastructure obligations may be issued pursuant to this division and division (C) of this section until at least one billion one hundred ninety-nine million five

hundred thousand dollars aggregate principal amount of state infrastructure obligations have been issued pursuant to Section 2m of Article VIII, Ohio Constitution.

- (2) Not more than one billion two hundred million dollars principal amount of state general obligations may be issued under this section for research and development purposes. Not more than four hundred fifty million dollars principal amount of those obligations may be issued in total from fiscal years 2006 through 2011, not more than two hundred twenty-five million dollars principal amount of those obligations may be issued in the next fiscal year of issuance, and not more than one hundred seventy-five million dollars principal amount of those obligations may be issued in any other fiscal year, plus in each case the principal amount of those obligations that in any prior fiscal year could have been but were not issued.
- (3) Not more than one hundred fifty million dollars principal amount of state general obligations may be issued under this section for development of sites and facilities for industry, commerce, distribution, and research and development purposes. Not more than thirty million dollars principal amount of those obligations may be issued in each of the first three fiscal years of issuance, and not more than fifteen million dollars principal amount of those obligations may be issued in any other fiscal year, plus in each case the principal amount of those obligations that in any prior fiscal year could have been but were not issued.

(C) Each issue of state general obligations for public infrastructure capital improvements or development of sites and facilities shall mature in not more than thirty years from the date of issuance, and each issue of state general obligations for research and development purposes shall mature in not more than twenty years from the date of issuance; or, if issued to retire or refund other obligations, within that number of years from the date the debt being retired or refunded was originally issued. If state general obligations are issued as notes in anticipation of the issuance of bonds, provision shall be made by law for the establishment and maintenance, during the period in which the notes are outstanding, of a special fund or funds into which shall be paid, from the sources authorized for the payment of such bonds, the amount that would have been sufficient, if bonds maturing during the permitted period of years had been issued without such prior issuance of notes, to pay the principal that would have been payable on such bonds during such period. Such fund or funds shall be used solely for the payment of principal of such notes or bonds in anticipation of which such notes have been issued.

Notwithstanding anything to the contrary in Section 2k or 2m of Article VIII, obligations issued under this section or Section 2k or 2m to retire or refund obligations previously issued under this section or Section 2k or 2m shall not be counted against the fiscal year or total issuance limitations provided in this section or Section 2k or 2m, as applicable.

The obligations issued under this division and division (B) of this section are general obligations of the state. The full faith and credit, revenue, and taxing power of the state shall be pledged to the payment of the principal of and premium and interest and other accreted

amounts on outstanding obligations as they become due (hereinafter called debt service), and bond retirement fund provisions shall be made for payment of that debt service. Provision shall be made by law for the sufficiency and appropriation, for purposes of paying debt service, of excises, taxes, and revenues so pledged or committed to debt service, and for covenants to continue the levy, collection, and application of sufficient excises, taxes, and revenues to the extent needed for that purpose.

Notwithstanding Section 22 of Article II, Ohio Constitution, no further act of appropriation shall be necessary for that purpose. The obligations and the provision for the payment of debt service, and repayment by governmental entities of any loans made under this section, are not subject to Sections 5, 6, and 11 of Article XII, Ohio Constitution. Moneys referred to in Section 5a of Article XII, Ohio Constitution may not be pledged or used for the payment of that debt service. Debt service on obligations issued for research and development purposes and for development of sites and facilities shall not be included in the calculation of total debt service for purposes of division (A) of Section 17 of Article VIII, Ohio Constitution.

(D)(1) The state may participate in any public infrastructure capital improvement under this section with municipal corporations, counties, townships, or other governmental entities as designated by law, or any one or more of them. Such participation may be by grants, loans, or contributions to them for any such capital improvements. The entire proceeds of the infrastructure obligations shall be used for public infrastructure capital improvements of municipal corporations, counties, townships, and other governmental entities, except to the extent that the General Assembly provides by law that the state may reasonably be compensated from such moneys for planning, financial management, or administrative services performed in relation to the issuance of infrastructure obligations.

(2)(a) Implementation of the research and development purposes includes supporting any and all related matters and activities, including: attracting researchers and research teams by endowing research chairs or otherwise; activities to develop and commercialize products and processes; intellectual property matters such as copyrights and patents; property interests, including time sharing arrangements; and financial rights and matters such as royalties, licensing, and other financial gain or sharing resulting from research and development purposes. State and local public moneys, including the proceeds of bonds, notes, and other obligations, may be used to pay costs of or in support of or related to these research and development purposes, including, without limitation, capital formation, direct operating costs, costs of research and facilities, including interests in real property therefor, and support for public and private institutions of higher education, research organizations or institutions, and private sector entities. The exercise of these powers by the state and state agencies, including state-supported and state-assisted institutions of higher education, and local public entities and agencies, may be jointly or in coordination with each other, with researchers or research organizations and institutions, with private institutions of higher education, with individuals, or with private sector entities. State and local public participation may be in such manner as the entity or agency determines, including by any one or a combination of grants, loans including loans to lenders or the purchase of loans, subsidies, contributions, advances, or guarantees, or by direct investments of or payment or reimbursement from available moneys, or by providing

staffing or other support, including computer or other technology capacity, or equipment or facilities, including interests in real property therefor, and either alone or jointly, in collaborative or cooperative ventures, with other public agencies and private sector entities including not for profit entities. In addition to other state-level monetary participation as referred to in this section or otherwise, state-supported and state-assisted institutions of higher education may, as authorized from time to time by the General Assembly, issue obligations to pay costs of participating in and implementing research and development purposes. In addition to the other obligations authorized in or pursuant to this section, the General Assembly also may authorize the state and state agencies and local public entities and agencies, and corporations not for profit designated by any of them as such agencies or instrumentalities, to issue obligations to borrow and loan or otherwise provide moneys for research and development purposes, including, but not limited to, obligations for which moneys raised by taxation shall not be obligated or pledged for the payment of debt service and which are therefore not subject to Sections 5, 6, and 11 of Article XII, Ohio Constitution.

(b) Implementation of the research and development purposes shall include utilization of independent reviewers to review the merits of proposed research and development projects and to make recommendations concerning which proposed projects should be awarded support from the proceeds of the sale of obligations under this section. Prior to the utilization of an independent reviewer, the state agency proposing to award the support for a project shall provide the name and other descriptive information regarding the independent reviewer to the Governor, the President and Minority Leader of the Senate, and the Speaker and Minority Leader of the House of Representatives. If the recommendations of an independent reviewer with respect to a proposed project are not adopted by the state agency proposing to award the support for the project, the agency shall notify the Governor, the President and Minority Leader of the Senate, and the Speaker and Minority Leader of the House of Representatives of that fact and explain the reasons for not adopting the recommendations.

(c) From the proceeds of the sale of obligations issued under this section, not more than four hundred fifty million dollars may be awarded, promised, or otherwise committed in total for research and development purposes from fiscal years 2006 through 2011, not more than two hundred twenty-five million dollars may be awarded, promised, or otherwise committed for research and development purposes in fiscal year 2012, and not more than one hundred seventy-five million dollars may be awarded, promised, or otherwise committed for research and development purposes in any other fiscal year beginning in fiscal year 2013 and thereafter, plus in each case the amount of the proceeds that in any prior fiscal year could have been but were not awarded.

(3) Development of sites and facilities for and in support of industry, commerce, distribution, and research and development purposes includes acquisition of real estate and interests in real estate, site preparation including any necessary remediation and cleanup, constructing and improving facilities, and providing public infrastructure capital improvements and other transportation and communications infrastructure improvements for and in support of the use of those sites and facilities for those purposes. State and local public moneys, including the proceeds of bonds, notes, and other obligations, may be used to pay costs of those purposes.

The exercise of these powers by the state and state agencies and local public entities and agencies, may be jointly or in coordination with each other, and with individuals or private sector business entities. State and local public participation may be in such manner as the entity or agency determines, including by any one or a combination of grants, loans including loans to lenders or the purchase of loans, subsidies, contributions, advances, or guarantees, or by direct investments of or payment or reimbursement from available moneys. In addition to other state-level monetary participation as referred to in this section or otherwise, state-supported and state-assisted institutions of higher education, and local public entities and agencies may, as authorized from time to time by the General Assembly, issue obligations to pay costs of participating in and implementing the development of sites and facilities.

(E) Obligations issued under authority of this section for research and development purposes and site and facility development purposes, provisions for the payment of debt service on them, the purposes and uses to which and the manner in which the proceeds of those obligations or moneys from other sources are to or may be applied, and other implementation of those development purposes as referred to in this section, are not subject to Sections 4 and 6 of Article VIII, Ohio Constitution. Obligations issued under authority of this section, the transfer thereof, and the interest, interest equivalent, and other income and accreted amounts therefrom, including any profit made on the sale, exchange, or other disposition thereof, shall at all times be free from taxation within the state.

(F) This section shall otherwise be implemented in the manner and to the extent provided by law by the General Assembly, including provision for the procedure for incurring and issuing obligations, separately or in combination with other obligations, and refunding, retiring, and evidencing obligations; provision for ensuring the accountability of all state funding provided for the development purposes referred to in division (A) of this section; provision for restricting or limiting the taking of private property under Section 19 of Article I for disposition to private sector entities for the purposes identified in divisions (A) (2) and (3) of this section or restricting the disposition of that property to private sector entities or individuals; and provision for the implementation of the development purposes referred to in division (A) of this section to benefit people and businesses otherwise qualified for receipt of funding for the development purposes referred to in division (A) of this section, including economically disadvantaged businesses and individuals in all areas of this state, including by the use to the extent practicable of Ohio products, materials, services, and labor.

(G) The powers and authority granted or confirmed by and under, and the determinations in, this section are independent of, in addition to, and not in derogation of or a limitation on, powers, authority, determinations, or confirmations under laws or under other provisions of the Ohio Constitution including, without limitation, Section 7 of Article I, Section 5 of Article VI, Sections 2i, 2n, 2o, 13, and 15 of Article VIII, Article X, and Section 3 of Article XVIII, and do not impair any previously adopted provisions of the Ohio Constitution or any law previously enacted by the General Assembly or by a local public agency.