



## *The OHIO ACADEMY of SCIENCE*



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### **“Believe in Ohio”**

Testimony by  
Mr. John Klipfell  
Executive Director - Entrepreneurial Engagement Ohio  
Co-Director – Believe in Ohio Program

Sub. H. B. 64  
Amendment SC2546X1

On behalf of GRF 23523  
**Youth STEM Commercialization  
and Entrepreneurship Program**  
(Popularly known as the Believe in Ohio Program)

\$5 million for the 2016-2017 Budget  
(\$2.5 million in each year)  
within the budget of the  
Ohio Department of Higher Education

Advance copy, May 19, 2015, for delivery  
Wednesday, May 20, 2015

The Ohio Senate Finance Committee  
Higher Education Subcommittee

Chairman Gardner, Vice Chair Cafaro, members of the committee.

My name is John Klipfell. I am Co-Director of the Believe in Ohio Program. I am also the Executive Director of Entrepreneurial Engagement Ohio, an educational 501(c)(3) which has collaborated with The Ohio Academy of Science in the development and implementation of the Believe in Ohio program.

Thank you for the opportunity to appear before you today on behalf of my colleagues as well as the many teachers, students, parents, STEM professionals and practitioners who are already involved with the Believe in Ohio program across the State of Ohio.

I am here to ask you to continue funding for the Believe in Ohio program by including GRF 233523 – Youth STEM Commercialization and Entrepreneurship Program (popularly known as “Believe in Ohio”) for \$5 million for the 2016-2017 biennium within the budget of the Ohio Department of Higher Education.

Believe in Ohio is a program of The Ohio Academy of Science that helps students prepare for the future and encourages them to become the STEM innovators and entrepreneurs Ohio will need to enhance and maintain its prosperity. The program was developed in collaboration with Entrepreneurial Engagement Ohio with the support of the Ohio Board of Regents and the 130<sup>th</sup> Ohio General Assembly.

Believe in Ohio is the only statewide Ohio student education program that integrates STEM, entrepreneurship and innovation as pathways to create future jobs. The program was developed to be able to reach any high school student in Ohio with a special emphasis on the underserved.

Enclosed is a four page document that describes the eight major program elements that make up the Believe in Ohio program, includes a listing of Believe in Ohio’s Top 10 first school year accomplishments, and includes comments by teachers, students and parents about what they think about the Believe in Ohio program. I encourage you to review it.

I offer a few reasons why I am asking you to support continued funding for the Believe in Ohio program:

1. Believe in Ohio implements recommendations of the Board of Regents 2012 Commercialization Task Force. As such, it complements, integrates with, builds on,

connects and extends many existing Ohio programs to create a Youth STEM Entrepreneurial Ecosystem for the State of Ohio.

2. Believe in Ohio was initially funded in the 2014-2015 Biennial Budget. In its first full year, it has accomplished virtually everything that it set out to do. As such, it is an established program that already involves more than 5,000 students, teachers and STEM professionals and practitioners.
3. Believe in Ohio addresses Ohio's brain drain problem by teaching students why Ohio is a great place for them to build their futures, and, this year, providing nearly \$1 million in cash awards and scholarships to Ohio colleges and universities. While Ohio has invested billions of dollars in the Third Frontier, what Ohio has done to build its innovation economy is virtually unknown to students.
4. Believe in Ohio opens students' eyes to the entrepreneurial application of STEM to build the new products and services and jobs of the future. As such, BiO is developing the future innovators and entrepreneurs that will be critically needed in the future if Ohio is to create new jobs and maintain its prosperity.
5. A key part of the Believe in Ohio program is reaching out to and lifting up Ohio's underserved populations through the development of a program to provide inspirational role models and mentors to Ohio's urban youth based on the "Each One, Teach One" concept.

Continued funding of the Believe in Ohio program was not included in the Governor's budget as it was only on April 9, 2015 that we were able to report on the successful implementation of our program to Chancellor John Carey and his staff. For that reason, Senators Frank LaRose and Tom Patton are leading the effort to include continued funding in the amount of \$2.5 million per year (total of \$5 million) in the Senate version of the budget, which is the same level of funding as was included in the 2014-2015 biennial budget.

As I said earlier in my remarks, I am here to ask you to continue funding for the Believe in Ohio program by including GRF 233523 – Youth STEM Commercialization and Entrepreneurship Program (popularly known as "Believe in Ohio" for \$5 million for the 2016-2017 biennium within the budget of the Ohio Department of Higher Education.

I welcome your questions and invite you to review the attachments to this testimony. We Believe in Ohio and its youth and know that you do as well. Thank you.

\_\_\_\_\_ moved to amend as follows:

1           Between lines 93591a and 93592, insert:

2           "GRF 235523 Youth STEM Commercialization and Entrepreneurship  
3           Program \$2,500,000     \$2,500,000"

4           In lines 93614 and 93640, add \$2,500,000 to both fiscal  
5           years

6           Between lines 94528 and 94529, insert:

7           "**Section 369.\_\_\_\_.**    YOUTH   STEM   COMMERCIALIZATION   AND  
8           ENTREPRENEURSHIP PROGRAM

9           The foregoing appropriation item 235523, Youth STEM  
10          Commercialization and Entrepreneurship Program, shall be used by  
11          the Director of Higher Education to support the Believe in Ohio  
12          Youth STEM Commercialization and Entrepreneurship Program of the  
13          Ohio Academy of Science. The purpose of this program is to grow  
14          Ohio's next generation of entrepreneurs, to create jobs in Ohio  
15          by focusing on the practical application of science, technology,  
16          engineering, and mathematics (STEM), including medicine and  
17          health fields, and to innovate new products and services. The  
18          Believe    in    Ohio    Youth    STEM    Commercialization    and

**SC2546X1**

19 Entrepreneurship Program shall (1) conduct regional STEM forums  
20 for students and educators; (2) develop regional online high  
21 school and collegiate STEM commercialization and  
22 entrepreneurship content and courses; (3) create a statewide  
23 STEM commercialization and entrepreneurship mentoring network  
24 available to high school students anywhere in Ohio; and (4)  
25 conduct statewide STEM Commercialization and Entrepreneurship  
26 Plan competitions that include incentive awards and scholarships  
27 for students and professional development and incentives for  
28 teacher participation. The competitions and all aspects of the  
29 program shall be open to any Ohio high school student and shall  
30 include initiatives to engage minority, rural, urban, and  
31 economically disadvantaged students anywhere in Ohio. The  
32 Believe in Ohio Youth STEM Commercialization and  
33 Entrepreneurship Program shall collaborate with Ohio's colleges  
34 and universities, existing STEM and entrepreneurship programs,  
35 and Ohio's STEM professional and trade associations to implement  
36 these provisions and to create the new products or services of  
37 the future, advance job creation in Ohio, and encourage  
38 enrollment at Ohio institutions of higher education."

39 The motion was \_\_\_\_\_ agreed to.

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SYNOPSIS

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**Department of Higher Education**

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**Sections 369.10 and \_\_\_.**

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Appropriates \$2.5 million in each fiscal year to GRF appropriation 235523, Youth STEM Commercialization and Entrepreneurship Program. Requires the Program to include regional STEM forums, online high school and collegiate content and courses, and a statewide mentoring network available to Ohio high school students. Requires the Program to conduct statewide competitions, open to all Ohio high school students, which includes awards for students, professional development and participation incentives for teachers, and initiatives to engage minority, rural, urban, and economically disadvantaged students. Requires the Program to collaborate with institutions of higher education, existing STEM and entrepreneurship programs, and STEM professional and trade associations to implement these provisions.



# BELIEVE IN OHIO



**ANDREA HARPEN**  
*Science Teacher at  
Blanchester HS*

“I think that the Believe in Ohio program is a fantastic program. I think that it is dead on. I feel that this program more than anything else I have done has really benefited my students and gets at the core of what we are targeting for as we trying to improve science education. ... I think it is so much better than testing, testing, testing.”



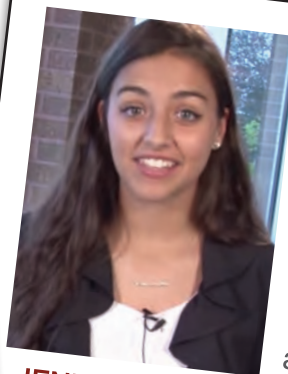
**ANDY BRUENING**  
*Science Teacher at  
Strongsville HS*

“This is it. This is the solution to standardized tests. This is what we need to have more of. This is experiential learning. This is kids finding their own way in Ohio. This is going to help Ohio. I became a science educator to help the Ohio science community and I think this is the best thing I have seen in my ten years of teaching.”



**NANCY MILLER**  
*Science Teacher at  
Canton South HS*

“All of my students benefited. Some of my children who are the lowest excelling in class, excelled in this program. It gives them an opportunity to take what they know and build on it, rather than be chopped down for the things that they don't know.”



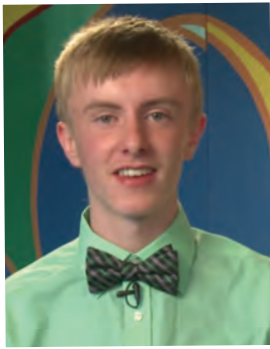
**JENNA ZUZOLO**  
*Student at  
Tippecanoe HS*

“The Believe in Ohio program is a great opportunity for students to really invest themselves into trying to solve a problem that deals with them personally in their life. I definitely think I benefited from this. It was an amazing experience and I learned so much.”

[www.BelieveinOhio.org](http://www.BelieveinOhio.org)

Believe in Ohio is a program from The Ohio Academy of Science that helps students prepare for the future and encourages them to become the STEM innovators and entrepreneurs Ohio will need to enhance and maintain its prosperity. The program was developed in collaboration with Entrepreneurial Engagement Ohio with the support of the Ohio Board of Regents and the Ohio General Assembly.

The Believe in Ohio program is the only statewide Ohio student education program to integrate entrepreneurship and innovation as pathways to create future jobs. The program was developed to be able to reach any high school in Ohio with a special emphasis on the underserved.



**KEENAN FRAYLICK**  
Student from Tri-Village HS

"It makes me think that I am an adult and not a student anymore, like I'm in the workforce and I'm presenting my ideas to investors. It makes me feel like I'm getting prepared for life in the long term."



**STEPHEN LEWIS, SR.**  
Business Teacher at Upper Arlington HS

"It provides an opportunity for our students to engage in business. I think that it gives them a real good perspective of real world business preparation."



**MELISSA NEMETH**  
Parent of a student at Strongsville HS

"It gets the students out of the text books and into the real world, into the business world, into the "thinking out of the box" world and that's what corporations are looking for."

# BELIEVE IN OHIO'S TOP 10 FIRST YEAR ACCOMPLISHMENTS

- 10** Nearly **2,000 high school students**, teachers and others attended one of eight Believe in Ohio STEM Forums throughout Ohio.
- 9** A video gallery of presentations from **50 of Ohio's leading STEM researchers & practitioners** was developed to introduce students to the cutting edge R & D taking place in Ohio.
- 8** Six regional "Introduction to the Innovation Economy of Ohio" online courses were developed, each with **100-140 videos** to introduce students to Ohio's Innovation Economy.
- 7** **400+ teachers** attended **56 professional development workshops** to learn about the program.
- 6** An **Urban STEM Mentor Network** based on the "Each One, Teach One" concept is under development as part of Believe in Ohio's "Inclusive Competitiveness" commitment to empower underrepresented Ohioans.
- 5** **2,750 students** at **83 high schools** from **41 counties** participated in the Believe in Ohio's STEM Commercialization Plan or STEM Business Plan programs and competitions.
- 4** **591 students** earned the right to participate in Believe in Ohio's regional STEM Plan competition.
- 3** **183 students** from **44 high schools** participated in Believe in Ohio's statewide competition on April 25, 2015.
- 2** About **1,000 Ohio professionals**, researchers and others served as competition judges across the state.
- 1** **NEARLY \$1 MILLION IN CASH AWARDS AND SCHOLARSHIPS TO OHIO COLLEGES AND UNIVERSITIES WERE AWARDED TO OHIO HIGH SCHOOL STUDENTS.**



**BRENDAN DAUGHERTY**  
*Student at Blanchester HS*

"Science isn't just sitting in a classroom and listening to a teacher talking about chemicals and all that. It's actually getting in there and doing the research and looking into what you are really passionate about. I know so many things that I didn't know before this."



**DR. DEANNE NOWAK**  
*Science Teacher at Gilmour Academy*

"I love the Believe in Ohio program. It's inspired our students who are science minded to start thinking about business. To start thinking about taking what they know about science and turning it into a business. In addition to that, it has helped my colleagues to start thinking that way, as like me, they were never trained to think of themselves as entrepreneurs."



**HALEY VARNADOE,**  
*Student at Marietta High School*

“I think it’s a good program for students to think about science, engineering and math and how they can affect those fields by inventing new things.”



**ANGEL PEREZ**  
*Parent of student at Hudson HS*

“I really, really enjoyed the overall concept of the program and the fact that it is targeted, but still fairly open. Whatever students are interested in, it could fit within this program and they could explore it further.”



**Make Believe In Ohio  
a part of your classroom!**

Believe in Ohio has completed its first year and is updating and enhancing its programs and professional development in preparation for the 2015-2016 school year. To find out more about the Believe in Ohio program and how to register to participate during the 2015-2016 school year please contact Believe in Ohio’s Statewide STEM Advocate Director, Angela McMurry.

**Statewide STEM Advocate Director  
Angela McMurry  
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