

## TRIUMPH GULF COAST, INC. PRE-APPLICATION FORM

### **APPLICANT INFORMATION**

Name of Individual/Entity/Organization: Biotility, University of Florida

Proposal Title: *Specializations within Secondary Biotechnology Programs Leading to Workforce Credentials*

Amount of Triumph Funds Requested: \$275,000

Total Estimated Project Cost: \$305,000

#### Brief Description of Individual/Entity/Organization:

Launched in 2006, Biotility was created as a state resource to develop workforce talent for Florida's bioscience industry. Efforts are directed at; 1) direct industry training and certificate short-courses; 2) secondary and postsecondary program development and support, including teacher training and certification; and 3) development and administration of the industry-recognized Biotechnician Assistant Credentialing Exam (BACE). Our vision is to enhance Florida's competitive ability to grow a world class biotechnology industry; building on the availability of responsive and relevant education and training programs to provide a multi-tiered source of employees.

#### Contact Information

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Names of co-applicants, partners or other entities, organizations that will have a role in the proposed project or program:

Biotility will partner with; 1) the University of Florida's Center for Pre-collegiate Education and Training (CPET), which promotes and supports the enhancement of science and technology teaching at the secondary education level statewide; 2) faculty and administrators representing secondary and postsecondary education institutions, who are familiar with career and technical education courses, industry-recognized standards and technical skill proficiencies in the Biotechnology cluster/pathway; 3) our network of Florida biotechnology industry representatives, as well as our national advisory board; and 4) teachers and schools who have implemented a Biotechnology program or Project Lead the Way's (PLTW) Biomedical program. Specific to the first funding year of the proposed project, we plan to work with Dixie County and Madison County High Schools as pilot centers for the new curriculum and credentialing opportunities.

### **REQUIRED EXECUTIVE SUMMARY**

In a maximum of two (2) pages, please describe the proposed project or program and anticipated outcomes including (i) the amount of funds being sought from Triumph Gulf Coast; (ii) the amount and identity of other sources of funds for the proposed project or program; (iii) the location of the project or program; (iv) summary description of the proposed program, including how the program will be transformational and promote economic recovery, diversification, and enhancement of the disproportionately affected counties, and (v) a summary timeline for the proposed project or program.

**Please Select the Proposal's Eligibility Category(s)**

Pursuant to Section 288.8017, Triumph Gulf Coast, Inc. was created to make awards from available funds to projects or programs that meet the priorities for economic recovery, diversification, and enhancement of the disproportionately affected counties. The disproportionately affected counties are: Bay County, Escambia County, Franklin County, Gulf County, Okaloosa County, Santa Rosa County, Walton County, or Wakulla County. *See*, Section 288.08012.

1. From the choices below, please check the box that describes the purpose of the proposed project or program (check all that apply):

- ☐ Ad valorem tax rate reduction within disproportionately affected counties;
- ☐ Local match requirements of s. 288.0655 for projects in the disproportionately affected counties;
- ☐ Public infrastructure projects for construction, expansion, or maintenance which are shown to enhance economic recovery, diversification, and enhancement of the disproportionately affected counties;
- ☐ Grants to local governments in the disproportionately affected counties to establish and maintain equipment and trained personnel for local action plans of response to respond to disasters, such as plans created for the Coastal Impacts Assistance Program;
- ☒ Grants to support programs that prepare students for future occupations and careers at K-20 institutions that have campuses in the disproportionately affected counties. Eligible programs include those that increase students' technology skills and knowledge; encourage industry certifications; provide rigorous, alternative pathways for students to meet high school graduation requirements; strengthen career readiness initiatives; fund high-demand programs of emphasis at the bachelor's and master's level designated by the Board of Governors; and, similar to or the same as talent retention programs created by the Chancellor of the State University System and the Commission of Education, encourage students with interest or aptitude for science, technology, engineering, mathematics, and medical disciplines to pursue postsecondary education at a state university or a Florida College System institution within the disproportionately affected counties;
- ☒ Grants to support programs that provide participants in the disproportionately affected counties with transferable, sustainable workforce skills that are not confined to a single employer; and
- ☐ Grants to the tourism entity created under s. 288.1226 for the purpose of advertising and promoting tourism and Fresh From Florida, and grants to promote workforce and infrastructure, on behalf of all of the disproportionately affected counties.

**Please Select the Priorities this Proposal's Outcomes will Achieve**

1. Please check the box if the proposed project or program will meet any of the following priorities (check all that apply):

- ☐ Generate maximum estimated economic benefits, based on tools and models not generally employed by economic input-output analyses, including cost-benefit, return-on-investment, or dynamic scoring techniques to determine how the long-term economic growth potential of the disproportionately affected counties may be enhanced by the investment.
- ☒ Increase household income in the disproportionately affected counties above national average household income.
- ☒ Leverage or further enhance key regional assets, including educational institutions, research facilities, and military bases.
- ☐ Partner with local governments to provide funds, infrastructure, land, or other assistance for the project.
- ☐ Benefit the environment, in addition to the economy.
- ☐ Provide outcome measures.
- ☒ Partner with K-20 educational institutions or school districts located within the disproportionately affected counties as of January 1, 2017.
- ☐ Are recommended by the board of county commissioners of the county in which the project or program will be located.
- ☐ Partner with convention and visitor bureaus, tourist development councils, or chambers of commerce located within the disproportionately affected counties.

Biotility, the education and training arm within the University of Florida's Center of Excellence for Regenerative Health Biotechnology (CERHB) is pleased to submit our pre-application for *Specializations within Secondary Biotechnology Programs leading to Workforce Credentials*. We propose to develop, implement and promote four rigorous and relevant modular course specializations with corresponding industry-recognized credentialing opportunities. The proposed activities will be designed to augment Florida's secondary Industrial Biotechnology program, provide professional development for teachers, and incorporate articulation agreements for secondary and post-secondary Biotechnology curricula.

#### **Funding Request**

Biotility respectfully requests \$275,000 in funding from Triumph Gulf Coast, Inc. to support this initiative. Biotility will provide up to \$30,000 for in-kind resources throughout the duration of the project, which will include onsite project and grant management, facility use for curricula development and beta testing, marketing, communication, and promotional event resources.

#### **Proposed Locations**

For the initial implementation of the proposed activities, Biotility will work with interested schools and districts within the eight counties (Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin, and Wakulla) of Northwest Florida. Biotility currently has strong working relationships with PACE High School (Santa Rosa County), and Wakulla High School (Wakulla County).

#### **Project Summary**

Biotility has partnered with secondary and postsecondary schools since 2006, beginning with the development of Florida's secondary Industrial Biotechnology program, which has become a recognized model for hybrid academic science and Career and Technical (CTE) education. To address teacher certification challenges, Biotility was approved by the Florida Department of Education to develop and offer the Industrial Biotechnology Teacher Experience (IBTE) professional development program, which leads to district certification for CTE instructors. With subsequent funding from the FL DOE, Biotility developed the industry recognized Biotechnician Assistant Credentialing Exam (BACE), which is currently utilized by 45 schools in Florida who offer either the Industrial Biotechnology program, or Project Lead the Way's Biomedical program. The BACE is used in the same capacity across the US, and has become nationally recognized. The knowledge and skill sets confirmed by successfully passing the BACE were identified by the bioscience industry as those valued for entry-level employment.

Using the BACE as the foundation, we propose developing four specialized curricula, professional development programs, and corresponding industry-recognized workforce credentials to provide student opportunities that lead to specializations specific to regional employment needs and/or postsecondary academic pathways. The proposed project is designed to build capacity within rigorous, biotechnology/biomedical programs of study, and incorporates key elements identified in the *Strengthening Career and Technical Education for the 21st Century Act* of 2018, including efforts to develop challenging academic and technical standards leading to high skill, high wage, and in-demand/emerging occupations, linking secondary and postsecondary education career pathways, providing professional development for teachers, faculty, administrators, and counselors, and increasing employment opportunities to students via industry-recognized credentials.

The curricula for the CTE performance standards of the third course within the three-year sequence of the Industrial Biotechnology program was originally intended to be flexible, to address immediate and emerging workforce needs of the region. The challenge for teachers has been the availability of relevant curricula options to integrate into the coursework. Successful completers of *Biotechnology 1 and 2* within the Industrial Biotechnology program, or those who have completed through *Biomedical Interventions* of Project Lead the Way's Biomedical program are typically prepared to challenge the BACE. By developing modular curricula options that lead to specialized workforce credentials in

conjunction with the BACE, regional workforce demands may be addressed, teachers will be less encumbered, and students will have increased career opportunities.

Biotility has successfully implemented three large initiatives including the (NSF funded) *Florida Partnership for Industrial Biotechnology*, and Florida's designated *Employ Florida Banner Center for Biotechnology*, both aimed at developing novel, rigorous and relevant curricula that provide academic and workforce opportunities for students in biotechnology. The third initiative *Florida's Statewide Biotechnology Program of Study* was funded by the FL DOE, which built on the secondary *Industrial Biotechnology* program to include the industry recognized Biotechnician Assistant Credentialing Exam (BACE) and statewide articulation. These initiatives involved industry, academic, and government agency partners, statewide organizations, and entailed comprehensive knowledge of K-20 education programs. Biotility partners will be involved in all phases, will have knowledge of the curricula and credentials to be developed, and have the authority to communicate information to decision-makers. The combined expertise will create an infrastructure on which a successful program is built; a collaborative environment with a commitment to create a competitive workforce by offering credentialing and articulation pathways to high skill, high wage, high demand career opportunities to students.

**Proposed Project Time Line:**

Winter/Spring 2019

- Work with industry partners to conduct an analysis in NW Florida of current and emerging occupations in the biotechnology/biomedical pathway and develop occupational projections.
- Identify foundational knowledge and skills applicable to identified biotechnology occupations, as well as skill requirements/competencies for specific occupations that will be incorporated into secondary and/or postsecondary biotechnology programs.
- Work with postsecondary partners to conduct a course analysis of existing postsecondary curricula to determine alignment of the proposed secondary content and skills/competencies.
- Confirm two course modules to be created, and develop frameworks for each.
- Submit frameworks to Florida's Articulation Coordinating Committee (if applicable) to schedule consideration for review/approval (May)

Summer 2019

- Work with secondary school, industry partners, and subject matter experts to identify and develop resources and curricula to support the successful implementation of each module.
- Coordinate with stake holders, subject matter experts, and Biotility's Florida and national advisory boards to define the parameters of the credentialing exams, establish a blueprint for each, and complete the Item writing and review process.
- Submit credentials to CareerSource Florida for approval process (Aug.), and Florida DOE review (April), for potential approval to CAPE Industry Certification Funding List (Sept., 2019).

Fall/Winter 2019

- Promote the Biotechnology/Biomedical course modules and career opportunities to teachers and school counselors through outreach and workshops
- Develop professional development coursework and materials
- Conduct one-week intensive professional development for partnering teachers in (5) pilot high schools (Year 1 and 2), and provide ongoing support

Winter/Spring 2020

- Implement first two modules into secondary coursework
- Administer credentialing exams to first cohorts

Repeat Cycle (see Winter/Spring 2019 through Winter/Spring 2020)

\*Projected Completion, May 31, 2021