**Funding Criteria**

**A. General Rules**

1. Students, faculty, and staff are encouraged to submit requests for funding. Student-led projects require a faculty or staff sponsor in order to have funds awarded.
2. Funding can only go to university-affiliated projects from students, faculty, staff, and departments.
3. All SSC projects must make a substantial impact on students. This may be a direct impact or an impact through education and engagement. All SSC funding is 100% from student green fees, so the projects funded by the students must benefit them.
4. SSC encourages innovation and new technologies – creative projects are encouraged to apply.
5. Unless a type of expense is specifically listed below as having restrictions, SSC can generally fund it. The items referenced below should not be taken as comprehensive list.

**B. Things SSC Can Fund, On A Case-By-Case Basis**

1. SSC can fund feasibility studies and design work; however, it must work toward ultimately addressing a sustainability need on campus.
2. SSC can fund staff positions that are related to improving campus sustainability. Strong preference will be given to proposals receiving matching funding from departments and/or plans for maintaining continuity of the position after the end of the initial grant.
3. SSC can fund outreach events with a central theme of sustainability, provided their primary audience is the general campus community.
4. SSC discourages funding requests for food and prizes but will consider proposals on a case by case basis that prove significant reasoning.
5. SSC can fund repairs and improvements to existing building systems as long as it works toward the goal of improving campus sustainability; however, a preference is shown to projects utilizing new or innovative ideas.
6. SSC can provide departments with loans for projects with a distinct payback on a case by case base. Loans will require a separate memorandum of understanding between SSC and departmental leadership pledging to repay the award in full and detailing the payback plan.

**C. Things SSC Will Not Fund:**

1. SSC will not fund projects with a primary end goal of generating revenue for non-University entities.
2. SSC will not fund personal lodging, food, beverage, and other travel expenses.
3. SSC will not fund any travel expenses.
4. SSC will not fund tuition or other forms of personal financial assistance for students beyond standard student employee wages.

**Your funding application should include this application and any letters of support.**

*Please submit this completed application and any relevant supporting documentation by the deadline listed on the SSC website to* *Sustainability-Committee@Illinois.edu**. The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the Student Sustainability Committee at* *Sustainability-Committee@illinois.edu.*

**General & Contact Information**

**Project Name:** Biodesign at Illinois

**Total Amount Requested from SSC:** $4,840

**Project Topic Areas:** [x]  Land & Water [x]  Education [ ]  Energy

[ ]  Transportation [x]  Food & Waste

**Applicant Name:** Gabe Tavas

**Campus Affiliation (Unit/Department or RSO/Organization):** Illinois Enactus

**Email Address:** gabetavas@gmail.com

**Check one:**

 [ ]  This project is solely my own ***OR***

 [x]  This project is proposed on behalf of (name of student org., campus dept., etc.): Illinois Enactus

**Project Team Members**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Email** |
| Muskaan Sawhney | Molecular and Cellular Biology in LAS | sawhney3@illinois.edu |
| Gabe Tavas | Sustainable Design in FAA | gtavas2@illinois.edu |
| Tara Entezar | Integrative Biology Honors & ESE in LAS | tentez2@illinois.edu |
| Shreya Balaji | Electrical & Computer Science in Grainger | sbalaj7@illinois.edu |

**Student-Led Projects (Mandatory):**

Name of Faculty or Staff Project Advisor: Mark Smith
Advisor’s Email Address: smithmk@illinois.edu

**Financial Contact *(Must be a full-time University of Illinois staff member)***

Contact Name: Mark Smith

Unit/Department: Finance

Email Address: smithmk@illinois.edu

**Project Information**

*Please review the proposal materials and online content carefully. It is highly recommended you visit a working group meeting sometime during the proposal submission process.*

**Please provide a brief background of the project, its goals, and the desired outcomes:**

*We want to know: What is your project? What does it concretely produce, accomplish, or solve? Why is this project needed on campus?*

Illinois Enactus, a student group focused on social entrepreneurship, houses nine different internal projects at the UIUC campus. Two of these projects, Symmetry and CreAlgae, are early-stage biodesign projects focused on creating products from natural materials to serve students, designers, entrepreneurs, and community members in the Urbana-Champaign area. Symmetry is creating wood without cutting down trees for eco-conscious woodworkers in and out of the university, and CreAlgae is focused on creating petroleum-free, algae-based bioplastics for local businesses.

Symmetry in particular started out with the mission of combating deforestation by bringing sustainable approaches to design work. In the woodworking practice, there are numerous concerns tied to the use of colorful exotic woods like mahogany and rosewood — the harvesting of which is a major driver of forest clearings in the tropics. Project Drawdown, a collaboration among several experts that ranks climate change mitigation solutions, rated the halting of tropical deforestation as #5 and food waste reduction as #3 out of a hundred solutions. By converting the sugar (or saccharides) in some of the most wasted food items like spoiled fruits and breads, the bacteria that Symmetry works with helps the project address both issues by producing the cellulose of its strong ‘alternative wood’. To date, the project has made several colors of the material and is receiving detailed and encouraging feedback from woodworkers in the Urbana-Champaign area who want to incorporate it into their work. The idea behind Symmetry was also acknowledged in the Technology Entrepreneur Center’s (TEC) Innovation Prize competition.

In the meantime, CreAlgae has developed a base formula for their bioplastic and numerous prototypes for their product, created using both wild and processed algae. The future source of algae will primarily be local harmful algal blooms, and CreAlgae has been in frequent contact with local lakes and state parks to confirm the existence of blooms around the Champaign-Urbana area. In fact, CreAlgae has already begun algae collection from an algae bloom at the corner of Second and Springfield Street, very close to campus. Harmful algal blooms grow due to excess nitrates and phosphates that pollute the waters, often due to agricultural runoff. They alter the oxygen contents in the waterways and result in the suffocation of aquatic wildlife through eutrophication. These blooms can also become contaminated with toxins, threatening ecosystem health and safe human interaction with the waterways. Harmful algal blooms are one of the most pressing environmental issues facing the Midwest. CreAlgae seeks to clear these blooms from local waterways and restore their health, all while using the collected algae to create an innovative bioplastic. This bioplastic is completely biodegradable and made from sustainable ingredients. Continued prototyping is underway to confirm that the created bioplastic is marketable for businesses seeking more eco-conscious materials.

Together, the two projects are leading an unprecedented effort to register UIUC in The Biodesign Challenge (BDC), an annual competition in which teams of artists and scientists from universities across the world learn how to develop sustainable products with biotechnology. Past participants have used bacteria to create efficient refrigeration systems that emit no greenhouse gases, mushrooms to create low-cost toilets for underprivileged communities, and invasive zebra mussels to create colorful soda-lime glass.

Typically, the work for the BDC happens in formal classes, but Illinois Enactus is being offered the rare chance to represent the school as a student-led entry. By participating, students in Enactus and those partnered with the organization would receive access to top-level advisors, international connections, and many more opportunities to widely share their biodesign work. At the same time, the university as a whole would further display its dedication to sustainability and innovation as well as its eagerness to collaborate with other organizations addressing urgent environmental challenges. The interdisciplinary nature of the BDC — and Enactus — could also encourage very different departments on campus to work together as they aid the students.

Images of our process and product can be found here: https://docs.google.com/document/d/1--7\_xJPPKp2nKgJ6cVLxCghfdAQnA7LIjJPiSouL3BQ/edit

**Where will the project be located? Are special permissions required for this project site?**

*If special permission is required for this location, please explain and submit any relevant letters of support with the application. SSC cannot fund projects without prior location approval.*

**CreAlgae and Symmetry do their hands-on prototyping work in the Urbana-Champaign Community Fab Lab, the friendly policies and culture of which allow students and community members of all backgrounds to freely learn about the work of the two projects. We are also able to continue prototyping to its full extent remotely, since almost all project members have all required supplies at home. The final summit for The Biodesign Challenge is traditionally hosted in New York City’s Museum of Modern Art (MOMA) but, unless there are significant improvements to the COVID-19 pandemic, it will be hosted online during the summer of 2021.**

**Other than the project team, who will have a stake in the project? Please list other individuals, groups, or departments affiliated directly or indirectly by the project. This includes any entity providing funding (immediate, future, ongoing, matching, in-kind, etc.) and any entities that benefit from this project.**

*Please attach letters of commitment or support at the end of the application.*

• Enactus, the overarching organization that our projects are a part of. Enactus is a 501 © (3) non-profit organization that is entirely student-run.

• Another RSO, Illini Algae, has been supplying materials to the CreAlgae project since Spring 2020. Their internal research efforts have often been focused on finding ways to create fuel from algae, so the partnership with Enactus enables the U of I community to cover uncharted territory into bioplastic research.

• Dr. Marianne Alleyne, an entomologist in the Integrative Biology department, has been co-teaching the university’s one class in Bio-Inspired Design for several years. Now, she has agreed to be an advisor for Enactus’s entry into the Biodesign Challenge.

• Professor Daniel Schneider, the faculty coordinator for FAA’s new sustainable design program and a member of the Urban Planning department, is also acting as an advisor for the BDC entry. His woodworking advice has already been very helpful for Symmetry.

• The Urbana-Champaign Community Fab Lab has endorsed the BDC entry (letter attached) and is providing the workspace for both CreAlgae and Symmetry. In the past, the Fab Lab has hosted classes through the Informatics department.

• Michael Collins and Lowell Miller, the fabrication coordinators of the Art + Design and Architecture departments, have given valuable advice to Symmetry and are open to teaching students involved in the project the basics of responsible woodworking. Lowell, in particular, is a sponsor of an up-and-coming RSO called Roof to Roof which converts nearby, naturally felled trees into tiny homes, benches, and other assets for the local community. He suggested that Symmetry and Roof to Roof form a partnership in which they work together to supply sustainable materials to woodworkers and designers in Urbana-Champaign.

As the start of The Biodesign Challenge program approaches, Enactus will also explore setting up partnerships with RSOs like Fermentation Club and iGEM that can assist with the technical research of the two projects. iGEM, in particular, focuses on genetic engineering and could potentially use practices of the field to increase Symmetry’s cellulose production and, in turn, the provision of alternative wood on campus.

**How will this project involve and/or benefit students?**

*This includes both direct and indirect impact.*

 **By increasing prototyping efforts and competing in The Biodesign Challenge with CreAlgae and Symmetry, the students’ hard work would be rewarded and supported with...**

**• Education in rapidly emerging biotechnology**

**• Access to experts in multiple disciplines**

**• An opportunity to meet like-minded students from across the world**

**• Access to top industry leaders and world-class designers who work with biology**

**• An opportunity for students to meet employers, investors, and curators**

**• An opportunity to present and exhibit at galleries worldwide**

**• Access to prototyping equipment and the freedom to experiment with their own ideas**

**• Improvement and increased access to the community’s Fab Lab**

**• Biodesign will be further explored on campus for the first time ever**

**• Potential volunteering opportunities for local school students, and college students**

**The students at our university, regardless of involvement in Symmetry and CreAlgae, will benefit from...**

**•Increased access to biodesign tools and equipment that will be housed at the Urbana-Champaign Community Fab Lab**

**o Any prototyping equipment in the Fab Lab will not only benefit students in CreAlgae or Symmetry, but also students from all backgrounds who want to use the biotechnology to implement their own designs and address the various local or global challenges. The hope is for the equipment and consequent opportunities to foster a culture of creativity and collaboration.**

**•Media exposure for student design work at UIUC**

**o Participation at The Biodesign Challenge, along with adequate product development through prototyping funding, will draw national and global attention and coverage for Biodesign at Illinois. Because The Biodesign Challenge is a prestigious event with attendance from noteworthy biodesigners, innovators, and journalists within the field, our university’s commitment towards sustainability will be showcased and the work of other biodesigion students at UIUC could gain traction as well.**

**•A university and community surrounded by healthier ecosystems and waterways, which will be achieved through CreAlgae’s clearing of harmful algal blooms from natural habitats**

**o This is not only a large benefit for the parks and animals that it directly impacts, but also the students at our university who study these ecosystems or enjoy their beauty.**

**o This Fall, CreAlgae has already begun collecting algae from a bloom at Second and Springfield. Reducing blooms so close to the heart of campus increases the aesthetic appeal of the area and ability to connect with local natural spaces. It also allows students to be able to conduct research experiments on local, healthy ecosystems.**

**•Utilization of the algae bioplastic and alternative wood in makerspaces and design studios by students across campus**

**o The chance to use these innovative products in different ways can help students become inspired to create their own formulas or simply implement sustainable materials into their creations. Not to mention, their proliferation could decrease the use of petroleum plastics — like non-recyclable pink foam — that design studios on campus are currently using in large quantities.**

**What are your specific outreach goals? How will this project inspire change at UIUC?**

**For many creative students at UIUC, one of the biggest educational frustrations has been the lack of interdisciplinary opportunities within the university. While there are initiatives like the Siebel Center for Design and the Hoeft Technology and Management Program, the university does not offer many opportunities for students of all backgrounds to come together to truly address real-world problems. The Biodesign Challenge, on the other hand, is unique in the sense that it has artists and scientists (and anyone else interested in biotechnology) use novel approaches to make the world a better place. The nature of our projects also allows and encourages this same energy. That being said, the specific outreach goals include:**

**• Helping a wide variety of students gain exposure to social entrepreneurship and the biodesign innovation process as a framework for identifying important global issues and implementing effective solutions to a target market**

**• Teaching Enactus members, project fellows, and student partners how to perform multifaceted, comprehensive research**

**• Providing opportunities outside of class to develop critical and creative thinking skills on interdisciplinary teams as well as ignite student passion**

**• Educating students on the necessity of implementing and driving sustainable development initiatives in a time when they are needed more than ever before**

**• Gathering UIUC exposure to the different corporate partners with which our projects form a relationship**

**• Establishing a larger stake for UIUC in the biodesign and biotechnology community**

**• Creating potential research opportunities for local high school students and university students**

**How will the project improve environmental sustainability at the Urbana-Champaign campus?**

The projects that would be registered in The Biodesign Challenge address different environmental challenges mentioned in the iCAP.

CreAlgae is focused on, and has already begun, collecting its algae supply from local harmful algal blooms. These algal blooms can be incredibly close to campus (we are currently collecting from a bloom on Second and Springfield) and often accumulate toxins, harm local waterways, and damage local ecosystems. CreAlgae will mitigate this damage by collecting the algae at increasing rates as our project grows. By turning algae into durable bioplastic, CreAlgae could provide an alternative to some of the unsustainable petroleum plastics currently used on our campus. Our product could limit the petroleum plastic in the university’s waste stream and also provide an economical way to reduce the University’s contributions to the dead zone in the Gulf of Mexico.

Symmetry, on the other hand, is primarily concerned with food waste and deforestation. The bacteria that help produce its ‘alternative wood’ grow well off often wasted foods rich in sugar like fruit, bread, and vegetables. By sourcing these from vendors on campus, the project could prevent food from releasing methane in the landfill and create beautiful wood for local design studios that replaces some of their less sustainable materials.

**If applicable, how does this project impact environmental injustice or social injustice?**

**Both Symmetry and CreAlgae impact environmental justice through direct interaction with our local areas and positive ripple effects on communities experiencing injustice. Our impact goes beyond our projects. By substituting exotic tree-based wood, Symmetry can help reduce the commercial incentives driving the logging that indigenous groups in the tropics face. This is particularly important given the several disturbing cases of loggers mercilessly killing off entire tribes and that indigenous lands are home to roughly 80% of Earth’s biodiversity. Meanwhile, CreAlgae’s efforts to improve local waterways provides an opportunity for environmental connection and appreciation available to all community members. Harmful algal blooms are often formed due to runoff or a lack of pollutant regulation in more industrialized areas. Some of these waterways are utilized as drinking water for their surrounding communities, which is especially troubling given the toxins that can form in these blooms over time. By clearing waterways of these blooms and toxins, CreAlgae can help provide a cleaner environment and water source for communities that would otherwise be at that disadvantage. Additionally, both Symmetry and CreAlgae could help counter the usage of petroleum plastics — which often enter the ocean, break down into microparticles, and get eaten by marine life that many people in the developing world rely on for food.**

**Working on biodesign projects and creating products that can be used by our community and peers will expose more individuals to sustainable and innovative efforts designed by students to create real change. Our space in the Fab Lab can be used by other students and community members regardless of income or background, exposing them to the world of biodesign and giving them room to create. Exposing students to the importance of sustainability, the impact of new ideas, and the world of biodesign can spur new ideas and inspire new efforts in the fight against environmental and social injustice.**

**Scope, Schedule, and Budget verification**

**What is the plan for project implementation? Describe the key steps of the project including the start date, target completion date, target date for submitting a final report, and any significant tasks or milestones.** *Please be as detailed as possible.*

The Biodesign Challenge Timeline:

• December 18, 2020: Our team will have been registered for the BDC by this deadline.

• January - June 2021: The Biodesign Challenge program is in progress. Remote work

• May 10, 2020: Most of the BDC program’s work will have been completed.

• June 2021: The online (though normally in-person) summit will occur over a week. The students on the Symmetry and CreAlgae teams will present during a certain time session and answer questions from the judges.

Symmetry Milestone Goals:

• September 30, 2020: Identify optimal sources of food waste on or near campus that the project can start obtaining sugar-rich items from. Refine the formula for alternative wood more.

• October 31, 2020: Begin sending samples of alternative wood to woodworkers and designers in the Urbana-Champaign area. Start receiving some food waste from one ideal source of food waste

• November 30, 2020: Adjust the formula and product further based on the honest, rigorous feedback. Explore the possibility of creating a simple online platform for designers where they can share their creations made of alternative wood. Start consulting experts on IP matters.

• December 31, 2020: Start providing small, workable pieces of wood through our website. Create examples of artwork made with our material to demonstrate its capabilities. Share the creation process on Youtube, where many woodworkers look for inspiration.

• Beyond December 2020: The Biodesign Challenge will officially start. Regardless of how that plays out, Symmetry will be focused on maturing its manufacturing process and building a community around its work so that there are many designers eagerly using its materials. When the project ultimately delinks from Enactus, there is a fair chance that Symmetry will become its own organization and join business development programs like iVenture.

CreAlgae Milestone Goals:

• September 30, 2020: Complete collection of our year’s supply of algae from the local bloom just off campus (upon time of writing, this goal is halfway complete). Plan and begin prototyping of a functional product. Research small companies in the sustainable design space. Call local businesses that purchase or have interest in purchasing bioplastics and continue market research. Prepare BDC application.

• October 31, 2020: Reach out to more of the sustainable companies we had found. Continue to prepare for BDC. Brainstorm different design elements to establish a brand for the project. Continue prototyping functional products and learning more about our space in the plastic market through calls with faculty, alumni, and companies. Collect feedback. Start looking into IP rights.

• November 30, 2020: Continue establishing our relationship with community members, the local government, and other small businesses. Have designated project associates for media needs. Start sending out samples to interested parties.

• December 31, 2020: Finalize our algae source. Have a finished website for the project. Collect reliable feedback about the market to establish our business plans for the duration of the project.

• Beyond December 2020: Future semesters of CreAlgae will continue to build upon each other. Our goal is to begin selling products and increasing our scale of algae collection. Ultimately, CreAlgae will delink from Enactus and become its own functional, sustainable entity.

**List all budget items for which funding is being requested. Include cost and total amount for each item requested.**

*Please be as detailed as possible.*

*Estimated total budget: $4,840*

*The Biodesign Challenge registration fee - $3000*

*• By registering CreAlgae and Symmetry for this challenge, we will be able to unlock the resources, support, and traction that can support project progress and product development*

*• The full details can be found on this link: https://biodesignchallenge.org/registration-requirements*

*Testing*

*• Algae toxicity screening - $24: Ensure customer and team member safety by confirming that the algae which we have collected doesn’t contain any toxins. https://www.salofa.com/sites/default/files/uutisetkuvat/BlueGreenTest\_brochure\_2018-08-20\_ENG.pdf*

*• Moisture sensor - No more than $25: The wood that Symmetry makes can only be worked with in design studios when it has a certain moisture content. This sensor helps ensure that quality.https://www.amazon.com/General-Tools-MMD4E-Moisture-High-Medium-Low/dp/B00275F5O2/ref=sr\_1\_3?dchild=1&keywords=wood+moisture+sensor&qid=1598930099&sr=8-3*

*Tools*

*• Dehydrator - around $100: Extracts all of the moisture out of our raw ingredients — a key operation for both projects. https://www.amazon.com/gp/product/B014IK804K/ref=ppx\_yo\_dt\_b\_asin\_title\_o02\_s00?ie=UTF8&psc=1*

*• High-speed grinder - $100 : Makes the algae into an extremely fine powder so that it is much easier to mix with other ingredients. https://www.amazon.com/CGOLDENWALL-300g-Electric-Pulverizer-medicine/dp/B00JMEBB2Q/ref=sr\_1\_3?dchild=1&keywords=pulverizer&qid=1598931247&sr=8-3*

*Material ingredients: these are the ingredients that are absolutely essential to making our materials. With a starting budget of about $1,400, the students would have more room to experiment with them and respond to a growing local community of people benefiting from the materials, until we generate the revenue to fund future costs..*

*• Algae (to supplement the algae collected from local blooms): Quantity: 4. Total price: $280. https://www.amazon.com/NuSci-Organic-Spirulina-Powder-Non-Irradiated/dp/B004ICVV8G/ref=sr\_1\_56?dchild=1&keywords=spirulina&qid=1598718281&sr=8-56*

*• Sugar: Quantity: 5. Total price: $58.60. https://www.amazon.com/Domino-Sugar-Granulated-4LB-Canister/dp/B00HJCXX24/ref=sxin\_7\_ac\_d\_rm?ac\_md=0-0-c3VnYXI%3D-ac\_d\_rm&cv\_ct\_cx=sugar&dchild=1&keywords=sugar&pd\_rd\_i=B00HJCXX24&pd\_rd\_r=80c93c09-0a7a-4516-91e9-0d0681ce0ce4&pd\_rd\_w=krSlY&pd\_rd\_wg=bc50o&pf\_rd\_p=e3dc9e0c-9eab-4c3e-b43a-ba36f8522e14&pf\_rd\_r=SKV3HG5FYBDCF0KMNWZ7&psc=1&qid=1598928300&sr=1-1-12d4272d-8adb-4121-8624-135149aa9081*

*• Chitosan: Quantity: 1. Total price: $68.96. https://www.amazon.com/Bulksupplements-Chitosan-Powder-1-kilogram/dp/B01MTO37DS/ref=sxin\_7\_ac\_d\_rm?ac\_md=2-2-Y2hpdG9zYW4gcG93ZGVy-ac\_d\_rm&cv\_ct\_cx=chitosan&dchild=1&keywords=chitosan&pd\_rd\_i=B01MTO37DS&pd\_rd\_r=a2c568b5-cb7a-42a1-859b-448253a88df0&pd\_rd\_w=nTnWC&pd\_rd\_wg=K1OHi&pf\_rd\_p=e3dc9e0c-9eab-4c3e-b43a-ba36f8522e14&pf\_rd\_r=HQ8V2AR1M62XD2KNDHBN&psc=1&qid=1598718321&sr=1-3-12d4272d-8adb-4121-8624-135149aa9081*

*• Cinnamon Oil: (significantly reduces bad smells from the algae): Quantity: 15. Total price: $120. https://www.amazon.com/Essential-Undiluted-Therapeutic-Aromatherapy-Cliganic/dp/B07DVSYCB5/ref=sr\_1\_6?dchild=1&keywords=cinnamon+oil&qid=1598718356&sr=8-6*

*• Agar: Quantity: 4 one-pound bags: Total price: $212. https://www.amazon.com/Frontier-Natural-Products-Powdered-Agar/dp/B000UVZPZY/ref=sr\_1\_24?dchild=1&keywords=agar+agar+250+grams&qid=1598928904&s=grocery&sr=1-24*

*• Carrageenan: Quantity: 10 one-pound containers. Total price: $340. https://www.amazon.com/WillPowder-Willpowder-Kappa-Carrageenan-1-Pound/dp/B004H1DYJC/ref=sr\_1\_14?dchild=1&keywords=kappa+carrageenan&qid=1600302578&sr=8-14*

*• Vinegar: Quantity: $3.50. Total price: $10.5. https://www.instacart.com/landing?product\_id=2641365&retailer\_id=266&region\_id=2070797315&mrid=135212023&utm\_medium=sem\_shopping&utm\_source=instacart\_google&utm\_campaign=ad\_demand\_shopping\_food\_il\_chicago\_newengen&utm\_content=accountid-8145171519\_campaignid-1751226946\_adgroupid-67300018263\_device-c&gclid=EAIaIQobChMIjdeLp6XB6wIVS73ACh0sbgF6EAQYAyABEgLy6PD\_BwE*

*New Experimental Materials: This includes any new ingredients that we may choose to experiment with, as well as the estimated cost of incorporating them into our formula on a longer-term basis. Total price: $500*

**If the project is implemented, will you require ongoing funding? What is the strategy for supporting the project in order to cover replacement, operation, or renewal costs?**

*SSC provides funding on a case by case basis and should not be considered as an ongoing source of funding*

*We will not require ongoing funding from the SSC. A core tenet of Enactus is that every project must be able to delink from the organization and sustain itself without the constant input of student work and Enactus support. The goal is to bring about a lasting impact. Historically, Enactus has done this by finding community partners in the Urbana-Champaign area who could continue the project using the revenue from sold products and services. However, since CreAlgae and Symmetry address problems of global scope and are run by very dedicated students, there is a possibility that they will eventually become larger companies (assisted by local programs like iVenture) with close ties to the University of Illinois. Algae bioplastic and alternative wood could be sold to entities all across the campus, empowering students, staff, and faculty with more sustainable materials as well as providing a financial lifeline for the projects.*

**Please include any other obtained sources of funding. Have you applied for funding elsewhere?**

*Please attach any relevant letters of support as needed in a separate document.*

We have not applied for any other funding at this time.

**Have you applied for funding from SSC before? If so, for what project?**

Enactus has applied for funding before, but none of the team members listed in this application were part of those write-ups. One of our members, Tara Entezar, did write a separate application in the past, but it was for a non-Enactus effort called Project 4 Less.

**How will you bring awareness and publicize the project on campus? In addition to SSC, where will information about this project be reported?**

As our projects grow, so will the involvement of community members in our initiatives. Both CreAlgae and Symmetry are in the process of staffing project fellows and volunteers, which has already started to increase our reach in the community and bring awareness to the different aspects of our mission (be it business, material science, or biology). For example, our project fellows conduct technical work like scientific research and might hear about the projects as Enactus continues outreach to biodesign-related channels like iGEM, the MCB department, the IBH program, Fermentation Club, Design for America, and Illini Algae. Some of the newsletters of these groups have already shared information and gathered interest. By incorporating students from a wide range of backgrounds and creating our own network of faculty and graduate student advisors, our projects are beginning to quickly gain traction through campus. This ensures that our projects’ involvement, knowledge, and events will not be limited to Enactus members. Both projects are also in the process of establishing their branding and will soon create social media accounts where they can publicize their goals online. Also, there is always the chance that someone will learn about us while visiting the Fab Lab during its open hours.

The information for these biodesign projects will be posted on the Illinois Enactus website and incorporated into the recruitment activities that Enactus already does every semester. First, it will be described and given a Q&A at the organization’s Open House event, which typically attracts an audience of 150-200 students of different majors interested in joining as new members. Then, during the semester, information will be shared at the Reverse Career Fair, where Enactus will be speaking with potential sponsors from established companies. Illinois Enactus will also share news of the BDC entry at the National Expo in the spring, an Enactus competition in which we compete with other branches of Enactus from different universities across the country. Last year, Illinois Enactus placed in the top eight teams at the competition. Both the BDC and the Enactus National Expo provide us with a large audience to whom we can present our project progress and products. These highly attended events give us space to advertise our efforts to renown biodesigners and reporters at BDC and the wide range of attendees at the National Expo.