# Dossier: BIOCANIC, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,886.00

**Award Date:** 2023-12-12

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

BioCanic, Inc. is a biotechnology company focused on developing novel, sustainable, and biodegradable polymers derived from non-food plant biomass for a variety of applications, including packaging, agriculture, and potentially, defense applications related to biodegradable munitions and other eco-friendly military solutions. Its core mission is to replace petroleum-based plastics with high-performance, bio-based alternatives that reduce environmental impact and contribute to a circular economy. BioCanic aims to solve the problems of plastic pollution, reliance on fossil fuels, and the limited biodegradability of conventional polymers. The company's unique value proposition lies in its proprietary enzymatic process that efficiently converts abundant, underutilized agricultural waste streams into versatile bio-based polymers with customizable properties, offering a cost-effective and environmentally superior alternative to traditional plastics.

**Technology Focus:**

* Proprietary enzymatic deconstruction and polymerization process: BioCanic utilizes a unique enzyme-based technology to break down plant biomass (e.g., corn stover, wheat straw) into monomer building blocks and then reassemble them into high-performance polymers. This process is claimed to be more efficient and environmentally friendly than traditional chemical methods.
* Tunable Polymer Properties: Their technology allows for precise control over polymer properties, enabling the creation of bio-plastics with varying degrees of strength, flexibility, and biodegradability. This enables tailored solutions for diverse applications.

**Recent Developments & Traction:**

* October 2023:\*\* BioCanic received a Small Business Innovation Research (SBIR) Phase I grant from the National Science Foundation (NSF) for the development of biodegradable agricultural films.
* 2022:\*\* BioCanic presented findings at the American Chemical Society (ACS) Fall 2022 meeting detailing advancements in their enzymatic deconstruction process for bio-plastic production.

**Leadership & Team:**

* The available online information does not clearly specify the current CEO, CTO, or President. Further investigation would be required to determine the key leadership figures.

**Competitive Landscape:**

* Danimer Scientific: Competes in the biodegradable plastics market but focuses on PHA (polyhydroxyalkanoate) based polymers produced via fermentation. BioCanic's enzymatic process represents a potentially more cost-effective alternative with broader feedstock flexibility.
* Origin Materials: Develops bio-based chemicals and materials from wood residues. Origin Materials focuses on PET plastic alternatives while BioCanic targets a wider range of polymers and feedstocks.

**Sources:**

1. [https://seed-db.com/companies/united-states/bio-canic](https://seed-db.com/companies/united-states/bio-canic)

2. [https://acs.confex.com/acs/2022fall/meetingapp.cgi/Paper/1408210](https://acs.confex.com/acs/2022fall/meetingapp.cgi/Paper/1408210)

3. [https://biofabricate.co/2015-summit-exhibitors/](https://biofabricate.co/2015-summit-exhibitors/)