

**Project Title:**

Impact of Low Temperature Plasma Exposure Time for Feminize Industrial Hemp Seed

Project Reference Code:

AAMU-Cebert

Host Facility:

Alabama A&M University

Host Facility Location:

4900 Meridian St.

Huntsville, Alabama 35811

<https://www.aamu.edu/>

Project Description:

The production and application of Industrial hemp (*Cannabis sativa*) continue to generate significant interest in the agricultural and health supplement sectors. However, significant challenges remain to be addressed regarding the biology and complete life cycle of the plant. Growing the plant for its cannabinoids require only female plants, which must be determined before planting the seeds. In this proposed project the CPU2AL summer internship program, we plan to set up various experiments to expose industrial hemp seeds to low temperature plasma (LTP), and Plasma Activated Water (PAW) to potentially modify or activate sex characterization hormones. Flowers of physiologically maturing plant will also be collected and exposed to LTP and PAW to observe potential changes to sex related hormones. Multiple experiments will be designed to study the proposed hypothesis.

Disciplines:

Agriculture, Plasma Physics

Is U.S. citizenship required to participate in this project?

No

Internship Location and COVID-19 related Backup Plan

Due to the COVID-19 pandemic, we are preparing multiple options to ensure that the internship will take place. We are looking at least at an in-person, hybrid, and fully virtual option. For any in-person component we will ensure that there is adequate physical spacing between workspaces, following all university cleaning protocols.

Name(s) of Mentor(s) and contact information:

Ernst Cebert (ecebert@gmail.com)

Internship Coordinator/ HR manager:

Srinivasa Rao Mentreddy (srinivasa.mentreddy@aamu.edu)

The name and contact information of personnel at the host facility is provided for further assistance with questions regarding the host facility or the project.

Interns will not enter into an employee/employer relationship with the host facility. No commitment with regard to later employment is implied or should be inferred.