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Undergraduate Research Program

Project Name	In vitro stress models for secondary metabolite production
Campus & Location in Mexico	Monterrey
Faculty	Engineering and Sciences
Research Area	Bioengineering: Phytochemistry, Plant Biotechnology
Research Responsible	César Armando Puente Garza, Ph.D.
Description of the Project	The project consists in generating a proposal of a platform for the generation of secondary metabolites in plants, based on in vitro technology. The strategy will evaluate different abiotic stress mechanisms applied under controlled environment conditions, using plant tissue culture tools. Also, it will be necessary for the preparation, extraction and analysis of secondary metabolites. These studies include HPLC to identify and quantify high value molecules that provide health benefits such as antioxidants, anticancer, among others.
Training Provided	Plant tissue culture Extraction preparation and quantification (Folin) Bioactivity tests (ORAC) HPLC analysis

Offered during:

SUMMER

WINTER

SEMESTER

Student

Tasks/Responsibilities	Data analysis Samples preparation
Required Language Proficiency	Spanish, English
Required Skills and Abilities	Basic laboratory experience Experience in biochemistry Plant physiology
Other Documents	2) Accumulative grade point average (GPA) 2.5 3) Official Transcript 4) 2 letters of recommendation of faculty members 5) Resume 6) Letter of intention explaining the reason why you would like to participate in the research program