



QUARTERLY RESEARCH PROGRESS REPORT
4th Quarter

Research Title: Bioactivity and molecular characterization of lead compounds from candidate antidiabetic indigenous plants

I. Program/Project/Study Objectives

1. To characterize and elucidate the structure of compounds from selected plant extracts with known antidiabetic properties,
2. To determine the effect and mechanism of action of plant extracts on the differentiation of adipocyte cells,
3. To determine the intermolecular interaction of the selected plant extracts to that of the alpha-glucosidase enzyme, receptor proteins, and ligands

II. Relevance to VSU & College's Thrust and Priorities:

The approved research will strengthen the research capacity of the Visayas State University in the field of Health Research in addressing the rapidly evolving state of both communicable and non-communicable diseases.

The international collaboration will also give opportunities to researchers to gain knowledge in the field of Computational Biology and Bioinformatics, which is also a part of the RDEI Priorities and Agenda of the Advanced Research and Innovation Center.

III. Highlights of accomplishments within the quarter

A. Targets for the quarter

- ✓ Confirmation of location and collection of the Red Magsumpay and Pitogo plant samples.
- ✓ Performed oil red staining and lipid droplet analysis
- ✓ Optimization of protein quantification, SDS-PAGE and western blotting protocol
- ✓ Enzyme kinetics experiment

B. Highlights of accomplishments

- ✓ Collected plant samples and created a geographical mapping for Red Magsumpay and Pitogo plant samples in Borongan City and Guiuan, Eastern Samar.
- ✓ Identification of the Red Magsumpay and Pitogo plant samples by Dr. Dennis Peque
- ✓ Initial results of oil red staining and lipid droplet analysis, SDS-PAGE and western blotting experiment
- ✓ Enzyme kinetics of the different plant samples