

# Ethnomedicinal Properties of Mountain Soursop (*Annona montana*)

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## Introduction

*Annona muricata*, also called soursop, graviola, and guanabana, is the most tropical member of the Annonaceae family growing in tropical and subtropical regions of the world. Best growth is achieved in deep, rich, well-drained, semi-dry soil, but the soursop tree can be and is commonly grown in acid and sandy soil, and in the porous, oolite limestone of South Florida and the Bahama Islands (Morton 1999). All the parts, fruits, seeds, leaves and roots, of the plant have been known to be used in many products.

*Annona muricata* has shown to have (Moghadamtousi 2015)

- anticancer
- anticonvulsant
- anti-arthritis
- antiparasitic
- antimalarial
- hepatoprotective
- antidiabetic activities

*Annona montana* tree somewhat resembles that of the soursop but has a more spreading crown and very glossy leaves. It is slightly hardier and bears continuously.

<i>Annona montana</i> (Mountain Soursop)	<i>Annona muricata</i> (Soursop/Graviola)
altitude between sea level to 2,000 ft	altitude between 800 to 1000 ft
hardier, withstanding temperatures several degrees below 32°F	moderate humidity, plenty of sun and shelter from strong winds
smaller fruit	larger fruit

## Research Objectives

A lot of research has gone into *Annona muricata*, soursop, and its ethnomedicinal uses, but not a lot is known of the *Annona montana*, also known as Mountain Soursop in South Florida. The objectives of this study is to identify the pharmaceutical compounds in leaves, pulp, and seeds of the *Annona montana*.

## Material and Methods

Plant samples (*A. montana*) were collected from Fruit and Spice Park and Possum Trot Nursery. The samples were each placed in a polyethylene bag prior to sample preparation and analysis.



Fig.1 Fruit and Spice Park mountain soursop tree.

Leaves and Fruits were stored in a -80 freezer until ready to use.



Fig. 2 Leaves received from Robert Barnum's Possum Trot after being stored in -80 Freezer.

Freeze dried the leaves in a Harvest Right dryer. Following this had to separate the pulp and seeds of the *Annona montana* fruits into petri dishes to be freeze dried next.



Fig. 3 *Annona montana* after being put in the dryer.



Fig. 4 Putting the pulp and seeds in the Harvest Right freeze dryer.

## Future Direction

Plan to conduct phenolic, glycosides, alkaloids, flavonoids, and glycoside saponin assay on the leaves, pulp, and seeds of the *Annona montana*. The highest concentration of compounds that are found in the *A. muricata* are alkaloid compounds called acetogenins. This is the main compound that is thought to be the reason for the medicinal qualities that the tree possesses. Then perform HPLS-MC on the part of the tree that demonstrates the highest concentration. To identify the specific compounds in the *A. montana*.

## Literature cited

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