# UCHUVA , GOLDENBERRY , PHYSALIS A TREASURE TO DISCOVER AND BECOME A WELLKNOWN AND DESIRED FRUIT TO THE WORLD

## LET'S DISCOVER WHY THE UCHUVA IS A TREASURE FOR THE HEALTH OF CONSUMERS

# PHITOSANITARY ADVANTAGES OF THE UCHUVA / GOLDENBERRY / PHYSALIS

Scientific Name; *Physalis Peruviana L.*
Systematics
Class: Angiospermae
Order: Tubiflorae
Family: Solanaceae
Genus: *Physalis*
Species: *peruviana L.*

The Uchuva (*Physalis peruviana L*) is known as Goldenberry in English (trade name) is part of the Solanaceae family, covered by a calyx that protects it from pathogens, insects and adverse environmental conditions. Physalis have a greater control of the dangers associated with the safety of the fruit, since the "cap" or calyx completely encloses the fruit preventing possible external contamination.

## ALL FRUITS HAVE NUTRITIONAL COMPONENTS FOR OUR HEALTH !


Its nutritional composition to have reported about highly antioxidant properties, since an 85 g portion of goldenberries provides 35% of vitamin A, 25% of vitamin C, and 25% of dietary fiber in terms of the percentage of daily value (%DV) reference amounts of nutrients to be consumed. It is important to remember that vitamin A contributes to tissue maintenance, vitamin C improves immune system function, and dietary fiber helps regulate the digestive system.


**BUT WHAT HAS THE UCHUVA THAT MAKES THE DIFFERENCE IF WE CONSUME IT IN COMPARASON WITH OTHER FRUITS ?**

## UCHUVA´S FUNCIONAL PROPERTIES

Journal name: Nutrients
Manuscript ID: nutrients-1314110
Type of manuscript: Article
Title: Plasma metabolome profiling by high-performance chemical isotope-labelling LC-MS after acute and medium-term intervention with golden berry fruit (Physalis peruviana L.), confirming its impact on insulin-associated signaling pathways
Authors: Fabrice Vaillant *, Vanesa Corrales-Agudelo, Natalia Moreno-Castellanos, Alberto Ángel-Martín, Juan Camilo Henao, Katalina Muñoz-Durango, Patrick Poucheret
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MDPI

*Article*

**Plasma Metabolome Profiling by High-Performance Chemical Isotope-Labelling LC-MS after Acute and Medium-Term Intervention with Golden Berry Fruit (*Physalis peruviana* L.), Confirming Its Impact on Insulin-Associated Signaling Pathways**

Fabrice Vaillant [1,2,3,*], Vanesa Corrales-Agudelo [4], Natalia Moreno-Castellanos [5], Alberto Ángel-Martín [6], Juan Camilo Henao-Rojas [1], Katalina Muñoz-Durango [4] and Patrick Poucheret [3]

# SPECIFIC COOPERATION AGREEMENT EXTENSION BETWEEN THE INDUSTRIAL UNIVERSITY OF SANTANDER, ANALDEX AND CIRAD.

cirad · Universidad Industrial de Santander · ANALDEX
ASOCIACIÓN NACIONAL DE COMERCIO EXTERIOR

*nutrients* · MDPI

*Article*

**Plasma Metabolome Profiling by High-Performance Chemical Isotope-Labelling LC-MS after Acute and Medium-Term Intervention with Golden Berry Fruit (*Physalis peruviana* L.), Confirming Its Impact on Insulin-Associated Signaling Pathways**

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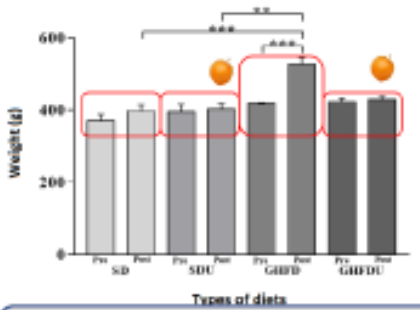
After the consumption of Uchuva, three (3) biological networks were identified

- Insulin signaling pathway
- Epidermal growth factor (EGFR) pathway
- Phosphatidylinositol 3-kinase (PI3K/Akt/mTOR) pathway

Conclusions: The identified biological networks are highly interconnected with the insulin signaling pathway, demonstrating that cape gooseberry intake may be associated with insulin signaling, which could reduce some risk factors related to metabolic syndrome.

## "EFFECT OF THE CONSUMPTION OF GOLDENBERRY (*Physalis peruviana L.*) ON THE PREVENTION AND/OR TREATMENT OF OBESITY AND DIABETES"




Compared to the consumption of a diet rich in fat and sugar (Obesogenic Diet) a weight reduction is observed after the consumption of Uchuva.

Decreased serum glucose, cholesterol, triglyceride, Fasn, and LPL gene concentrations.

Increase of genes Insr and Pparg.

Conclusions: It shows that the intake of Cape Gooseberry improves insulin signaling, improves the metabolism of lipids and carbohydrates, which allows reducing some risk factors related to diabetes and obesity.

**The Goldenberry, the new approach of researchers to understand its possible in insulin metabolism.** These properties found in the goldenberry are what attracted the attention of researchers, The results identified that goldenberry intake is mainly associated with the insulin signaling pathway. This work generates important hypotheses that must be tested with studies that are designed to evaluate functionality in humans, which is why the properties of goldenberry in human health continue to be investigated.

**Highlights**

- **For the first time, the bioavailability of withanolides in humans was demostrated**
- **The main urinary biomarkers of golden berry intake are sesquiterpenoids and 4β-hydroxywithanolide E**
- **Golden berry consumption increases the urinary excretion of acylcarnitines, proving that fat is more mobilized to meet the body's energy needs**

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# Main urinary biomarkers of golden berries (Physalis peruviana) following acute and short-term nutritional intervention in healthy human volunteers

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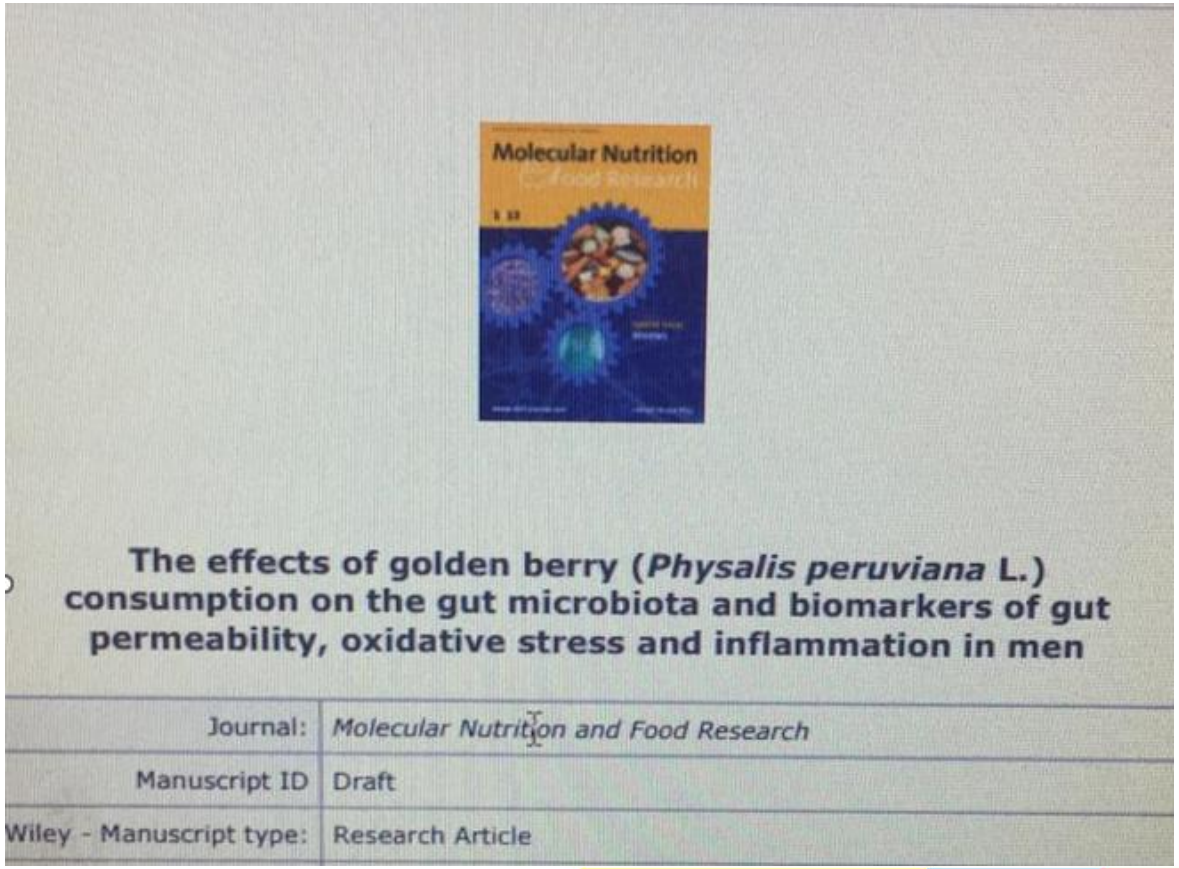

# ECONOMIC AND SOCIAL UCHUVA IMPACT IN COLOMBIA

Physalis is an opportunity for Agribusiness and rural development. Most Physalis producers are small entrepreneur farmers with farms of less than 1ha.

**Physalis Made in Colombia**

Each Physalis fruit is opened carefully to see inside the calix the quality of the fruit to be sure it is ok. This process makes a significant social impact too because the majority of the workers are rural women who are head of their households working in exporters packing houses.

# Goldenberry Exporters Committee

**LET´S DO IT TOGUETHER .**
**The Winner will be the UCHUVA**

CHALLENGE : UCHUVA CAMPUS TO RESEARCH AND SHARE RESULTS WITH ALL UCHUVA CHAIN PARTICIPAB


THANK
YOU.