LABIOTRE

Verbascox®

A granulated, patented and clinically blend extract: the natural COX-2 selective inhibitor

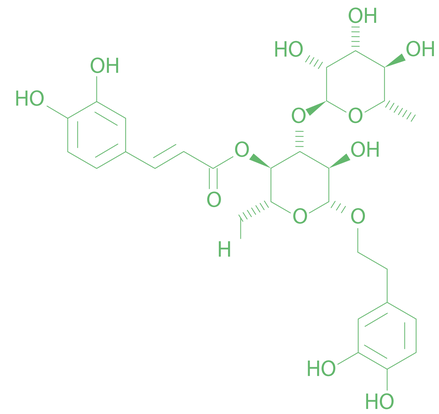
Lippia citriodora

Plantago lanceolata

Verbascoside is a phenylethanoid glycosides.
In vitro and *in vivo* tests shown several biological activities:

- Antimicrobic
- Antioxidant
- Anti-inflammatory
- Antispasmodic

From the union of Verbena and Plantain a new studied botanical blend titrated in Verbascoside, a phenylethanoid glycosides.



Titred 5% varbascoside and 2% aucubin

Clinically tested

Traditional extraction

Granulated extract

COX-2 INHIBITION

Botanical informations

Lippia citriodora, known even as Verbena is a plant of Lippia genus.

Plantago lanceolata is a very well known plant, found in Europe, western Asia and northern Africa.

Phytocomplex content

Verbena: is mainly rappresented by terpenoids and polyphenols like Verbascoside.

Plantago: presents a wide range of molecular families such as flavonoids, polyphenols including Verbascoside, iridois glycosides (aucubin and catalpol).

Phytotherapic application

Verbena: The benefical effects of this plant for human health are very well known to South America indigenous people and to CTM (Chinese Traditional Medicines) that use the plant as treatment for respiratory disease.

Plantago: in Canary islands, this variety of plantain is traditionally used to treat renal and urinary disorders. It has important applications even in respiratory disorders and as anti-inflammatory.

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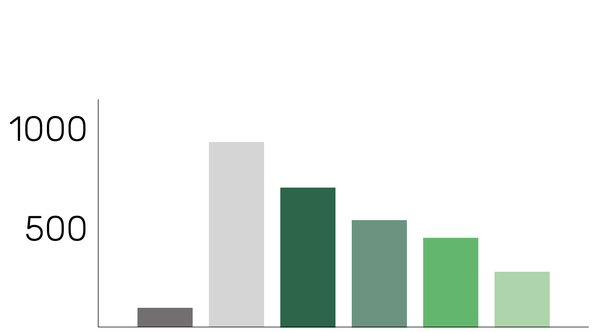
In vitro efficacy

Verbascox® titrated in verbascoside (≥5%) and aucubine (≥2%).
Cells: Human neutrophiles exposed to LPS.

Orthopedic application

Efficacy and safety comparison between Verbascox®, a branded plant extract that can inhibit the human cyclooxigenase-2, and Celecoxib in patients with knee osteoarthritis.

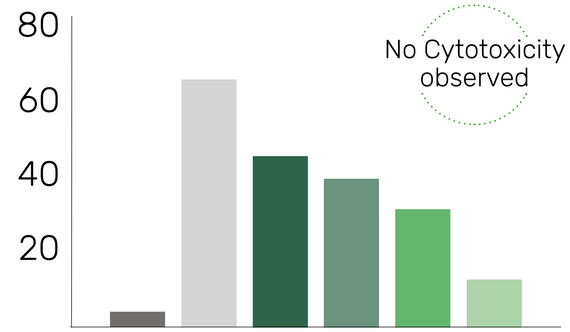
- Control
- Cells exposed to LPS
- Cells exposed to LPS + Verbascox 1%
- Cells exposed to LPS + Verbascox 3%
- Cells exposed to LPS + Verbascox 5%
- Cells exposed to LPS + Celecoxib 1%



COX-2 expression

RT-PCR assay

COX-2 INHIBITION COMPARABLE WITH CELECOXIB



PGE2 concentration

RT-PCR and immunological assays for PGE_2

DOSE DEPENDENT INHIBITION OF PGE2

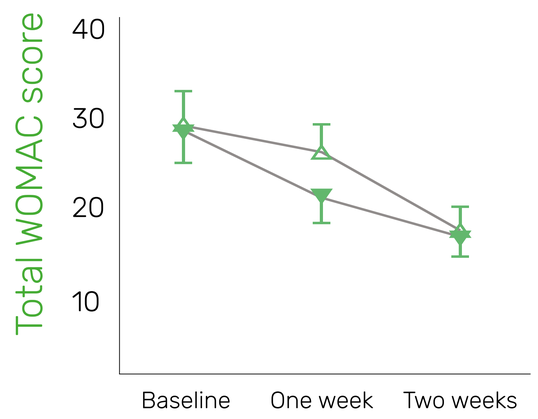
Clinical Evidences

Efficacy and safety comparison between **Verbascox®**, that can inhibit the human cyclooxigenase-2, and Celecoxib in patients with knee osteoarthritis.

Volunteers: 150 patients
Conditions:
- Control group (n=50) no treatment
- Verbascox® group (n=50) 800 mg/day
- Celecoxib group (n=50) 200 mg/day

Duration of tratment:
2 weeks

Clinical endpoint:
Evaluation of the pain through the VAS pain score, WOMAC score, serum P substance evaluation.



Conclusions

Oral supplementation with **Verbascox®** (800 mg/day) in patients with mild-to-moderate OA of the knee is as effective and safe as a standard therapeutic dose of celecoxib in terms of pain relief and improvement in functional capacity after a 2-week treatment course, although celecoxib demonstrated a quicker efficacy.