



## Review on in Vivo Anti-Inflammatory Activity of Anthocynine From A Fruit of Chrysobalanus Icosa Linn

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### Abstract

The genus Chrysobalanus belongs to a class of medicinal plants used to treat and cure various ailments in the orthodox medical system, including for nutritional purposes that have long been used in various medical systems. It is an evergreen shrub or bushy tree seen as an exotic species (10). Few secondary metabolites were isolated from the fruits, leaves, vapors, roots, and seeds of Chrysobalanus icaco linn (C.I.L.) (4), and research has focused on phenols, anthocinins, alkaloids, and terpenoids (4). These secondary metabolites become diseases such as inflammation, blood sugar, obesity, cancer, etc. Increases the anti-inflammatory activity of c.i.l. However, the fruit and steam bark contain anthocinins that have anti-inflammatory properties (1). (dose: aqueous/200,400 mg/kg) (4).

### Introduction:

Chrysobalanus icoca linn (C.I.L.) is a member of the Chrysobalanaceae (3) family, found mainly in Brazil, West Africa and South America (10). c.i.l. It has few side effects and is used for various diseases, therapeutic activities. Also called C.i.l. Avagel (3). The Chrysobalanaceae family consists of 17 genera and about 525 shrub species (2). Various uses of plants are medicinal, nutritional and food. Some of the plants used have medicinal properties such as steam, bark, leaves, roots and fruits. However, the current pharmacological treatment of drugs to patient lifestyles has several side effects, including: We therefore examine the effect of c.i.l. on its anti-inflammatory activity.

### Methodology :

Search for reviews after October 2022 by scientific name chrysobalanus icoca linn. Data selection on Google, scholar.com, science direct, Wikipedia, web of science, ncbi. Studies are chosen when the chemical aspect opts for the in vivo or in vitro evaluation of the anti-inflammatory pharmacological activity of the secondary metabolite anthocyanins obtained from the fruit and steam bark.

#### 1. Relationship of inflammation with metabolic syndrome (Obesity) :

Obesity is considered an inflammatory condition. The concept of proinflammatory conditions is part of the metabolic syndrome because of the reactive proteins associated with metabolic syndrome risk factors.

#### 2. Relationship of inflammation with Diarrhea :-

A group of diseases that cause inflammation, pain, and swelling of the large and small intestines. IBD includes Crohn's disease and ulcerative colitis, which cause diarrhea (5).

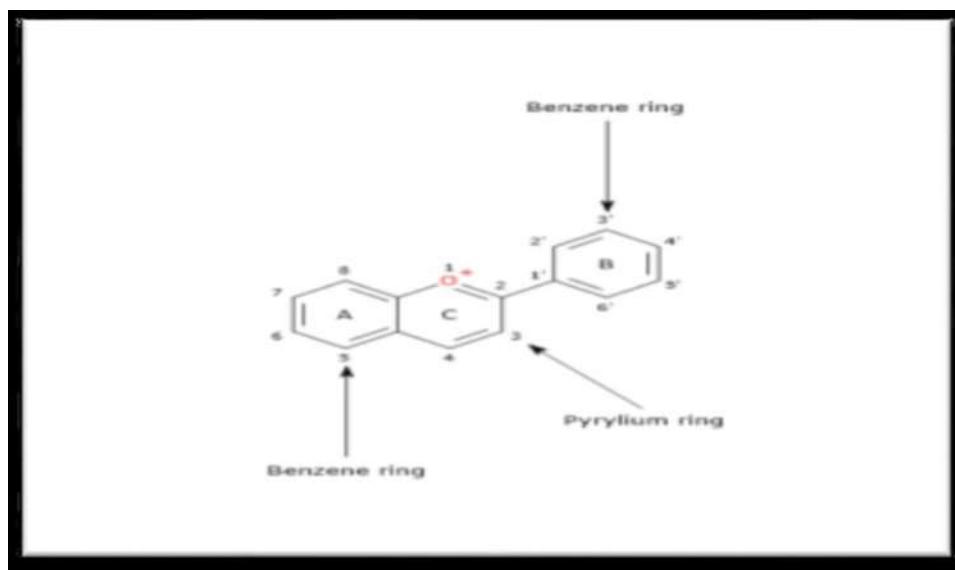
#### 3. Relationship with rhumetoid arthritis (R.A)

It is an autoimmune disease that attacks soft tissue causing inflammation (redness, swelling, heat) and a painful condition in patients. (3)

### ANTHOCYNINE:

Chemical formula: C<sub>15</sub>H<sub>11</sub>O (9)

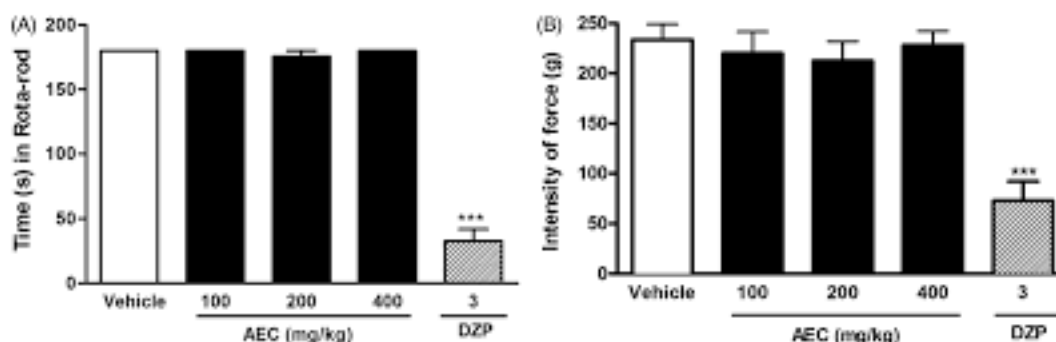
Structural formula : (9)



### Discussion :-

This study was conducted in Wistar rats (190–200 kg) (4) using the writhing test (3). Indomethacin and acetylsalicylic acid drugs are used. Samples were made from dried bark and fruit. Aqueous extract of c.i.l. Extracted using formula (4). Increased vascular permeability by acetic acid is known to induce inflammation by releasing mediators such as pge2, histamine, il6 and il8. The release of vasoactive amines and prostaglandins is stopped by administering a dose of 400 mg/kg of aqueous extract of c.i.l. (4)

### Graphs :



Effect of aq.extract of C.L.L. leaves 100,200,400 mg/kg . A) Rotarod (4)

### Conclusion :

Anti-inflammatory effects of secondary anthocinin metabolites from the fruit of *Chrysobalanus icaco* linn.

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