

Review of traditional / modern usage, photochemistry, essential oils / extracts and pharmacology of *Embelia ribes* Burm

Abstract

Review of traditional / modern usage, photochemistry, essential oils / extracts and pharmacology of *Embelia ribes* Burm. Also known as Vedanta in Ayurveda (*E. ribes*, Myrsinaceae), it has been shown to have significant therapeutic effects under several conditions, and its major bioactive ingredient, embelin, is an innovative drug. It has the potential for treatment to be converted into. It's been getting a lot of interest lately. In this study, a higher level of understanding, awareness, and comprehensive understanding of the traditional usage, photochemistry, and pharmacological properties of *E. ribes* over the last few decades (February 1965 to June 2021).[1] Providing knowledge and research on essential oils from *E. Ribs* with great potential for antioxidant and anti-inflammatory properties.

Introduction

Embeliaribes Burm is a wood shrub of the family Myrsinoideae commonly known as Vedanta, which includes analgesic, repellent, antioxidant, antibacterial, ant diabetic, anticancer, antihyperlipidemic and wound healing effects It has been used in traditional medicine because of its observed effects, and has anti-sperm-forming activity etc. It is a plant that is widely distributed in Cambodia southern China, India, Laos Malaysia, Sri Lanka, Thailand, Vietnam, etc. In ripe fruits, the spherical fruits are dark red to almost black, with small beak-shaped protrusions on the top and five-leafed calyxes. The thin epidermis of the outer pericarp is warty, and the moderately wide monocarp consists of large plate-like parenchymal tissue, widely scattered clusters of sclerosis, and fibrous vascular bundles. Simple druse crystals of calcium oxalate and starch granules (oval) have also been identified. A layer of pyramidal sclerosis forms the inner pericarp[2]. The inner pericarp, which contains a single seed, is surrounded by stone inner pericarp. The roots of the seeds are indented indenters of endosperm and ruminant endosperm, mottled with tan dots.

Methodology

A thorough literature review was conducted to provide an overview of the pharmacological activity of *E. ribes* and highlight the antioxidant capacity of essential oils, their traditional uses, and photochemistry. From February 1965 to June 2021, we used academic electronic databases such as. The medical term was used for the search in PubMed. Keywords were searched individually and in combination with the Boolean operator AND. The PRISMA flowchart in Figure 1 illustrates a previously published information selection methodology using Pageetal. *E.ribes* Essential Oils / Extracts and Nanoparticles[3].

Aqueous Extracts

Several experimental studies have been conducted to evaluate the correlation between photochemistry and pharmacology of *E. ribes* plant compounds, and the importance

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of essential oils is increasing with the development of analytical methods. In 2006 scientists from the Faculty of Pharmaceutical and Botanical Sciences at Hundred University, primarily in New Delhi, India, obtained botanically certified dried fruit of *E. Ribes* (voucher sample number UB 2) purchased at the local market. The average yield of aqueous extract of *E. ribes* was about 5.261%. Because previous studies showed *E. Ribes* were extracted at doses of 100 and 200 mg / kg body weight and the resulting aqueous extract of *E. ribes* was diluted with Tween 80 and orally administered to adult male Westar albino rats. Standardization of *E. ribes* aqueous extract is performed using standard chemical tests used to perform preliminary phytochemical screening of *E. ribes* fruit aqueous extract for detection of plant constituents. It was done[4-5]. The extract contained essential oils, alkaloids, proteins, flavonoids, carbohydrates phenolic components saponins, and compounds believed to be responsible for their antioxidant properties.

Ethanol extract

The leaf ethanol extract was used to isolate the plant compound embelin. The ethanol extract was evaluated on a silica gel chromatography column and eluted with methanol and chloroform. The elution fraction was analysed using thin layer chromatography (TLC) they were also divided into five factions. The higher concentrations measured in Fraction 2 were recrystallized from chloroform, producing orange-red needle-like aromatic molecules. Quinones have been qualitatively studied in crystalline compounds.

Pharmacological properties:

Ethanol leaf extracts isolated from *E. ribes* (30 mg / ml) and embelin (4 mg / ml) were tested for wound healing activity in albino rats. The wound healing activity of ethanol extract and embelin proved to be significant compared to flamisetin (standard skin ointment). The drugs tested showed faster wound epithelialization with higher wound shrinkage, higher tensile strength and collagen formation. Histopathological examination showed improved cross-linking of collagen fibers and lack of monocytes [6-7].

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