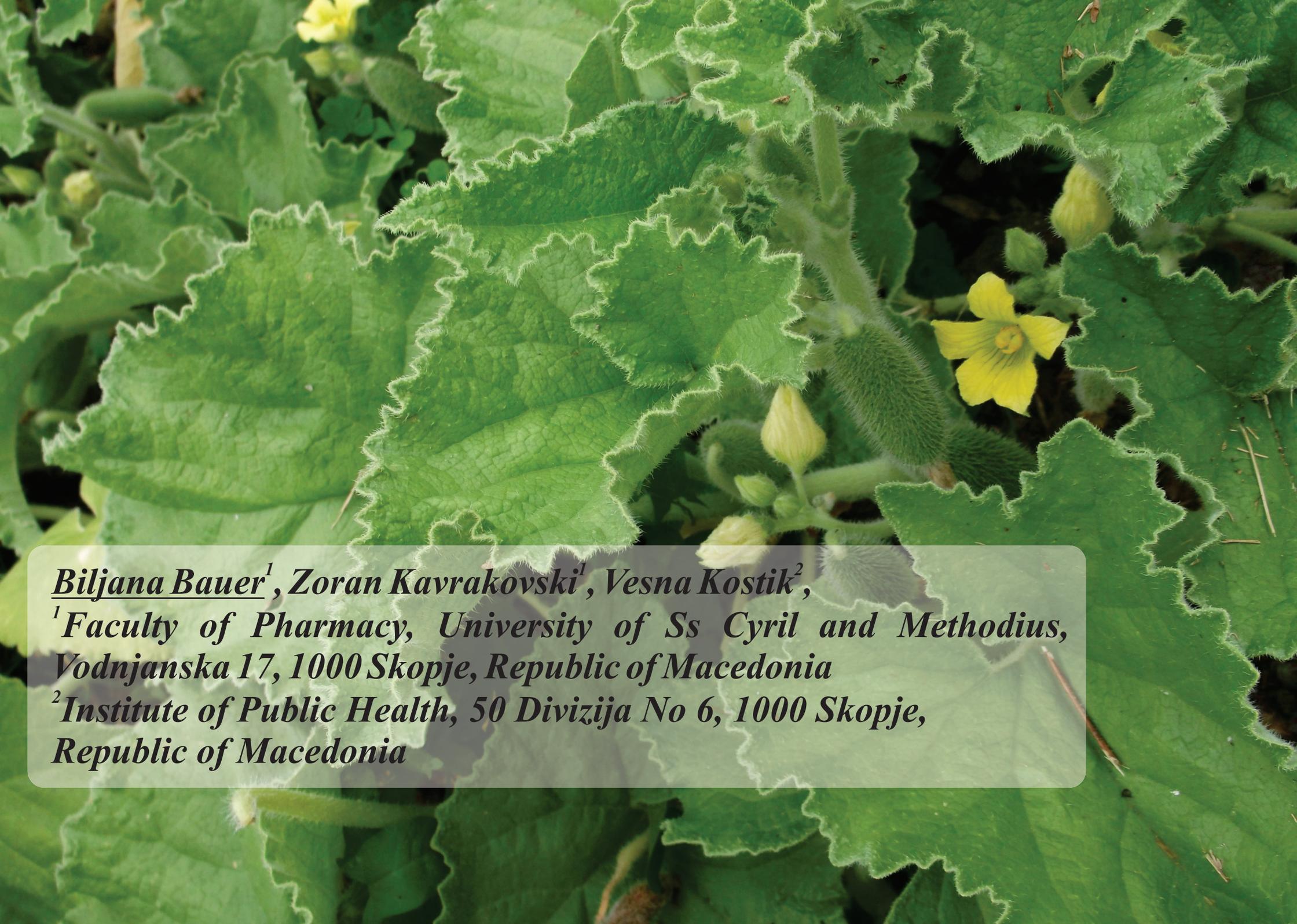




**AN ETHNOPHARMACOLOGICAL
AND TOXICOLOGICAL REVIEW OF
Ecballium elaterium (L.) A. Rich.**

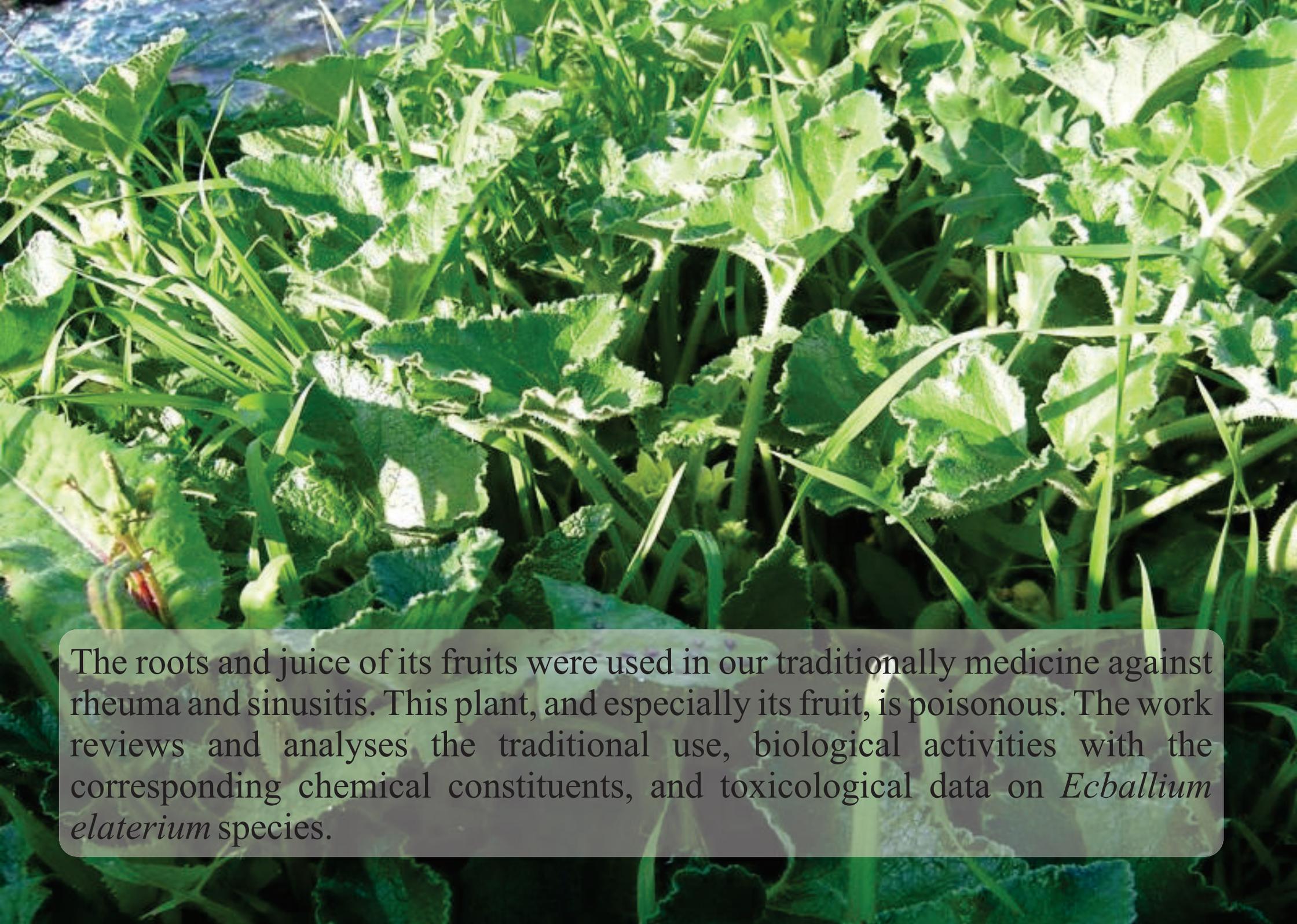


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Ecballium elaterium (L.) A. Rich. (known as squirting or exploding cucumber, луда краставица, дива краставица) is a weedy plant that belongs to the Cucurbitaceae family.

Is a perennial herb growing to 15-60 cm. The flowers are monoecious, individual flowers are either male or female, but both sexes can be found on the same plant. It is in flower from Jun to August, and the seeds ripen from Aug to September. It is native to Europe, northern Africa, and temperate areas of Asia



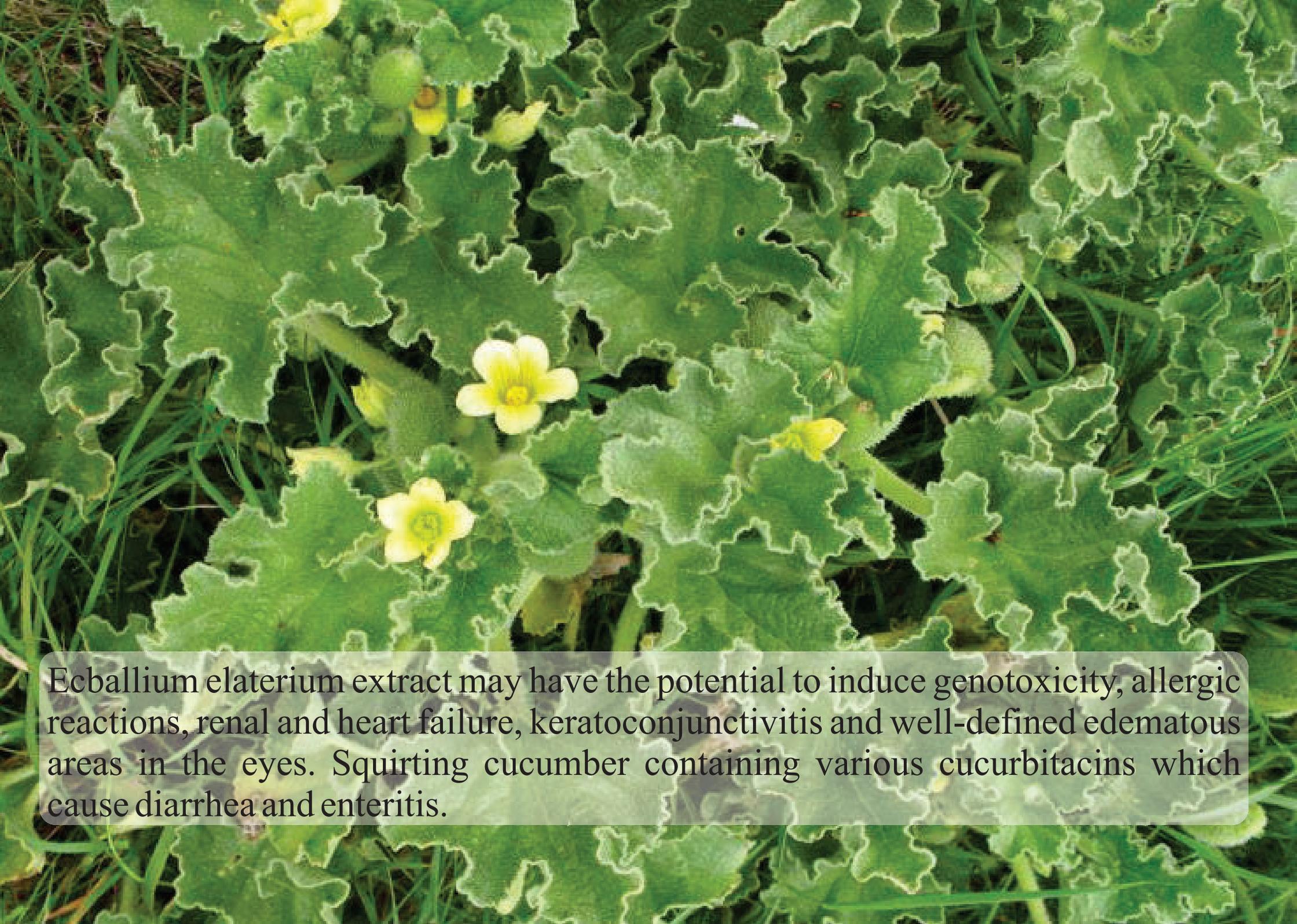
The roots and juice of its fruits were used in our traditionally medicine against rheuma and sinusitis. This plant, and especially its fruit, is poisonous. The work reviews and analyses the traditional use, biological activities with the corresponding chemical constituents, and toxicological data on *Ecballium elaterium* species.



Data regarding squirting cucumber was collected using electronic databases and library search for selected peer-reviewed articles. Additional information on traditional use and botany was obtained from published books. The review encompasses literature, mainly regarding biological activity and toxicological data, from 1950 until 2013.



Ecballium elaterium has been used in Asian, and European traditional medicine mainly against inflammation, treatment of epilepsy, treating malaria, rhinosinusitis in various forms. In vivo and in vitro testing of plant extracts and isolated compounds determined diverse biological activities including anti-inflammatory and antihepatotoxic activity. Cucurbitacin B from *Ecballium elaterium* has a significant anti-inflammatory activity and preventive and curative effects against CCl₄-induced hepatotoxicity. Immunomodulatory activity was observed on cucurbitacin E isolated from *Ecballium elaterium*. In the ancient world it was considered to be an abortifacient.



Ecballium elaterium extract may have the potential to induce genotoxicity, allergic reactions, renal and heart failure, keratoconjunctivitis and well-defined edematous areas in the eyes. Squirting cucumber containing various cucurbitacins which cause diarrhea and enteritis.

A close-up photograph of a plant stem, likely Ecbalium elaterium, showing its characteristic dense covering of fine, white, spreading hairs. The stem is green and appears to have small, yellowish-green, pointed structures or leaves emerging from it. The background is blurred, showing more of the plant's foliage.

CONCLUSION

Exposure to the juice of *Ecbalium elaterium*, mainly in its undiluted form, may cause irritation of mucous membranes, supposedly of inflammatory nature.

Patients exposed orally or intranasally should be closely followed for upper airway obstruction.

Patients exposed ocularly should have their eyes promptly irrigated to prevent corneal and conjunctival injury.