

Chemicals in Garcinia plants of northeast could be beneficial for humans, finds study

November 12, 2019

The “volatile chemicals” were found in the leaves of six species of Garcinia that were studied for the first time—Garcinia assamica, G arcinia dulcis, G arcinia lanceifolia, G arcinia morella, G arcinia pedunculata and G arcinia xanthochymus.



Nurseries are now raising different species of Garcinia as a commercial crop, says Assam Forest Department officer

Chemicals in certain plants of the northeast are bad for herbivores but could be good for humans, says a new botanical study.

The “volatile chemicals” were found in the leaves of six species of Garcinia that were studied for the first time. These species are *Garcinia assamica*, *Garcinia dulcis*, *Garcinia lanceifolia*, *Garcinia morella*, *Garcinia pedunculata* and *Garcinia xanthochymus*.

The study by four plant specialists, including Assam Forest Department officer Jatindra Sarma, has been published in the latest issue of the US-based *Natural Product Research*.

The other researchers are Lekshmi N. Menon and K.B. Rameshkumar of Thiruvananthapuram’s Jawaharlal Nehru Tropical Botanic Garden and Research Institute and P.S. Shameer of Indian Council of Agricultural Research’s Central Tobacco Research Station in Dindigul.

The genus Garcinia with some 250 species of trees and shrubs is distributed in southeast Asia, the Indian subcontinent and tropical Africa. The Indian subcontinent has 44 of this species, with the northeast hosting 19 of them.

Of these, *Garcinia assamica* is a newly discovered species. Only a few trees were recorded from areas near western Assam’s Manas National Park.

“We identified 64 volatile compounds from the essential oils obtained by hydro-distillation from the six Garcinia species. The major compounds were (E)-caryophyllene, a-copaene and b-selinene,” Mr. Sarma told *The Hindu*.

The compositions of North East Garcinia species were compared with those of the Western Ghats species. The former were found to have (E)-caryophyllene as the major chemical compound found to retard the growth of other plants in the vicinity and repulse herbivore attacks.

“This compound possesses anti-inflammatory, anti-carcinogenic, anti-fibrotic, anxiolytic, anaesthetic, anti-cancer, antioxidant, antimicrobial and other biological activities that can be studied further for medicinal use,” Mr. Sarma said.

Earlier studies across the world had established the genus Garcinia as a source of therapeutically active substances and possessing essential oils exhibiting antioxidant and anti-inflammatory properties.

Oils rich in a-copaene compounds from the north-eastern Garcinia species were also found to have human-friendly properties similar to (E)-caryophyllene.

“Given their tremendous health benefits, nurseries are now raising different species of Garcinia as a commercial crop. The fruit of this plant has been used traditionally in Assam for controlling dysentery and diarrhoea. It has the potential for marketing as an anti-obesity agent,” Mr. Sarma said.

SOURCE: -<https://www.thehindu.com/sci-tech/science/chemicals-in-garcinia-plants-of-northeast-could-be-beneficial-for-humans-finds-study/article29951356.ece>