

Medicinal Effects and Mechanism of Capsaicin in Other *Capsicum Sp.* Vs *Capsicum annuum* L.

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From National Conference on Interdisciplinary Research and Innovations in Biosciences, NATCON -2018.

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American J of Bio-pharm Biochem and Life Sci 2018 January, Vol. 4 (Suppl 1): OP01

ABSTRACT

Capsaicinoids are the major constituent of all the capsicum species. The most commonly occurring capsaicinoids are capsaicin (69%), dihydrocapsaicin (22%), nordihydrocapsaicin (7%), homocapsaicin (1%) and homodihydrocapsaicin (1%). When compared to other compounds, capsaicin plays an active role and is an important component of chilli pepper which belongs to the plant species capsicum. These compounds form the secondary metabolite of capsicum sp.. Capsaicin is chemically noted as 8-methyl-N-vanillyl-6-nonenamide. Pure capsaicin is hydrophobic, colourless, highly pungent and crystalline to waxy substance. Capsaicin in large quantity is present in the placental tissue, the inner membrane and to a lesser extent in the other fleshy part of the fruits of plants in the genus capsicum. The seeds themselves will not produce capsaicin, although higher amount of capsaicin is found in the whiter pith of the inner walls, where the seeds are attached. The health benefits of the compound capsaicin include antidiabetic, antimicrobial, antifungal, anticholesterol, antioxidant and anti-inflammatory. The health benefits of capsicum include relief from stomach issues, back pain, muscle spasms, head aches, cancer, skin ageing, peptic ulcer, lower risk of cardiovascular diseases and diabetes. It also has anti-inflammatory and analgesic properties and also provides relief from pains related to arthritis. Capsicum is an ancestral species that is popularly known and consumed world wide. But the interesting fact is about its medicinal benefits which is still unknown. Though capsaicin is one of the active compounds in capsicum sp., it is present in lesser amount in capsicum annuum (sweet pepper) which is recognised by its flavour. It is reported that capsaicin in smaller dosage to human model increases the secretion of hydrogen ion in the stomach. This leads to ulcer, acidity, gastro intestinal dysfunctioning and in some cases carcinoma of the stomach. This review paper suggests that for the cancer treatment and for other gastro intestinal dysfunctioning, capsicum annuum L -sweet pepper which is low in capsaicin content are more effective in treatment than other capsicum variety which has high amount of capsaicin content.