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Ethnopharmacological Note

### **Anti-cancer use of *Eupatorium odoratum* L. (Asteraceae) leaves by a folk medicinal practitioner in Satkhira district, Bangladesh**

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*Eupatorium odoratum* L. (Asteraceae) is a woody herbaceous perennial plant found growing in the wild in Bangladesh. In English, the plant is known as bitter bush, while in Bangladesh, the plant is known as 'jarmany lota'. In a recent ethnomedicinal survey in 2016, it was observed that a female folk medicinal practitioner (FMP) named Mst. Ruma Khatun, age 37 years, and residing in Borokhordo village, Kolaroa in Satkhira district, Bangladesh, used leaves of the plant to treat tumours and cancers. The FMP, by her own admission, had been practicing folk medicine for the past 12 years and treating tumour and cancer patients for the last 3 years. Tumours were diagnosed by her on the basis of visible swellings on the body of patients and which swellings appeared suddenly and grew progressively with time. Cancer patients (cancer was diagnosed by allopathic doctors after proper examination in modern diagnostic centres) came to her when they could no longer afford the costs of allopathic treatment. Specimen of the plant, after being shown by her, was identified at the Bangladesh National Herbarium (Accession Number 43728). Briefly, the FMP's method of treatment consisted of collecting the leaves of the plant in the morning, crushing the leaves between two pieces of stone to obtain juice, which was collected and filtered through a piece of clean cloth. One glass of juice was orally taken by the patients thrice per week in the early morning on an empty stomach. Patients were told to take the juice on Saturday, Sunday and Monday for three consecutive weeks. The interviewers also met two patients, one female diagnosed with breast cancer, and a male patient diagnosed with throat cancer. Both reported remission of their cancers (as determined allopathically) following the FMP's treatment. The Marma tribe of Bandarban district, Bangladesh reportedly use root of the plant to treat stomach pains resulting from gastric ulceration (Rahmatullah et al., 2009). Tribals in Jalpaiguri district, West Bengal, India, use leaf sap to stop bleeding (Bose et al., 2015). The Temuan tribe of Ayer Hitam Forest, Selangor, Peninsular Malaysia also use leaf sap to treat wounds and stop bleeding (Hanum & Hamzah, 1999). Folk medicinal practitioners in Mirzapur village, Dinajpur district, Bangladesh, and the Tripuri tribe in Tripura State, India, also use leaf juice for cuts and wounds (Rahmatullah et al., 2010; Majumdar & Datta, 2007). Thus, the FMP's use of the plant to treat tumours and cancer appears to be a novel use. On the other hand, a few scientific studies have shown that the plant merits further studies towards discovery of component(s) for treatment of several types of cancer (Harun et al., 2012; Tiwari et al., 2015).



### Declaration of Conflict of Interest

No conflict of interest associated with this work.

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Figure 1. *Eupatorium odoratum*