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Ethnopharmacological Note

Multiple folk medicinal uses of *Tamarindus indica* L. plant parts

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Tamarindus indica L. (Fabaceae) is a tree, which can be found in various countries in tropical regions of Africa and Asia. It can be found in the wild but is also cultivated for its edible pods, which are used in cuisines. Various parts of the tree also have medicinal uses. In English the tree is known as the tamarind tree, while in Bangladesh it is known as 'tetul'. Folk medicinal practitioners (FMPs) in Pabna district of Bangladesh have been reported to use roots of the plant for treatment of chest pain with respiratory difficulties (Kamal et al., 2014). In several villages of Patuakhali district, Bangladesh, leaf juice is boiled and taken orally for mucus as a home remedy (Rahman & Rahmatullah, 2015). In Shitol Para village of Jhalokati district, Bangladesh, leaves are used to stop bleeding due to piles (Rahmatullah et al., 2010). FMPs in Dhamrai area of Dhaka district, Bangladesh use leaf juice of the plant to treat dysentery and burning sensations during urination (Rahmatullah et al., 2009a). A folk herbalist in Tangail district, Bangladesh, reportedly used fruits of the plant to treat blood dysentery (Mahnoor et al., 2015). In two villages of Narail and Chuadanga districts, Bangladesh, FMPs use seeds of the plant to treat diabetes (Biswas et al., 2011). The Garo tribal community residing in Netrakona district, Bangladesh, use fruits and seeds of the plant to treat fever, vomiting, and asthma (Rahmatullah et al., 2009b). A FMP of Narayanganj district, Bangladesh has been reported to use fruits of the plant to treat constipation, loss of appetite, chronic fever, diarrhoea, and dysentery (Karim et al., 2011). The Mandai tribe of Bangladesh use seeds of the plant to treat diabetes and debility (Malek et al., 2012). To our knowledge, very little or no ethnomedicinal surveys have been carried out in Gopalganj district of Bangladesh. During a recent survey to document the medicinal plants used by the FMPs of the district, it was observed that a FMP named Tinnat Thakur was using various parts of the tree to treat a wide variety of diseases, and some of the phytotherapeutic uses were novel. Since *T. indica* is very common throughout Bangladesh, a specimen of the tree was just confirmed by the FMP and several villagers of Gopalganj district. Practically all members of the survey team were also familiar with the tree. However, a specimen was deposited with the Medicinal Plant Collection Wing of the University of Development Alternative (Accession Number 675/2016). The FMP used the plant in multiple ways. For treatment of diabetes, jaundice, and to lower blood cholesterol, powder obtained from dry young leaf and flower was taken orally. For treatment of indigestion, half spoonful of crushed seed powder was taken orally. For treatment of arthritis, gall bladder disorders, chronic dysentery, aphthous ulcer, and urination problem, juice obtained from crushed leaf was taken orally. For blood purification, seed powder was mixed with few pieces of seeds of *Nigella sativa* and taken orally with honey. For burning sensations on hands and feet or whole body due to allergy, seed pulp was soaked in water and then crushed in a copper pot. The resultant powder was then applied on affected areas of the body. It is our expectation that a number of



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novel uses of parts from *T. indica* as gathered from the Gopalganj FMP can help scientists in conducting further experiments towards validating these uses and towards discovery of new medicines.

Declaration of Conflict of Interest

No conflict of interest associated with this work.

References

Biswas KR, Ishika T, Rahman M, Swarna A, Khan T, Monalisa MN, Seraj S, Rahman MA, Mou SM, Rahmatullah M (2011) A survey of scientific literature on anti-diabetic activity in medicinal plants used by folk medicinal practitioners of two villages in Narail and Chuadanga districts, Bangladesh for treatment of diabetes. *Am.-Eur. J. Sustain. Agric.* 5(2): 196-208.

Kamal Z, Bairage JJ, Moniruzzaman, Das PR, Islam MT, Faruque MO, Islam MR, Paul PK, Islam MA, Rahmatullah M (2014) Ethnomedicinal practices of a folk medicinal practitioner in Pabna district, Bangladesh. *World J. Pharm. Pharmaceut. Sci.* 3(12):73-85.

Karim MS, Rahman MM, Shahid SB, Malek I, Rahman MA, Jahan S, Jahan FI, Rahmatullah M (2011) Medicinal plants used by the folk medicinal practitioners of Bangladesh: a randomized survey in a village of Narayanganj district. *Am.-Eur. J. Sustain. Agric.* 5(4):405-414.

Mahnour N, Moonmoon IF, Saha T, Mahamud K, Biswas S, Islam E, Rahmatullah M (2015) Medicinal plants of a folk herbalist in Tangail district, Bangladesh. *Am.-Eur. J. Sustain. Agric.* 9(4): 74-82.

Malek I, Islam T, Hasan E, Akter S, Rana M, Das PR, Samarrai W, Rahmatullah M (2012) Medicinal plants used by the Mandais – a little known tribe of Bangladesh. *Afr. J. Tradit. Complement. Altern. Med.* 9(4):536-541.

Rahman S, Rahmatullah M (2015) Medicinal plant home remedies in several villages of Patuakhali district, Bangladesh. *J. Chem. Pharmaceut. Res.* 7(6):147-151.

Rahmatullah M, Mukti IJ, Haque AKMF, Mollik MAH, Parvin K, Jahan R, Chowdhury MH, Rahman T (2009b) An ethnobotanical survey and pharmacological evaluation of medicinal plants used by the Garo tribal community living in Netrakona district, Bangladesh. *Adv. Nat. Appl. Sci.* 3(3):402-418.

Rahmatullah M, Das AK, Mollik MAH, Jahan R, Khan M, Rahman T, Chowdhury MH (2009a) An ethnomedicinal survey of Dhamrai sub-district in Dhaka district, Bangladesh. *Am.-Eur. J. Sustain. Agric.* 3(4):881-888.

Rahmatullah M, Nuruzzaman M, Hossan MS, Khatun MA, Rahman MM, Jamal F, Harun-Or-Rashid M, Nasrin D, Seraj S, Jahan R (2010) An ethnomedicinal survey of folk medicinal practitioners of Shitol Para Village, Jhalokati District, Bangladesh. *Adv. Nat. Appl. Sci.*, 4(1):85-92.



Figure 1. *Tamarindus indica* L.