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Ethnopharmacological Note

### **A novel combination of phytotherapy and zootherapy for treatment of puerperal fever**

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Puerperal or postpartum infection occurs when bacteria infect the uterus and surrounding areas after a woman gives birth. Even in a highly developed country like the United States of America, it has been said that about 10% of pregnancy related deaths are caused by infections. The causative microorganisms are usually *Staphylococcus* or *Streptococcus* and the most common symptom of such infection is fever, also known as ‘puerperal fever’ in English and ‘sutika jor’ in Bengali. Puerperal fever is common in Bangladesh, particularly in the rural areas, because instead of well-trained doctors and hospitals delivery usually takes place at home under unhygienic conditions and attended by traditional birth attendants (Goodburn et al., 2000). Bangladesh has over 86,000 villages, and the vast majority of villages, if not all, have at least one folk medicinal practitioner (FMP) catering to the therapeutic needs of the village population. Most folk medicinal practitioners use medicinal plants for treatment of a diverse array of diseases ranging from simple gastrointestinal disorders to complicated diseases like diabetes or cancer (Sultana and Rahmatullah, 2016; Akter et al., 2017). *Musa paradisiaca* L. (Musaceae) is a type of banana more known by the English name plantain. In Bangladesh, it is known as kanch kola (literally unripe banana), because unripe fruits are consumed in the cooked or mashed form, unlike other bananas (like *Musa acuminata* Colla) fruits of which are consumed when ripe. The fruits of *M. paradisiaca* L. are considered medicinal in Bangladesh, and one of the most common home remedies is consuming the unripe fruits in cooked form during gastrointestinal disorders. Leaf juice is taken orally to keep body healthy, and inner portion of stems soaked in a glass of water overnight followed by drinking the water the following morning to keep blood glucose under control in diabetic patients (Shahnaj et al., 2015). Ripened fruits are taken by the Rajbanshi tribe of Coochbehar district, West Bengal, India, for stomach trouble (Roy, 2015). Tribes of Rewa district, Madhya Pradesh, India, take decoction of stem to treat leucorrhea (Shukla et al., 2010). In an ethnomedicinal survey conducted in Paschim Boragari Union, Domar, Nilphamari district, Bangladesh, we observed a folk medicinal practitioner (FMP), named Rafiqul Islam using a novel combination of phytotherapy and zootherapy to treat puerperal fever. The FMP was male and aged 50 years. In his treatment method, a plantain is roasted and a fresh fish belonging to the *Puntius* species is put inside the plantain and the plantain containing the fish then taken orally. This is done only once and the FMP claimed that puerperal fever will be cured within 7 days. Since plantain is so common in Bangladesh, it was not identified at the



Bangladesh National Herbarium. There are several species within the *Puntius* genera (Figure 1 & 2) in Bangladesh, which are for the most part small in size and ranges between 4 and 53 cm. Two of the most common species and still quite abundant in rural water bodies are *Puntius sophore* (English: pool barb, Bengali: jat punti) and *Puntius terio* (English: one spot barb, Bengali: taka punti). The FMP advised partaking of any of these two species along with a roasted plantain (Figure 3). The use of *Puntius* species in indigenous medicine has been reported before. Fermented whole body of *P. sophore* is crushed into a paste with cooked rice; the paste is taken before meal for 6/7 days as remedy for plague and gastric ulcer by ethnic groups of Bishnupur district in Manipur, northeast India (Chanu et al., 2014). On the other hand, in cases of lesions of tongue, a section of the Santal tribe in Bangladesh does not eat several fish species, including *Puntius punctatus* (Rahmatullah et al., 2012).

**Keywords:** medicinal plants *Musa paradisiaca*, puerperal fever; *Pontius*

### Declaration of conflict of interest

No conflict of interest associated with this work.

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Figure 1. *Puntius sophore*



Figure 2. *Puntius terio*



Figure 3. Plantain