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Ethnopharmacological Note

Note on novel uses of *Nigella sativa* seed oil for treatment of cancer and Hepatitis D

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Nigella sativa L. is an annual flowering plant belonging to the Ranunculaceae family. It is known in English as black cumin and in Bangladesh as 'kali jira'. The plant is cultivated in Bangladesh for both culinary and medicinal uses. In various localities of Bhopal district, India, the seeds of the plant are used to treat stone diseases (Agarwal and Varma, 2012). In Moulvibazar district of Bangladesh, the Nag clan of the Rai Ghatual tribe use seeds of the plant in a polyherbal formulation to treat fever and loss of appetite (Das et al., 2013a). The Tai-Khamyangs of Assam, India, use the seeds to treat gastric disorders (Sonowal and Barua, 2011). A folk medicinal practitioner in Manikganj district, Bangladesh uses the seeds to treat skin diseases and constipation (Shahnaj et al., 2015). Seeds are used for getting relief from pain during menstruation by the Bauri tribal community of Moulvibazar district, Bangladesh (Das et al., 2013b). Folk medicine is very common in Bangladesh since anybody can become a folk medicinal practitioner (FMP) without having to undergo any studies or any registration. As such FMPs are numerous in the country and can be found in practically every village and urban areas. In a recent survey conducted amongst randomly selected folk medicinal practitioners (FMPs) in Noakhali district, a practitioner was observed to use seed oil from *N. sativa* to treat cancer and hepatitis D. The FMP showed the plant to us, which was later identified at the Bangladesh National Herbarium (Accession Number 43403). For treatment of cancer, 2 ml of seed oil was added to a cup of grape juice and advised to be orally taken two times daily. For treatment of hepatitis D, seed oil was advised to be added to daily diet once daily and consumed. What was interesting was that the FMP did not have any diagnostic tools for diagnosing cancer or hepatitis D. The original diagnosis was made by allopathic doctors and then patients who could not afford the costs of allopathic treatment came to him for medications. The FMP mentioned that he learnt to use this medication through trial and error. But as to why the seed oil was used for all types of cancer but only one type of hepatitis (hepatitis D) was left unanswered by the FMP. Irrespective of how the FMP obtained the novel and to our knowledge previously undocumented information from at least Bangladesh to use *N. sativa* for treatment of various types of cancers and hepatitis D, recent studies have shown that the plant can be effective against various types of cancer (Zheng et al., 2016; Majdalawieh and Fayyad, 2016). Also, while the use of *N. sativa* to treat hepatitis D still remains to be validated, the plant has reportedly proven effective against hepatitis C virus and liver complications (Barakat et al., 2013; Mollazadeh and Hosseinzadeh, 2014). This suggests that even



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though FMPs can be quite illiterate and lack any formal medical training, their knowledge obtained over years and even possibly generations, can be of scientific value towards discovery of new drugs.

Declaration of Conflict of Interest

No conflict of interest associated with this work.

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