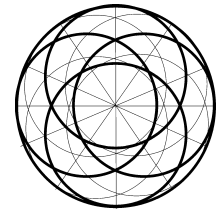




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### Hyssop (*Hyssopus officinalis* L.): a potential treatment for mustard lung

Dear Editor,

Respiratory symptoms are among the most common chronic complications of sulphur mustard. These complications, also known as mustard lung, mainly include chronic cough, dyspnoea and expectoration, and are pathologically represented as bronchiolitis obliterans.<sup>1,2</sup> Oxidative stress, inflammation and dysregulated apoptosis have been suggested as potential mechanisms underlying the pathologic effects of sulphur mustard on the respiratory system.<sup>1,2</sup>

Effective treatment options for the management of mustard-induced respiratory symptoms are very limited, and therapeutic strategies are mainly symptomatic, relying on the use of  $\beta_2$  agonists and inhaled corticosteroids. Herewith, we would like to introduce *Hyssopus officinalis* L. (hyssop) as a potential natural treatment for mustard-induced respiratory symptoms.

Hyssop has been traditionally used for the treatment of cough and asthma. Pharmacological investigations have shown that this plant can mitigate airway remodelling and inflammation, and reverse the pathological changes (e.g. mucus hypersecretion and collagen deposition) in asthmatic animals.<sup>3</sup> Moreover, several lines of evidence have supported the antioxidant properties of hyssop oil and extracts using different assays. Immunoregulatory action, as well as antibacterial, antiviral and antifungal effects, are among other properties of the plant that are relevant to relieving the symptoms, and counterbalancing the pathophysiological features of mustard lung.<sup>4-6</sup> However, clinical evidence regarding the efficacy of this plant in respiratory disorders is lacking.

Since hyssop has a long history of use in humans as a traditional herbal remedy, it is considered generally recognised as safe (GRAS). Therefore,

evaluation (under RCT conditions) of the therapeutic potential of hyssop as an adjunct to the routine treatment of mustard lung is recommended.

**Conflict of interest** None declared.

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