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Comment on: Preventive effect of *Teucrium polium* on learning and memory deficits in diabetic rats

- 1 Mahmoud Rafieian-Kopaei
- 2 Hamid Nasri

1 Medical Plants Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran

2 Department of Nephrology, Division of Nephropathology, Isfahan University of Medical Sciences, Isfahan, Iran

Corresponding Author: Hamid Nasri, e-mail: hamidnasri@med.mui.ac.ir

We read with great interest the article by Hasanein and colleagues in the *Medical Science Monitor Journal*, entitled "Preventive effect of *Teucrium polium* on learning and memory deficits in diabetic rats" [1]. They aimed to investigate passive avoidance learning and memory in control and streptozocin-induced diabetic rats treated with an aqueous extract of *Teucrium polium*. Impairment in acquisition of passive avoidance learning and retrieval of memory was seen by inducing diabetes. *Teucrium polium* treatment (200 and 400 mg/kg) improved learning and memory in control rats and reversed learning and memory deficits in diabetic rats. They concluded that *Teucrium polium* prevented the deleterious effects of diabetes on passive avoidance learning and memory. The authors suggested that antioxidant, anticholinesterase, and hypoglycemic effects of *Teucrium polium* may be involved in the obtained effects. They also concluded that *Teucrium polium* appears to be a promising candidate for memory improvement in diabetes [1]. We would like to point out a few comments about this paper. To test the possible renal toxicity of hydroalcoholic extract of *Teucrium polium*, we recently studied 100 male Wistar rats [2] divided into 10 groups of 10 each. Five groups were injected intraperitoneally (IP) with 50, 100, 150, and 200 mg/kg extracts and normal saline for 28 days and killed to examine the probable kidney damage. Five other groups were injected according to the same drug regimen, but they were killed 28 days after discontinuation of *Teucrium polium* injections to investigate possible renal complications or regeneration during recovery. After 28 days of receiving *Teucrium polium* (Phase I), renal injury were not increased in comparison with the control group. However, kidney injury, including degeneration, destruction, and vacuolization [3–5] appeared 28 days after drug cessation. We concluded that *Teucrium polium* may be associated with kidney tubular injury and that this herbal medicine should be used with caution [2]. It is well known that herbal remedies have an important role in the recovery of some disease [6–9]; however, some medicinal plants can cause renal injury. *Teucrium polium* has been widely used to control blood sugar in diabetes [7]. Hence, according to our results concerning its renal tubular cell toxicity, it needs much attention to re-evaluate its use. Indeed, information about successful effect on prevention or amelioration of a medicinal drug requires knowledge the adverse effects, mainly on kidney or liver [10–17]. In this regard, to better understand the hepatic and renal effects of *T. polium*, more experimental or clinical studies are suggested.

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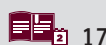
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Conflict of interest

None to declare.

Key words: *Teucrium polium* • diabetes • kidney injury

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