

## **Guggulu (Commiphora mukul) potentially ameliorates hypothyroidism in female mice.**

Panda S<sup>1</sup>, Kar A.

### **Author information**

1 Thyroid Research Unit, School of Life Sciences, D. A. University, Khandwa Road, Indore-452017 (M.P.), India.

### **Abstract**

The efficacy of guggulu, the gum resin of *Commiphora mukul* in regulating hypothyroidism was evaluated in female mice. In addition to estimating serum levels of thyroxine and triiodothyronine, hepatic 5' monodeiodinase, hepatic glucose-6-phosphatase and lipid-peroxidation (LPO), the activities of the anti-oxidative enzymes, superoxide dismutase (SOD) and catalase (CAT), were investigated. While 6-n-propyl-2-thiouracil (PTU, 10.00 mg/kg/d for 30 days) induced hypothyroidism in mice, as evidenced by a decrease in thyroid hormone concentration and in hepatic 5'D-I activity, simultaneous administration of guggulu (200 mg/kg/d for 30 days) reversed this effect, indicating its potential to stimulate thyroid function. Although in PTU treated animals a marginal increase in hepatic LPO was observed, when simultaneously treated with guggulu, it was decreased. A parallel increase in the activity of endogenous antioxidants, SOD and CAT, in the latter group indicated the safe and antiperoxidative nature of the drug. These findings suggest the possible use of guggulu in the amelioration of hypothyroidism.