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## An experimental evaluation of adaptogenic potential of standardized epipremnum aureum leaf extract (Article)

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## Abstract

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Background: Stress is a normal part of everyday life but chronic stress can lead to a variety of stress-related illnesses including hypertension, anxiety, and depression. In the present investigation, standardized leaf extract of *Epipremnum aureum* was evaluated for its anti-stress potential. Materials and Methods: For the evaluation of anti-stress activity, groups of mice (n = 6) were subjected to forced swim stress and anoxic stress tolerance test in mice 1h after daily treatment of *E. aureum* extract. Diazepam (5 mg/kg) was taken as a reference standard. Urinary vanillylmandelic acid (VMA) and ascorbic acid were selected as noninvasive biomarkers to assess the anti-stress activity and plasma cortisol, blood ascorbic acid, and weight of adrenal were measured. The 24 h urinary excretion of VMA and ascorbic acid were determined by spectrophotometric methods in all groups under normal and stressed conditions. The hematological parameters (neutrophils, lymphocytes, and eosinophils) were also determined. Results: Administration of *E. aureum* at doses of 400 and 600 mg/kg was found to be effective in inhibiting the stress induced urinary biochemical changes in a dose-dependent manner. Treatment with *E. aureum* extract prevents the rise in blood ascorbic acid and plasma cortisol. Moreover, the extract prevented the increase in weight of adrenal gland also significantly increased the anoxia stress tolerance time. Dose-dependent significant reduction in white blood cell count was observed in anoxic stress tolerance test as compared to stressed group. Conclusion: Hence, the present study provides scientific support for the positive adaptogenic effect of *E. aureum* extract. © 2017 Journal of Pharmacy and Bioallied Sciences | Published by Wolters Kluwer - Medknow.

## Reaxys Database Information

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## Author keywords

Anorexia tolerance test anti-stress cortisol Epipremnum aureum forced swimming test

## Indexed keywords

EMTREE drug terms: ascorbic acid diazepam Epipremnum aureum extract hydrocortisone plant extract unclassified drug vanillylmandelic acid

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Epipremnum aureum   experimental study   female   forced swim test  
hydrocortisone blood level   lymphocyte count   male   mental stress   mental test   mouse  
neutrophil count   nonhuman   organ weight   plant leaf   priority journal   standardization  
urinary excretion   urine level   vitamin blood level

## Chemicals and CAS Registry Numbers:

ascorbic acid, 134-03-2, 15421-15-5, 50-81-7; diazepam, 439-14-5; hydrocortisone, 50-23-7; vanilmandelic acid, 55-10-7

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