

Anti-stress Potential of PHYTOCEE®: Effect on Cortisol Release

OBJECTIVE

To evaluate the effect of PHYTOCEE® on an anti-stress biomarker, cortisol release

MATERIALS AND METHODS

Cortisol release assay

H295R cells were grown in basal medium, supplemented with 2.5% Nu-serum, ITS+ premix, at 37°C, 5% CO₂ until confluent. The cells were dissociated and appropriate cell density was prepared and incubated for 24 hrs at 37°C with 5% CO₂. The monolayer was trypsinized and the cell count was adjusted to 5 X 10⁵ cells/ml. To the each well of 96 well microtiter plate, 100 µl (50,000/well) of H295R cell suspension was added. After 24 h, the cells were incubated with PHYTOCEE® at various concentrations (5-40 µg/ml) and 10µM forskolin at 37°C in 5% CO₂ for 24 h. Post incubation, the cell supernatant was analyzed for cortisol levels by cortisol ELISA kit.

RESULTS

Effect of PHYTOCEE® on cortisol release in H295R cells

Groups	Cortisol Concentration (pg/mL)	Percent Inhibition (%)
Control	1161.80	-
Forskolin (FSK) 10 µM	2308.03	-
FSK + PHYTOCEE® (5 µg/kg)	1430.39	38.03
FSK + PHYTOCEE® (10 µg/kg)	1205.92	47.75
FSK + PHYTOCEE® (20 µg/kg)	477.92	79.29
FSK + PHYTOCEE® (40 µg/kg)	223.70	90.31

Values expressed as mean; n=3

CONCLUSIONS

Cortisol is a salient biomarker of hypothalamic pituitary adrenal (HPA) axis activation in chronic stress. PHYTOCEE® administration showed inhibition in forskolin induced cortisol release. Hence, PHYTOCEE® was proven to possess anti-stress properties.