J Bioequiv Availab, 4.3
doi: http://dx.doi.org/10.4172/0975-0851.S1.11

OMICS Group Conferences
Accelerating Scientific Discovery

3rd World Congress on
Bioavailability & Bioequivalence

March 26-28, 2012 Marriott Hotel & Convention Centre, Hyderabad, India

Anti depressant activity of Aqueous extract of Terminalia chebula fruits in rodents

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Terminalia chebula is commonly known as Myrobalan (English) belonging to the family Combretacea. It contains tannins, saponins, steroids, terpenoids, carbohydrates, flavonoids. The Anti-depressant activity of the aqueous extract of Terminalia chebula at a dose level of 100, 200 and 400 mg/kg body weight was evaluated in both the methods of Forced swim test and Tail suspension test. Acute administration of aqueous extract of Termenalia chebula at a dose of 400 mg/kg showed significant ($P < 0.01$) decrease in duration of immobility in both the methods of depression compared to control group. Whereas chronic administration of aqueous extract of Terminalia chebula at all doses (200 and 400 mg/kg) significantly ($P < 0.01$) decreased the duration of immobility in Forced swim test where as in Tail suspension test only 400 mg/kg showed significant ($P < 0.01$) decrease in duration of immobility compared to control group. The locomotor activity of the extract at a dose of 400 mg/kg body weight did not show any significant change, which indicates the decrease in duration of immobility is not due to CNS stimulant effect. Therefore the aqueous extract of Terminalia chebula may have potential therapeutic value for management of depressive disorder.

The effect of saponins from leaves of Ziziphus mauritiana, Lam on caffeine modulated GABA and Dopamine mediated sleep and anxiety

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TInsomnia is trouble falling asleep or staying asleep through the night. Emotional disorders that can cause insomnia include depression, anxiety, and posttraumatic stress disorder. The complexity of daily life in modern society frequently leads to varying degree of anxiety. Anxiety is often paired with sleep disturbances and both interact in a complex manner. Sleep problems are often included in diagnostic criteria in anxiety disorders.

In the present study we have evaluated the effect of saponins obtained from leaves of Ziziphus mauritiana, Lam. (SZM) on sleep and anxiety. The SZM was used in doses 25, 50 and 100 mg/kg. Results show that SZM increases duration of Thiopental induced sleep. In presence of anxiogen (Caffeine) SZM increasing the no. of entries and time spent in open arm and reduces the same in closed arm on elevated Plus Maze (EPM) model. It also increases the time spent in active social interaction in presence of anxiogen. Diazepam was used as standard anxiolytic drug. SZM potentiate the effect of diazepam on actophotometer and further potentiate Haloperiol induced Catalepsy.

Caffeine exhibits an anxiogenic profile in the social interaction test. It also disturbs the sleep. It is known to have some affinity for BDZ receptors and it also modifies the central dopaminergic mechanism. Its ability to increase anxiety may be linked to this mechanism. The result of present study shows GABAregic potentiation and dopamine (D_2) antagonism indicating functional reversal of anxiety and potentiation of sleep by SZM. This neuronal system may involve in the mechanism of SZM.

Synthesis, characterization and anticatotonic activity of some novel Pyrazolopyrimidines

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Some novel Pyrazolopyrimidines were synthesized by reaction of 5-amino-1-(4-cyanophenyl)-1H-Pyrazole-4-Carbonitrile by reaction with formamide, methanolic ammonia & Raney nickel o give 1-(4-(amino-methyl)phenyl-1H-pyrazolo[3,4-d] pyrimidine-4-amine(1).The reaction of compound(1) with 1-Ethyl-3-(3-dimethyl-aminopropyl)carbodiimide(EDCI) as coupling agents yielded amide derivatives(2).The formation of the compound has been characterized by IR, ^{1}HNMR & Mass spectra. The synthesized compounds were screened for anticatotonic activity against standard drugs atropine and chlorpromazine. All the five synthesized compounds have shown moderate activity.