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❖ To analyze the pharmacological activity of OS by assessing its antioxidant activity, phenolic, flavanoid, carotenoid and heavy metal content as these vary according to the geographical location as well as the environmental factors.

❖ To study the broad band white noise (100 dB) induced alteration in steroid levels and whether it could be normalized by OS treatment.

❖ To evaluate whether the acute, sub acute and chronic noise stress can induce "Oxidative stress" changes in discrete regions of the brain of albino rats by observing the oxidative stress induced changes in the relevant oxidative enzyme activity and endogenous antioxidants. If there are changes, to monitor the effect of OS treatment on these enzyme systems.

❖ In brain any sensory input is widely communicated and hence the effects are not limited to specific regions. It is therefore planed to study the central neurotransmitter levels - Norepinephrine (NE), Epinephrine (E), Dopamine (DA), Serotonin (5-HT), 5 Hydroxy indole acetic acid (5-HIAA) and 5-HT turnover after acute, sub acute and chronic noise stress in six discrete regions of the brain of albino rats. If alterations are present, the effect of OS treatment will be studied.

❖ To investigate the expression of Brain heat shock proteins (Hsp70), as they are known to express themselves to protect the brain. Its expression after acute, sub acute and chronic noise stress and also after the OS treatment will be analyzed.