Aim and objective of the study:

Aim: Stress has become a part of modern day life which in turn could be a cause of physical and mental fatigue. Armed Forces personnel experiences emotional stress due to deployment in forward area separation from families, deployment in inhospitable areas etc. The manifestation of stress will aggravate based on the physical conditions and environments such as high altitude and desert regions. The aim of the study was focused on recent advances in the research of herbal medicines and their bioactive ingredients used in animal and cell culture models for their anti fatigue and neuroprotective properties of selected species of *Ocimum*. This prompted us to undertake the present investigation with the following objectives:

OBJECTIVES

1. To screen prominent *Ocimum* species namely *Ocimum sanctum*, *Ocimum basilicum* and *Ocimum gratissimum* for anti fatigue activity.
2. To investigate potent *Ocimum* species for antifatigue properties at different temperatures (8°C and 37°C) and evaluation of biochemical mechanisms at tissue and molecular levels.
3. To evaluate modulation of smoke induced stress and neuroprotection by *Ocimum*.
4. To develop and evaluate antifatigue food bars as a dietary supplement from the selected *Ocimum* species.
5. To evaluate the performance of the food product developed in human volunteers.