3. RESEARCH QUESTION

(AIM AND OBJECTIVES)

3.1 Research Question (Aim)

To assess oxidative stress in chronic infectious condition (Tuberculosis) and in degenerative condition (Hypertension) and to evaluate and compare the effect of standard antioxidants (Vit. E and Vit.C) and Ayurvedic medicine (*Hemidesmus indicus*) on it by estimation of markers of oxidative stress, Malondialdehyde (MDA) and Superoxide dismutase (SOD).

3.2 Objectives:

i) To estimate the Protective Index (PI) and Stress Index (SI) in healthy human volunteers through estimation of MDA and SOD.

ii) To estimate the effect of DOT therapy on Protective Index (PI) and Stress Index (SI) in the patients suffering from Tuberculosis (T).

iii) To estimate the effect of Calcium Channel Blockers (CCB) on Protective Index (PI) and Stress Index (SI) in the patients suffering from Hypertension treated with Calcium Channel Blockers (CCB) as antihypertensive drugs.
iv) To estimate the effect of Antihypertensive (OA) agents other than Calcium Channel Blockers on Protective Index (PI) and Stress Index (SI) in the patients suffering from Hypertension treated with Antihypertensive (OA) agents Other than Calcium Channel Blockers.

v) To evaluate the effect of *Hemidesmus indicus* root powder on Protective Index (PI) and Stress Index (SI) in the patients of (T), (CCB) and (OA) groups.

vi) To evaluate the effect of only one standard antioxidant Vit.E or Vit.C on Protective Index (PI) and Stress Index (SI) in the patients of (T), (CCB) and (OA) groups.

vii) To evaluate the effect of combination of standard antioxidants Vit.E and Vit.C on Protective Index (PI) and Stress Index (SI) in the patients of (T), (CCB) and (OA) groups.

viii) To compare the effect of single and double dose of-

a) *Hemidesmus indicus* root powder

b) Vit.E

c) Vit.C and

d) combination of Vit.E and Vit.C with control.