

# Chapter 4: Aim and Objectives

Chapter 4 .....	87
4. Aims and Objectives .....	87
4.1. Aims of the Study: .....	87
4.2. Objectives of the Study: .....	87
4.3. Hypothesis: .....	87

## **Chapter 4**

### **4. Aims and Objectives**

#### **4.1. Aims of the Study:**

- a. To develop and validate Yoga modules for sea voyage and extreme climatic conditions of Antarctica
- b. To study the changes in gene expression, biochemical changes and perseverative cognition during voyage and throughout the period of stay in individuals performing yoga as compared to non-yoga practicing Indian Antarctic expeditioners.

#### **4.2. Objectives of the Study:**

- a. To assess the effect of practicing yoga on Indian Antarctic expeditioners compared to non-yoga practitioners on gene expression, biochemical changes, quality of sleep and perseverative cognition
- b. To identify the cellular pathways that respond to Yoga for combating extreme conditions.
- c. To understand the mechanism through which Yoga might help in coping with extreme climate.
- d. To assess differentially regulated genes associated with pathologies following expedition.

#### **4.3. Hypothesis:**

Yoga practices might facilitate optimal and efficient adaptation to extreme environmental conditions through regulation of cell proliferation, metabolism, stress adaptation, immune functions and alleviate perseverative cognition.

Null Hypothesis:

Yoga practices does not have any influence on human physiological adaptation or regulation in extreme conditions and does not influence telomere shortening and perseverative cognition.