2. AIM AND OBJECTIVES

In search of most promising alternative to synthetic anticancer agent which are devoid of serious side effects, toxicity present and resistance to existing mechanisms study has been focused over plants for their anticancer efficacy. Herbal drugs provide pure and therapeutically active essence of compounds hence considered as safer drugs. Hence, the aim of study is to investigate the anticancer and antioxidant efficacy of leaves of Borassus flabellifer Linn., Annona reticulata Linn. (Ramphal), Abrus precatorius L. and Cassia sophera L.

Objectives of the study

The present study is aimed to evaluate the methanolic extract of leaves of Borassus flabellifer Linn., Annona reticulata Linn. (Ramphal), Abrus precatorius L. and Cassia sophera L. for anticancer and antioxidant and to screen them for their potential use as a drug.

Objective can be summarized:

1. Collection and authentication of plant material.
   
   Borassus flabellifer Linn.
   
   Annona reticulata Linn. (Ramphal)
   
   Abrus precatorius L.
   
   Cassia sophera L.

2. Soxhlet extraction of dried powder of leaves of the plant by using methanol as solvent.
3. Phytochemical investigations of methanol extract using standard procedure and protocols.

4. Pharmacological activities:
   A. Screening of extract for anticancer activity using cell lines.
      - Human colon cancer cell line (HCT15)
      - Human lung cancer cell line (Hop65)
      - Human hepatoma cell line (HEPG2)
   B. Antioxidant activity
      - 1, 1-diphenyl-2-picryl-hydrazyl (DPPH) radical scavenging activity
      - Hydrogen peroxide (H$_2$O$_2$) scavenging assay