Aim and Objective
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The aim of the present study is to evaluate the anticancer effect of ethanol extract of *Bauhinia variegata* leaves on COLO 320, a human colon cancer cell line using *in vitro* model.

The objective of the study includes

1. To study the pharmacognostic nature of the leaves of *B.variegata*.
2. To analyze the preliminary phytochemical composition of various extracts (of increasing polarity) of *B.variegata* to choose the best extract.
3. To determine the antioxidant capacity using *in vitro* models.
4. To assess the antimicrobial activity of *B.variegata* against various bacteria and fungi.
5. To develop a HPTLC fingerprint of *B.variegata* leaves.
6. To develop the DNA barcode of *B.variegata* leaves for species identification.
7. To isolate the active principle of *B.variegata leaves* with anticancer activity using bioactivity fractionation.
8. To identify the bioactive constituents present in the active fraction by GCMS and HPTLC.
9. To study the impact of active fraction on various gene and protein expression of colon carcinogenesis using COLO 320 cell lines.
10. In silico studies of the bioactive components to study the interaction between the phytochemicals and protein of interest.