VISVESWARAIAH TECHNOLOGICAL UNIVERSITY
Belgaum-590 010

A PROJECT REPORT ON

"SCREENING OF ANTIOXIDANT AND HEPATOPROTECTIVE POTENCY OF *BUTEA SUPERBA*.- A RARE PLANT GENETIC RESOURCE OF WESTERN GHAT'S"

A KSCST FUNDED PROJECT-2009

Submitted by

SURESH.S (1OX05BT023)

THOUSIF (1OX05BT025)

Under the guidance of

Dr.B.K.MANJUNATHA
Professor
Dept of Biotechnology,TOCE

DEPARTMENT OF BIOTECHNOLGY
THE OXFORD COLLEGE OF ENGINEERI NG
Bommanahalli, Hosur Road, Bangalore-560 068.

THE OXFORD COLLEGE OF ENGINEERING
BANGALORE – 560068

(Affiliated to Visveswaraiah Technological University, Belgaum)

"SCREENING OF ANTIOXIDANT AND HEPATOPROTECTIVE POTENCY OF *BUTEA SUPERBA*.- A RARE PLANT GENETIC RESOURCE OF WESTERN GHAT'S"

The project approved by the Karnataka State Council for Science and Technology.

SYNOPSIS

Butea or *Flame of the Forest* is a genus of flowering plants belonging to the pea family, Fabaceae. It includes many species of trees, shrubs, and lianas. Several species produce resins used in cosmetics or ayurvedic medicine.

The stem bark of the *Butea superba* was extracted with different solvents using continous soxhlet extraction method and used to investigate phytochemical constituents present in it followed by separation techniques. The crude extracts and isolated fractions were screened for Hepetoprotective, Antioxidant activity and Antimicrobial activity. Carbon tetra chloride induced liver damage model was selected for hepatoprotective study as it stimulates the Hepatitis B viral infection. Various biochemical parameters were studied to evaluate the Hepatoprotective activity of crude extracts. In serum, total bilirubin, toal protein, alanine transaminase, aspartate transaminase and alkaline phosphatase activities were determined. The Hepatoprotective activity is also supported by histopathological studies of liver tissue. Results of this study revealed that stem bark extract of *Butea superba* could afford significant protection against carbon tetrachloride induced Hepatocellular injury.

For screening Antioxidant activity, crude extract and flavonoid fraction were used. The screening is done by chemical assays such as DPPH, P-NDA and Total phenol method. The result showed that these plant components had efficient antioxidising potential in comparison with the standard antioxidants such as the Rutin used as the standard in the assay