



CONTENTS

CONTENTS

CHAPTER	TITLE	PAGE
No.		No.
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF PLATES	
1.0	INTRODUCTION	1
2.0	REVIEW OF LITERATURE	8
3.0	EXPERIMENTAL PROCEDURE	35
4.0	RESULTS AND DISCUSSION	88
5.0	SUMMARY AND CONCLUSION	162
	BIBLIOGRAPHY	

LIST OF TABLES

TABLE No.	TITLE	PAGE No.
1	TREATMENT PROTOCOL FOR ANIMAL STUDY	59
2	GROUPING OF EXPERIMENTAL ANIMALS	66
3	NUTRIENTS IN <i>Helicteres isora</i>	92
4	ACTIVITIES OF ENZYMIC ANTIOXIDANTS IN <i>Helicteres isora</i>	96
5	LEVELS OF NON – ENZYMIC ANTIOXIDANTS IN <i>Helicteres isora</i>	97
6	PER CENT INHIBITION OF <i>in vitro</i> LIPID PEROXIDATION, SUPEROXIDE AND NITRIC OXIDE GENERATION OF <i>Helicteres isora</i>	100
7	DPPH FREE RADICALS AND HYDROXYL RADICALS SCAVENGING ACTIVITY OF <i>Helicteres isora</i>	101
8	THE REVERSIBILITY OF STANDARD TESTER STRAINS AND MUTAGENICITY OF STANDARD MUTAGENS OF STANDARD TESTER STRAINS TA 98, 100, 102 ON TREATMENT WITH <i>Helicteres isora</i>	103
9	HEMATOLOGICAL PARAMETERS IN EXPERIMENTAL RATS	109

TABLE No.	TITLE	PAGE No.
10	LEVELS OF BIOCHEMICAL PARAMETERS IN EXPERIMENTAL RATS	111
11	LEVELS OF BLOOD GLUCOSE AND LIVER GLYCOGEN IN DIFFERENT GROUPS OF RATS	116
12	ACTIVITIES OF GLUCOKINASE, GLUCOSE-6- PHOSPHATE DEHYDROGENASE, FRUCTOSE-1, 6- BISPHOSPHATASE AND GLUCOSE-6-PHOSPHATASE	123
13	SERUM LIPID PROFILE (mg/dl) IN THE EXPERIMENTAL RATS	127
14	LIVER LIPID PROFILE (mg/g.) OF THE RATS	128
15	TOTAL PROTEIN, ALBUMIN, GLOBULIN (g/dl) AND ALBUMIN/GLOBULIN RATIO	141
16	HISTOPATHOLOGY OF RAT LIVER, PANCREAS AND KIDNEY	143
17	PHYTOCHEMICALS IN THE ALCOHOLIC EXTRACT OF <i>Helicteres isora</i>	151
18	IDENTIFICATION OF THE PHYTOCHEMICALS BY THIN LAYER CHROMATOGRAPHY	152
19	RETENTION TIME AND CONCENTRATION OF ROSMARINIC ACID AND SCUTELLAREIN IN <i>Helicteres isora</i>	154

LIST OF FIGURES

FIGURE	TITLE	PAGE
No.		No.
1	OXIDATIVE STRESS AND ASSOCIATED DISEASES	21
2	FLOW CHART FOR THE PREPARATION OF THE PLANT EXTRACT USING SELECTED ORGANIC SOLVENTS	84
3	BODY WEIGHT OF RATS BEFORE AND AFTER THE ADMINISTRATION OF <i>Helicteres isora</i> FOR 45 DAYS	107
4	LEVELS OF BLOOD GLUCOSE ON ADMINISTRATION OF <i>Helicteres isora</i>	114
5	LEVELS OF INSULIN IN <i>Helicteres isora</i> TREATED RATS	119
6	SERUM FRUCTOSAMINE LEVELS IN RATS	121
7	LEVELS OF THIOBARBITURIC ACID REACTIVE SUBSTANCES IN THE LIVER OF THE RATS	131
8	LEVELS OF HYDROPEROXIDES IN THE LIVER OF THE RATS	131
9	CATALASE ACTIVITY IN THE LIVER OF THE RATS	134
10	GLUTATHIONE PEROXIDASE ACTIVITY IN THE LIVER OF THE RATS	134

FIGURE	TITLE	PAGE
No.		No.
11	SUPEROXIDE DISMUTASE ACTIVITY IN THE LIVER OF THE RATS	135
12	GLUTATHIONE -S- TRANSFERASE ACTIVITY IN THE LIVER OF THE RATS	135
13	LEVELS OF VITAMIN C IN THE LIVER OF THE RATS	137
14	LEVELS OF VITAMIN E IN THE LIVER OF THE RATS	138
15	LEVELS OF VITAMIN A IN THE LIVER OF THE RATS	138
16	LEVELS OF REDUCED GLUTATHIONE IN THE LIVER OF THE RATS	139
