



Contents

CONTENTS

Chapter No.	Title	Page No.
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF PLATES	
1.0	INTRODUCTION	1
2.0	REVIEW OF LITERATURE	9
3.0	EXPERIMENTAL PROCEDURE	44
4.0	RESULTS AND DISCUSSION	77
5.0	SUMMARY AND CONCLUSION	147
	BIBLIOGRAPHY	153
	PUBLICATION	

LIST OF TABLES

TABLE NO.	TITLES	PAGE NO.
1	DETAILS OF THE TEST SUBSTANCE	49
2	EXPERIMENTAL PROTOCOL FOR ACUTE TOXICITY	50
3	HOUSING AND FEEDING CONDITIONS	50
4	STUDY PERIOD AND OBSERVATION PARAMETERS	51
5	TREATMENT PROTOCOL OF MICE FOR THE DETERMINATION OF LIVER ANTIOXIDANTS AND SERUM ENZYMES	53
6	TREATMENT PROTOCOLS OF MICE FOR DETERMINATION OF HEMATOLOGICAL PARAMETERS, BODY WEIGHT AND SURVIVAL TIME	62
7	EFFECT OF <i>Coleus forskohlii</i> ROOT AT THE DOSAGE OF 25mg, 50mg, 500mg AND 2000mg / kg b.w	83
8	LEVELS OF LIPID PEROXIDATION IN THE LIVER OF MICE	86
9	ACTIVITIES OF SUPEROXIDE DISMUTASE AND CATALASE IN THE LIVER OF MICE	89
10	ACTIVITIES OF GLUTATHIONE PEROXIDASE AND GLUTATHIONE S-TRANSFERASE AND GLUTATHIONE REDUCTASE IN THE LIVER OF MICE	93
11	LEVELS OF GLUTATHIONE AND ASCORBIC ACID IN THE LIVER OF MICE	97
12	ACTIVITIES OF ACID PHOSPHATASE AND ALKALINE PHOSPHATASE IN SERUM OF MICE	100
13	ACTIVITIES OF ASPARTATE TRANSAMINASE, ALANINE TRANSAMINASE AND LACTATE DEHYDROGENASE IN SERUM OF MICE	103
14	BLOOD HEMOGLOBIN CONTENT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	105

TABLE NO.	TITLES	PAGE NO.
15	WHITE BLOOD CELLS CONTENT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	107
16	LYMPHOCYTE COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	109
17	MONOCYTE COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	110
18	DIFFERENTIAL COUNT OF THE DLA TRANSPLANTED MICE AT DIFFERENT TIME INTERVALS	113
19	EFFECT OF <i>Coleus forskohlii</i> EXTRACT ON THE SURVIVAL OF THE ASCITIS TUMOR BEARING MICE	116
20	EFFECT OF <i>Coleus forskohlii</i> EXTRACT ON THE BODY WEIGHT OF THE ASCITIS TUMOR BEARING MICE	117
21	HISTOPATHOLOGY OF THE LIVER OF MICE	118
22	DPPH AND HYDROXYL RADICAL SCAVENGING ACTIVITY OF METHANOLIC EXTRACT OF ROOTS OF <i>Coleus forskohlii</i>	123
23	SUPEROXIDE AND NITRIC OXIDE RADICAL SCAVENGING ACTIVITY OF THE METHANOLIC EXTRACT OF THE ROOTS OF <i>Coleus forskohlii</i>	126
24	PHYTOCHEMICALS IN THE EXTRACTS OF <i>Coleus forskohlii</i> ROOTS	130
25	DETERMINATION OF CELL VIABILITY OF DLA CELLS	133
26	PERCENTAGE OF CELL VIABILITY WITH VARYING CONCENTRATION OF CHLOROFORM FRACTION OF THE METHANOL EXTRACT BY USING MTT ASSAY	136
27	HPTLC OF PARTIALLY PURIFIED FRACTION OF METHANOLIC EXTRACT OF <i>Coleus forskohlii</i>	138
28	THE GC-MS PROFILE OF <i>Coleus forskohlii</i>	143

LIST OF FIGURES

FIGURE NO.	TITLES	PAGE NO.
1	THREE STAGES MODEL OF CARCINOGENESIS AND THE LEVEL OF CARCINOGENIC EFFECT VS. LEVEL OF FREE RADICALS AT VARIOUS STAGES OF CARCINOGENIC PROCESS	25
2	FRACTIONATION OF METHANOLIC EXTRACT OF <i>Coleus forskohlii</i> ROOTS	71
3	BLOOD HEMOGLOBIN CONTENT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	106
4	WHITE BLOOD CELLS CONTENT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	108
5	LYMPHOCYTES COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	109
6	MONOCYTES COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	111
7	NEUTROPHILS COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	114
8	EOSINOPHILS COUNT IN THE MICE BEARING DALTONS LYMPHOMA AT DIFFERENT TIME INTERVALS	114
9	DPPH RADICAL SCAVENGING ACTIVITY OF THE METHANOLIC EXTRACT OF <i>Coleus forskohlii</i> ROOTS	123
10	HYDROXYL RADICAL SCAVENGING EFFECT OF THE METHANOLIC EXTRACT OF <i>Coleus forskohlii</i> ROOTS	125
11	SUPEROXIDE RADICAL SCAVENGING EFFECT OF THE METHANOLIC EXTRACT OF <i>Coleus forskohlii</i> ROOTS	127

FIGURE NO.	TITLES	PAGE NO.
12	NITRICOXIDE RADICAL SCAVENGING EFFECT OF THE METHANOLIC EXTRACT OF <i>Coleus forskohlii</i> ROOTS	128
13	CELL VIABILITY OF DLA CELLS WITH VARYING CONCENTRATION OF CHLOROFORM FRACTION OF THE METHANOLIC EXTRACT OF THE ROOTS OF <i>Coleus forskohlii</i> .	133
14	PERCENTAGE OF CELL VIABILITY WITH VARYING CONCENTRATION OF CHLOROFORM FRACTION OF THE METHANOLIC EXTRACT BY USING MTT ASSAY	137
15	THE GC-MS CHROMATOGRAM OF CYTOTOXIC FRACTION OF <i>Coleus forskohlii</i>	139 - 142
16	HPLC PROFILE OF STANDARD FORSKOLIN	145
17	HPLC PROFILE OF <i>Coleus forskohlii</i>	145

LIST OF PLATES

PLATE NO.	TITLES	PAGE NO.
1	<i>Coleus forskohlii</i> ROOTS AND ROOT POWDER	48
2	HISTOLOGY OF THE UNTREATED LIVER	119
3	HISTOPATHOLOGY OF THE DLA INDUCED MICE (PERIPORTAL INFLAMMATION)	119
4	HISTOPATHOLOGY OF THE DLA INDUCED MICE (PERIVENULAR INFLAMMATION)	120
5	HISTOPATHOLOGY OF THE METHANOLIC EXTRACT TREATED MICE	120
6	HIGH PERFORMANCE THINLAYER CHROMATOGRAM OF CHLOROFORM FRACTION OF THE METHANOLIC EXTRACT OF <i>Coleus forskohlii</i>	138
7	TLC PROFILE OF FRACTIONATED <i>Coleus forskohlii</i>	144