LIST OF FIGURES

Figure 2.1 Mechanism of APAP-induced hepatotoxicity 28
Figure 2.2 Generation of various types of ROS 38
Figure 4.1 Characterization of HepG2 cell line 59
Figure 4.2 Cell titration assay: HepG2 cell line 60
Figure 4.3 Cell viability (MTT assay) of HepG2 cell line exposed to different concentrations of APAP for 24 h 60
Figure 4.4 Graphical representation of effect of 20 mM APAP-induced toxicity on release of AST, ALT, GGT and ALP 61
Figure 4.5 AO/EB staining of HepG2 cell line exposed to 20 mM APAP (100×) 63
Figure 4.6 Generation of ROS in HepG2 cell line exposed to 20 mM APAP 63
Figure 4.7 Cell cycle analysis of HepG2 cell line exposed to 20 mM APAP 64
Figure 4.8 Microscopic examination of mustard seed sections stained with phloroglucinol (100×) 75
Figure 5.1 Extraction of B. juncea seeds employing soxhlet, cold maceration and ultrasonication 86
Figure 5.2 IR fingerprint of BJHME 89
Figure 5.3 HPTLC chromatogram (254 nm) and densitogram of BJHME with sinigrin 93
Figure 5.4 HPTLC chromatogram (366 and 254 nm) and densitogram of BJHME with catechin 94
Figure 5.5 HPTLC chromatogram (visible, 254 and 366 nm) and densitogram of BJHME with quercetin 95
Figure 5.6 HPTLC chromatogram (254 nm) and densitogram of BJHME with gallic acid and vanillin 96
Figure 5.7 HPTLC chromatogram (254 nm) and densitogram of BJHME with quinine & colchicine 97
Figure 5.8 DPPH autographic analysis of BJHME 98
Figure 5.9 HPLC-DAD fingerprint of BJHME and standards sinigrin, catechin, vanillin, quercetin and vitamin E at 273 nm 100
Figure 6.1 Flow of study of the in vitro analysis of BJHME 112
Figure 6.2 Schematic representation of hepatoprotective treatment models for BJHME against APAP-induced toxicity on HepG2 cell line 113
Figure 6.3 Effect of post-treatment of BJHME against 20 mM APAP-induced toxicity on HepG2 cell line

Figure 6.4 Graphical representation of effect of 24 h BJHME post-treatment on AST, ALT, GGT and ALP profiles in HepG2 cell line

Figure 6.5 Effect of pre-treatment of BJHME against 20 mM APAP-induced toxicity on HepG2 cell line

Figure 6.6 Graphical representation of effect of 24 h pre-treatment of BJHME on AST, ALT, GGT and ALP profiles in HepG2 cell line

Figure 6.7 Effect of co-treatment of BJHME against APAP-induced toxicity on HepG2 cell line

Figure 6.8 AO/EB staining of HepG2 cell line treated with BJHME against APAP-induced damage (400×)

Figure 6.9 Effect of BJHME treatment on generation of ROS against APAP-induced toxicity on HepG2 cell line

Figure 6.10 Effect of BJHME treatment on cell cycle of HepG2 cells against APAP-induced toxicity on HepG2 cell line