

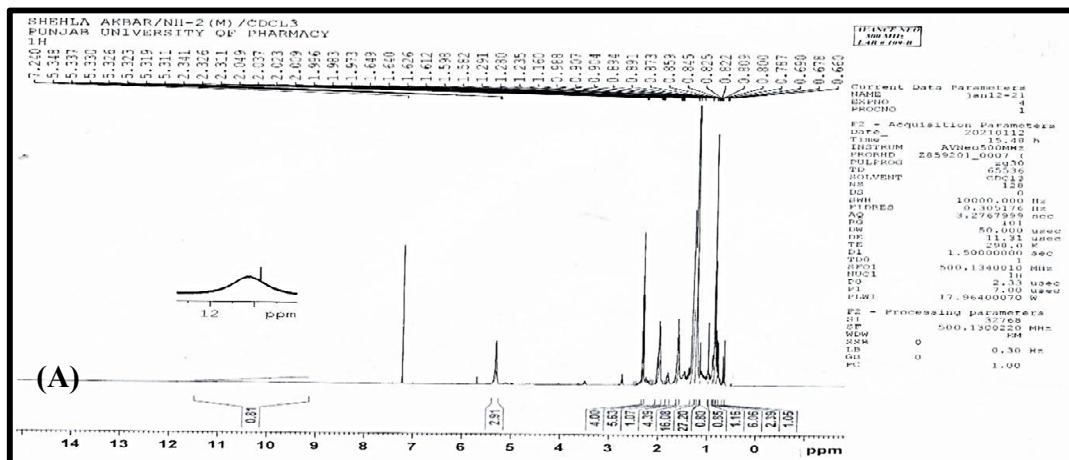
## Evaluation of the antioxidant, antimicrobial and anticancer activity of *Dicliptera bupleurooides* isolated compounds using *in vitro* and *in silico* studies

### Supplementary materials

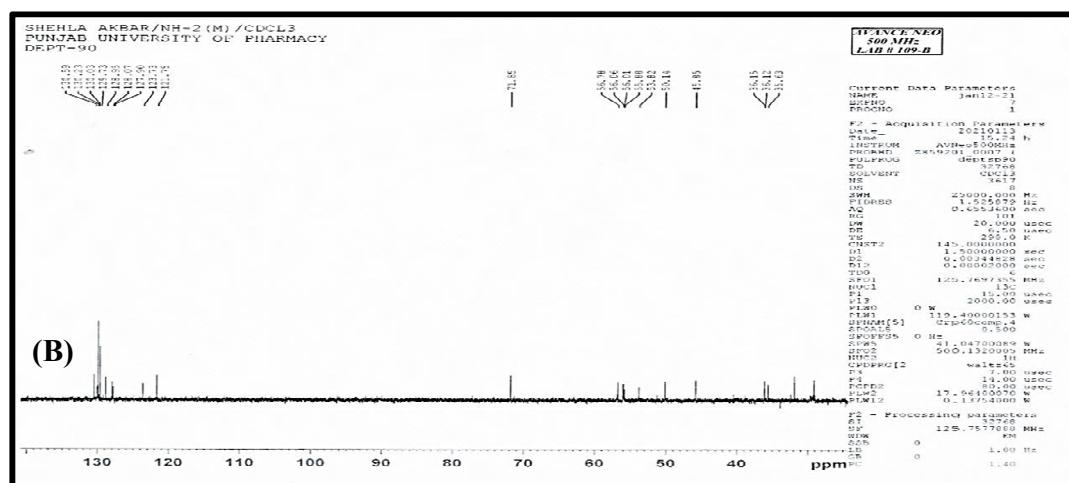
**Figure S1:**  $^1\text{H}$  NMR (A), DEPT-90 (B), DEPT-135 (C) and IR (D) spectra of  $\beta$ -sitosterol (1).

**Figure S2:**  $^1\text{H}$  NMR (A) and IR (B) spectra of vanillic acid (2)

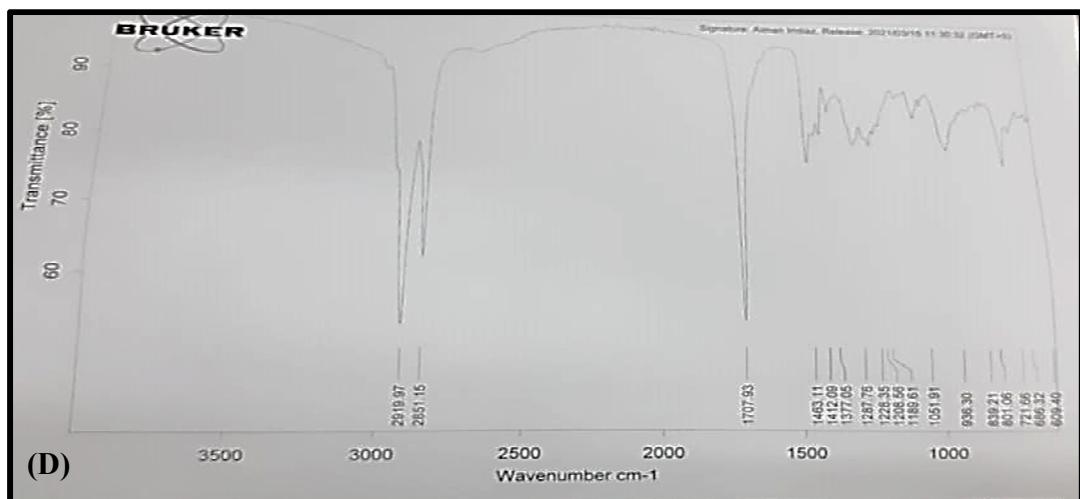
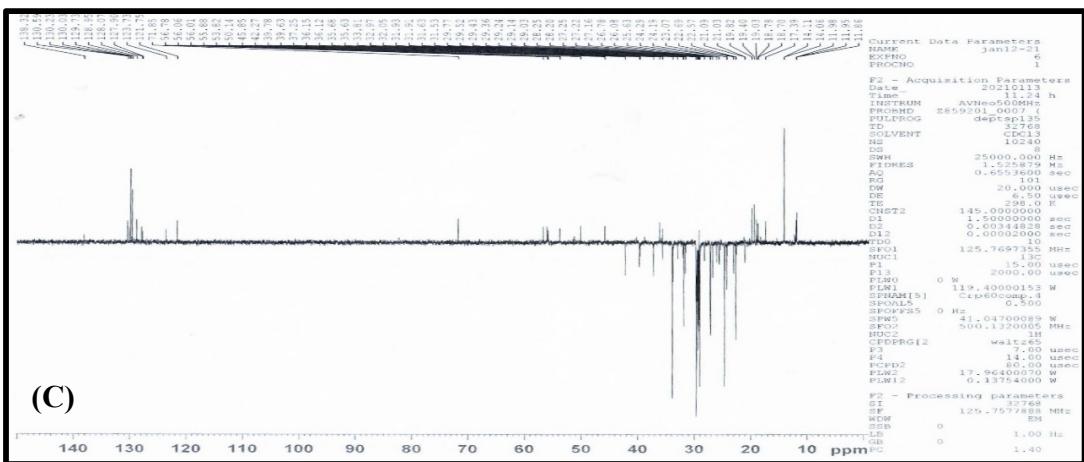
**Figure S3:** 2D and 3D binding mode of vanillic acid (2) within the active site of  $\beta$ -lactamase



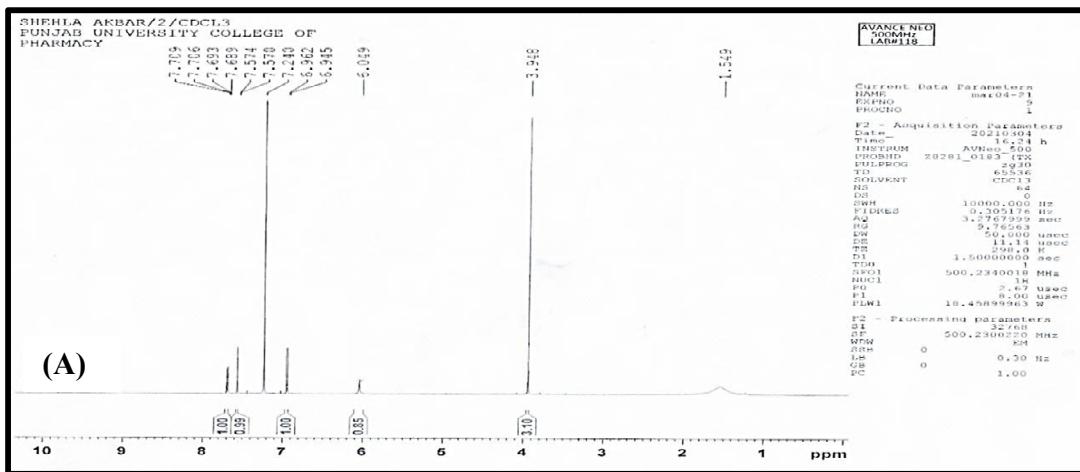
(A)

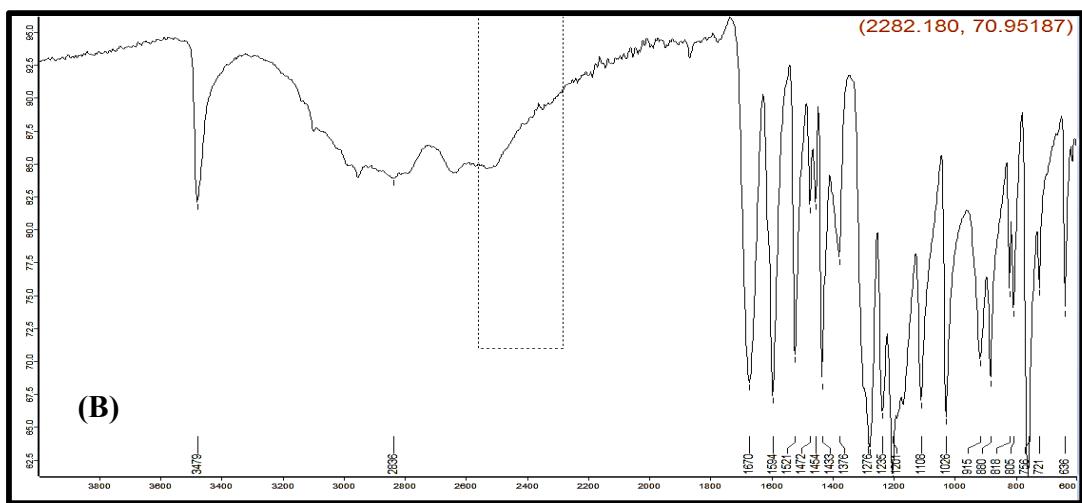


(B)

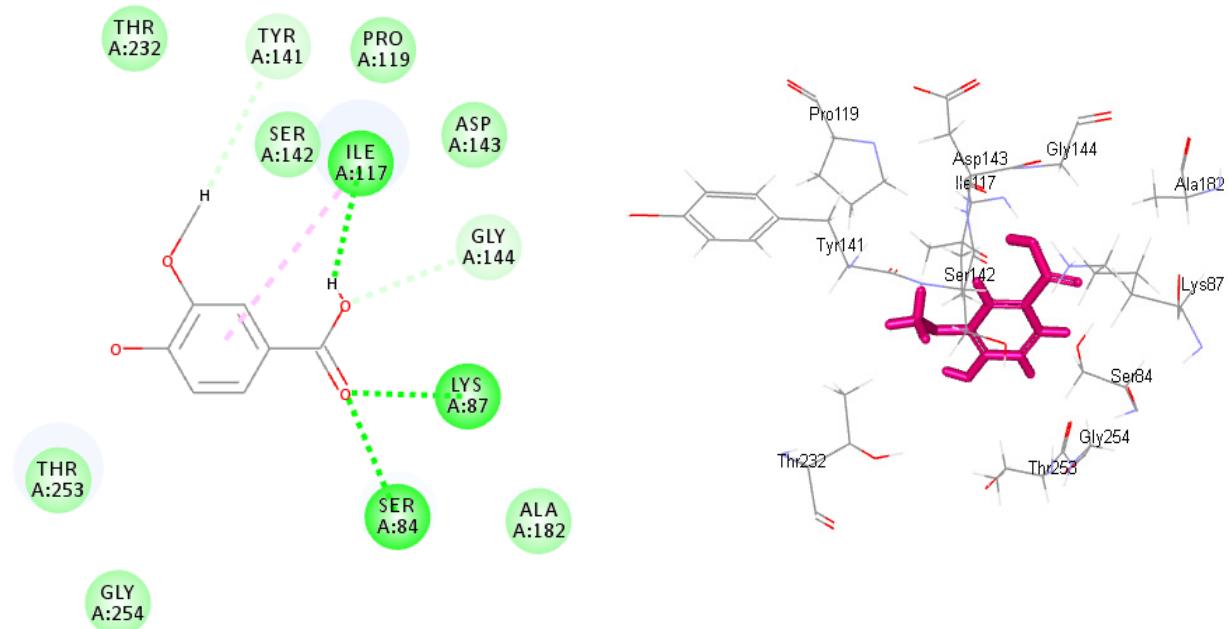


**Figure S1**  $^1\text{H}$  NMR (A), DEPT-90 (B), DEPT-135 (C) and IR (D) spectra of  $\beta$ -sitosterol (**1**).





**Figure S2** <sup>1</sup>H NMR (A) and IR (B) spectra of vanalllic acid (**2**)



**Figure S3:** 2D and 3D binding mode of vanillic acid (**2**) within the active site of  $\beta$ -lactamase