Basic Health Sciences **Poster**

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Antibacterial activities of Protein Extracts From *Andrographis Paniculata*, *Tinospora Crispa* and *Centella Asiatica*

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Introduction: *Andrographis paniculata*, *Tinospora crispa* and *Centella asiatica* are known to have various pharmacological functions. This research was carried out to investigate the antibacterial activities of protein extracts from *A. paniculata*, *T. crispa* and *C. asiatica*. **Methods:** Total soluble proteins from these herbs were extracted using a modified TCA/acetone method. The protein extracts were then quantified using the Bradford assay and separated using SDS-PAGE. The antibacterial activities were determined by disc diffusion method. **Results:** *T. crispa* had a significantly higher amount of proteins (83.86 ± 0.4 µg/µl) compared to *A. paniculata* (81.57 ± 0.4 µg/µl) and *C. asiatica* (78.93 ± 0.5 µg/µl). The proteins separated by SDS-PAGE were ranged from 30kDa to 260kDa, 25kDa to 110kDa and 25kDa to 160kDa for *A. paniculata*, *T. crispa* and *C. Asiatic*, respectively. The high abundance proteins were observed in *A. paniculata* and *T. crispa* but not in *C. asitica*. Protein extracts from *C. asiatica* have demonstrated antibacterial activity against all tested bacteria with the diameter of inhibition zone of 11.0 ± 0.5 mm, 12.3 ± 0.6 mm, 10.7 ± 0.7 mm and 20.0 ± 0.8 mm against B. *cereus*, *S. aureus*, *K. pneumonia* and *S. typhimurium* respectively. Meanwhile, protein extracts of *A. paniculata* showed a positive antibacterial activity only against *B.cereus* (13.7 ± 0.4 mm), *S. aureus* (7.0 ± 0.8 mm) and *S. typhimurium* (11.5 ± 0.3 mm). Protein extracts from *T. crispa* only showed a positive antibacterial activity against *B. cereus* (9.7 ± 0.5 mm). **Conclusions:** There is a constant need in the discovery of new antibiotics for the treatment of infectious diseases.

KEYWORDS: SDS-PAGE, soluble protein, disc diffusion, antibacteria