

**P036** Saponin glycosides as natural antioxidant from *Aegle marmelos* and their protective role in oxidative damage to protein

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Natural antioxidants are of great interest in oxidative stress due to their antioxidant role in protection to biomolecules. The saponin glycosides fraction from methanol-aqueous extract of *A. marmelos* leaves were fractionated on sephadex LH-20 column chromatography. The constituents in saponin glycosides fraction were ascertained using GC-MS and HPLC technique. To ascertain their efficacy to scavenge free radical and antioxidant potential, DPPH free radical scavenging assay and FRAP assay were performed. To determine the modulatory interaction with reference to bovine serum albumin (BSA) protein in the presence of metal catalysed oxidation system (MCO), we employed spectrophotometric protein carbonyl estimation assay using DNPH (Dinitrophenyl hydrazine), SDS-PAGE and western blot technique to detect protein carbonyl using anti-DNP primary antibody. Saponin glycosides are identified and suggested to be of pregnane type glycosides. The protective role against MCO catalysed oxidative damage to BSA was also evaluated and results substantiated the significant contribution of saponin glycosides with an effective modulatory concentration of  $EC_{50}$  150.41  $\mu\text{g/ml}$  to inhibit oxidative damage to BSA. The natural saponin glycosides from *A. marmelos* could be concluded as promising free radical scavenger and their protective against oxidative injury to BSA is significant and convincing.