

**P-029: COX-2 PUF-LC-MS-GUIDED IDENTIFICATION OF ACTIVE CONSTITUENTS FROM CRANBERRY (*VACCINIUM MACROCARPON* AIT.)**

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Cranberry, the dried or fresh ripe fruit of *Vaccinium macrocarpon* Ait., Ericaceae, is a plant native to North America. Historically, cranberry was used as food source, as well as a medicine, for the treatment of wounds by Native American Indians. Currently, products containing cranberry are employed as adjunct therapy for the prevention and symptomatic treatment of urinary tract infections (UTIs), however conclusive data are still lacking. PUF-LC-MS is a binding technique that can be used for rapid screening of complex mixtures for ligands that bind to a target protein, in this case cyclooxygenase (COX-2). Our investigation showed that a methanol extract of cranberry inhibited the activity of cyclooxygenase-2, with an IC<sub>50</sub> of 12.8 µg/ml. Further more, the components responsible for anti-inflammatory activities through the pathway of COX-2 were identified from cranberry extracts. The most active constituents of cranberry extract were identified as: Compound **1** ursolic acid (MH<sup>+</sup> *m/z* 456.71), compound **2** unknown (MH<sup>+</sup> *m/z* 504), compound **3** and **4**, *cis* and *trans*-hydroxycinnamoyl ursolic acid (MH<sup>+</sup> *m/z*, 603.402, 603.403), subjected to PUF COX-2 assay. The structure elucidation of unknown compound **2** was under the way.