Supplementary Materials and Methods

Extraction of constituents from the SJW Diet and SJW Powder

Pelleted SJW diet and SJW powder were processed at various time points of day 0, 4, 8, 20 in duplicates and carried the extraction method on the respective days. In short, diet pellets were grinded to powder and approximately 200 mg measured for the extraction. For about 100 mg diet and/or SJW powder, 6 mL of ethanol was added and extracted for 15-20 min by sonication in 15 mL tubes (BD Falcon, USA). After the sonication, sample tubes were centrifuged at 4500 rpm for 30 min using Sorvall Legend XTR centrifuge (Thermo Scientific Inc.,) at 4°C to pellet down particulate diet. Supernatant was transferred to fresh tubes covered with foil and stored at -80^{0}C. The extraction procedure was always carried in yellow light.

UPLC-MS Analysis

After all time points, sample extracts from day 0, 4, 8, 20 and SJW powder were analyzed together using ESI-QTOFMS coupled with Acquity UPLC C18 reverse-phase column (Waters Corp., Milford, MA) in positive and negative ionization mode in full-scan mode from 100 to 1000 m/z. Separation of different constituents was achieved by gradient of mobile phases with water and Acetonitrile containing 0.1% formic acid. The flow rate used was 0.5 mL/min with a total run time of 17 min. The following gradient was maintained throughout the run: 98 % H_2O till 0.5 min, 80% H_2O till 4 min, 5% H_2O till 8min and 1% H_2O till 15 min. The column was returned to initial condition in the last 2 min. Mass chromatograms and mass spectral data were acquired using MassLynx software (Waters Corp., Milford, MA). Extracted peak areas of SJW constituents in the diet were quantitated on a Xevo G2 using Quant TOF technology (Waters Corp., Milford, MA). For MS/MS analysis in the same platform, the collision energy was ramped from 5 to 45 eV along the run. Constituents identified in the analysis (calculated m/z) were hyperforin (535.378), hypericin (503.076), pseudohypericin (519.071), quercetin (301.034), quercitrin (447.092), hyperoside (463.087), Rutin (609.145), chlorogenic acid (353.087), and procynadin (577.134) with respective m/z values in negative electrospray ionization mode in the bracket. The experimentally obtained m/z values of these constituents are hyperforin (535.372), Hypericin (503.072), Pseudohypericin (519.070), quercetin (301.032), quercitrin (447.098), hyperoside (463.088), Rutin (609.146), chlorogenic acid (353.088), and procynadin (577.135).