

Recovery of antioxidants from *Myrmecodia pendans* and identification of its major constituent compounds

Yi-Hsu Ju and Adam Mekonnen Engida

National Taiwan University of Science and Technology, Taiwan

In the present work, heat reflux extraction (HRE) method with solvent ethanol/water (80:20; v/v) was used to extract antioxidants from sarangsemut (*Myrmecodia pendans*). Ethanol, from crude extract (CE), was evaporated using rotary evaporator. The two third of aqueous part was fractionated successively with hexane and ethyl acetate. Each fraction was collected separately and ethyl acetate was evaporated from ethyl acetate fraction (EAF) under reduced pressure. Water from the aqueous fraction (AQF) was removed using freeze drier. Equal mass of dried CE, EAF and AQE were dissolved in methanol to evaluate their antioxidant activity against DPPH radical and ferric reducing power. EAF showed comparable antioxidant activity against DPPH radical and ferric reducing power with CE. Finally EAF was selected to analyze major compounds using LC/ESI/MS/MS and HPLC techniques. Three major phenolic compounds: rosmarinic acid, proanthocyanidin B1, and sodium adduct proanthocyanidin B-type dimer were identified. The first two compounds were confirmed and quantified by HPLC using authentic standards but confirmation of the third compound was hampered by lack of commercial standard. The concentration of rosmarinic acid and proanthocyanidin B1 was found to be 20.688 ± 1.573 mg/g dry sample and 3.236 ± 0.280 mg/g dry sample, respectively. All these three compounds are reported for the first time in this medicinal plant.

yhju@mail.ntust.edu.tw