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An Study on the Flora(Macro-Hydrophyte) and Community of Jeongyang and Paksil reservoir of Hapcheon-gun

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The flora and community of Jeongyang and Paksil reservoir were investigated from March, 2005 to January, 2006. The flora of Jeongyang reservoir was composed of 40 families, 73 genera, 84 species, 12 varieties and 1 form, total 97 kinds, and those were 31 kinds of vascular hydrophytes was classified as 15 kinds(48%) of emergent plants, 6 kinds(19%) of submerged plants, 3 kinds(10%) of free-floating plants, 3 kinds(10%) of floating-leaved plants, 3 kinds(10%) of Hygrophytes Plants and 1 kind(3%) of Terrestrial Plants, respectively. And the flora of Paksil reservoir was composed of 40 families, 91 genera, 100 species, 15 varieties and 2 form, total 117 kinds, and those were 33 kinds of vascular hydrophytes was classified as 16 kinds(49%) of emergent plants, 5 kinds(15%) of Hygrophytes Plants, 4 kinds(12%) of submerged plants, 3 kinds(9%) of free-floating plants, 3 kinds(9%) of Terrestrial Plants, and 2 kinds(6%) of floating-leaved plants, respectively. The community of Jeongyang and Paksil reservoir were *Miscanthus sacchariflorus* community, *Phragmites communis* community, *Echinochloa crus-galli* var. *caudaza* community, *Scirpus triqueter* community, *Zizania latifolia* community, *Typha orientalis* community, etc.

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Purification and biological activities of total ginsenosides

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Antioxidation, antibacterial and anticancer activities of total ginsenosides were measured after purification from white ginseng, red ginseng and cultured wild ginseng. Purification step was crude extraction with 75% ethanol and ultrasonification, AB-8 macroporous adsorption column for water soluble impurities, Amberlite IRA 900 Cl anion-exchange column for decolor, and Amberlite XAD16 adsorption column for non-polar impurities. Purified extracts had about 6-20 fold concentrated ginsenosides compared to that of crude extracts. Extract of white ginseng showed the most powerful antioxidant activity. Extracts of cultured wild ginseng roots represented the strongest antibacterial activity. According to the result of the MTT assay, all three extracts had anticancer effect and white ginseng was most powerful. This study will enable the efficient extraction of ginsenosides from ginseng and showed cultured wild ginseng has biological activities.