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### Mating System and Population Genetic Structure of Wild Garlic Populations in Korea

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Garlic is a perennial herb primarily distributed throughout the world. These plants are regarded as a medically and agricultural important crop in the world. I used to electrophoretic allozyme analysis to study the mating system and population genetics of wild garlic, *Allium victorialis* L. within the family Liliaceae. For six natural populations, mean multi-loci estimate of outcrossing ( $t_m$ ) was 0.321 across 11 polymorphic loci. The expected inbreeding coefficient at equilibrium ( $F_e$ ) was 0.587. For five cultivated populations,  $t_m$  was 0.448. The expected inbreeding coefficient at equilibrium ( $F_e$ ) was 0.557. The  $t_m$  indicates that the cultivated populations had lower values than those of wild populations, which may mean that the domestication process had eroded the level of outcrossing. In most cases, significant heterozygote deficiencies still occurred, suggesting that the presence of other forms of inbreeding in addition to consanguineous mating. These results indicate that inbreeding depression substantially decreases the proportion of selfed progeny in partially self-fertilising subpopulations.

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### Protective Effects of Garlic Extract on Hepatotoxicity in Carbon Tetrachloride-intoxicated Rats

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This study investigated the hepatoprotective effects of Garlic extract in carbon tetrachloride (CCl<sub>4</sub>)-induced liver injury. Sprague-Dawley male rats weighing about 180g were divided 3 groups : control group (CON), Garlic extract and CCl<sub>4</sub>-treated group, CCl<sub>4</sub>-treated group. Administration of CCl<sub>4</sub> increased the levels of GOT and GPT in serum, while the levels were decreased by the addition of Garlic extract. Although total-cholesterol and triglyceride were increased in the CCl<sub>4</sub>-intoxicated rats, supplementation with the garlic extract decreased the levels. Higher levels of HDL-cholesterol were found in the control group and Garlic extract and CCl<sub>4</sub>-treated groups. The results indicate that Garlic extract has a hepatoprotective effect in rats given CCl<sub>4</sub>.

**Key words:** Garlic extract, hepatoprotective, carbon tetrachloride