Chemical Compositions of *Cordyceps militaris* Cultured in *Bombyx mori* Pupae and the Pupae Separated from the Culture

Yeon Sung-Hum, Jun-Ran Kim and Young-Joon Ahn
School of Agricultural Biotechnology, Seoul National University, Suwon, Korea

The chemical compositions of *Cordyceps militaris* Link cultured on fresh pupae of *Bombyx mori* (L.) and the pupae separated from the culture were examined. The *Cordyceps* fruiting body and the pupae contained 8.84% and 6.30% moisture, 3.29% and 2.29% crude ash, 43.81% and 70.13% crude protein, 1.10% and 5.56% crude fat, 11.34% and 11.78% crude fiber, and 30.97% and 3.94% carbohydrate, respectively. The amount of neutral and acid detergent fiber was higher in silkworm pupae than the *Cordyceps* fruiting body. The *Cordyceps* fruiting body had higher amount of Cu, Na, P and K than the pupae, whereas the amounts of Mg, Ca and Fe were the reverse. Al and Mn were not detected in both fruiting body and the silkworm pupae. Total and essential amino acid contents of the *Cordyceps* fruiting body and the silkworm pupae 171.20 and 154.78 mg/g, and 60.50 and 46.07 mg/g, respectively. The *Cordyceps* fruiting body contained 17 amino acids, whereas the silkworm pupae had 16 ones except for methionine. Among the constituent fatty acids, the major ones were oleic (18:1), linoleic (18:3), and palmitic (16:0) in *C. militaris*. Unsaturated fatty acid contents were generally higher than saturated fatty acid.