

Biological Activity of Ethanol Extract from *Amelanchier asiatica*

Young-Je Cho^{1*}, Jung-Woo Chae², Jin-Sung Kim³, Bun-Sung Jo³, Won-Seup Cha³,
Sung-Sook Chun¹, Hye-Jin Park⁴ and Sun-Ae Kang⁴

¹*School of Food Science & Biotechnology, Food & Bio-Industry Research Institute, Kyungpook National University, Daegu 702-701, Korea*

²*Gyeonggi-do Forest Environment Research Institute, Osan 447-290, Korea*

³*School of Food Science, Kyungpook National University, Sangju 742-711, Korea*

⁴*School of Applied Biosciences, Kyungpook National University, Daegu 702-701, Korea*

The purpose of this study is in order to determine biological activity of *Amelanchier asiatica*. *Amelanchier asiatica* has been used as a traditional medical food. The research was carried out to assay antioxidants, angiotensin converting enzyme(ACE), Xanthine oxidase, and elastase inhibition effects. Total phenolic compounds of *Amelanchier asiatica* extracts was 17.6mg/ml. EDA of *Amelanchier asiatica* upon DPPH free radical scavenging test was 90.18% at 200 µg/ml. ABTS radical decolorization of *Amelanchier asiatica* extracts was 98.81% at 200 µg/ml. The inhibiting rate of antioxidant protection factor was 1.03 PF, and TBARS was 73.27% at 200 µg/ml. Xanthine oxidase inhibiting activity of *Amelanchier asiatica* extracts showed the effects as 13.19% at 200 µg/ml. The angiotensin converting enzyme (ACE) activity was significantly inhibited by *Amelanchier asiatica* extracts (82.52% inhibition at 200 µg/ml). Elastase inhibition activity in the *Amelanchier asiatica* extracts(41.48% at 200 µg/ml) was higher than that of Vit. C.(12.8% at 200 µg/ml)

This study suggests that *Amelanchier asiatica* has the greatest property as a functional food source.

Key words : *Amelanchier asiatica*, xanthine oxidase, angiotensin converting enzyme, elastase, antioxidants.