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Isolation of Angiotensin Converting Enzyme Inhibitor from the Ripe *Cucurbita moschata* Duch

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Angiotensin converting enzyme (ACE) inhibitor acts on the inhibition of ACE and causes to result in decrease of blood pressure and was screened from protein hydrolysates of various food sources. The ripe *Cucurbita moschata* Duch has been used as an oriental medicine in Korea. To isolate the ACE inhibitor, crude extracts of the edible portion of ripe *Cucurbita moschata* Duch were obtained after heating at 95℃ for 2 hr, followed by centrifugation at 5000 x g for 30 min. Crude extracts were filtered using PM-10 membrane. The membrane-filtered solution was loaded onto Sephadex G-15 column (1.8 cm x 75 cm) equlibrated with 20 mM phosphate buffer (pH 7.0). Using the most ACE inhibitory fraction of gel filtration profile, reversed-phase HPLC using a C_{18} column was performed on the condition of buffer A (0.1% trifluroacetic acid, TFA) and buffer B (acetonitrile containing 0.1% TFA), having gradient of 0% of B to 80%. Among the four major fractions of gel permeation chromatography, the 2nd fraction had the highest inhibitory activity of 65%. Further purification of the fraction using reversed-phase HPLC produced an ACE inhibitor, which was identified as a molecular mass of 359 by Tandem mass spectrometer.

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Isolation of Anti-hypertensive Substances from *Chrysanthemum boreale* Makino

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Hypertension is one of the serious diseases in the aged people. Its number has been increasing due to improvement of nutritional intake, lack of exercise, and increase of stress. This study is to isolate anti-hypertesive substances from *Chrysanthemum boreale* Makino. *Chrysanthemum boreale* Makino has been used as an oriental medicine for treatment of patients having hypertension in Korea. Crude extracts of the flower parts of the plants were prepared after heating at 60℃ for 2 hr, followed by centrifugation at 5000 x g for 30 min. Crude extracts were then filtered using a series of membranes. The membrane-filtered solution was loaded onto Sephadex G-15 column (1.8 cm x 75 cm) equlibrated with 20 mM phosphate buffer (pH 7.0). Using the most angiotensin converting enzyme (ACE) inhibitory fraction of gel filtration profile, reversed-phase HPLC using a C_{18} column was performed on the condition of buffer A (0.1% trifluroacetic acid, TFA) and buffer B (acetonitrile containing 0.1% TFA), having gradient of 0% of B to 80% and anti-hypertesive substances were isolated.

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