Spent hen meat protein hydrolysates were digested by thermolysin actively inhibited angiotensin I converting enzyme. The 3 most potent peptide fractions were isolated and the peptide sequences were analyzed. Our study demonstrates that spent hen meat is a potent source of antihypertensive peptides.

Background

Around one in three people has raised blood pressure.

— from World Health Statistics 2012

22.7% of Canadian adults aged 20 years and older were living with diagnosed hypertension. 46% of women and 38% of men aged 60 or over are on drug therapy.

— from Public Health Agency of Canada

Utilization of spent hen

a. Generally considered as byproduct of egg industry
b. Low price because of its age and relative toughness

Our objective

Our Approach

a. Identify novel antihypertensive peptides from spent hen meat
b. Add economic value to spent hen meat

Our Observations

a. Spent hen meat protein showed a comparable angiotensin I converting enzyme inhibitory activity.
b. The peptides identified from the most potent fractions of spent hen protein hydrolysates exhibited a certain level of similarity in their sequences.
c. Some peptides identified from spent hen meat have been reported from other protein commodities to possess angiotensin I converting enzyme inhibitory activity.

What Does this mean?

Spent hen meat is a potent source of antihypertensive peptides and it can be applied to develop antihypertensive functional food.

Acknowledgements

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