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## FOOD AND BEVERAGES

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**Antioxidant and angiotensin I-converting enzyme inhibitory activity of by-product of dry-aged beef**Choe J<sup>1</sup>, Kim HY<sup>1</sup>, Kim GW<sup>1</sup> and Jo C<sup>2</sup><sup>1</sup>Kongju National University University, South Korea<sup>2</sup>Seoul National University, South Korea

The present study investigated antioxidant and angiotensin I-converting enzyme (ACE) inhibitory activity of crust which is inevitably produced during dry aging process and discarded before consumption, derived from dry aged beef. The antioxidant activity, ACE inhibitory activity, and protein profile of the crust were determined compared to unaged, wet-, and dry-aged beef. The greatest ( $P < 0.05$ ) antioxidant and ACE inhibitory activity were observed in crust from dry-aged beef among the treatments, exhibiting from the three different mechanisms of action (radical scavenging, non-radical redox potential activity, and metal chelating). Antioxidant activity of dry-aged meat sample showed higher level compared those of

unaged and wet-aged beef samples. Small molecular weight protein bands indicating potent bioactivity including antioxidant and ACE inhibitory activity were evident in the myofibrillar protein profile of crust samples. Significantly high and low ACE inhibitory activities were observed for protein extract from crust and unaged beef, respectively. The protein extract from wet-aged beef showed similar ACE inhibitory activity to unaged beef. The results indicate that crust could be utilized in various areas as functional ingredient possessed antioxidant and ACE inhibitory activity instead of being discarded.

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