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關鍵字 (英)	chicken essence residues antihypertensive activity antioxidative capacity enzymatic hydrolysates spontaneously hypertensive rat
摘要 (中)	<p>雞精殘餘物為雞精製程中所產生的廢棄物，仍有許多蛋白質，常被使用作為飼料。本研究主要探討雞精殘餘物利用酵素水解後其降血壓及抗氧化之能力。脫脂之雞精殘餘物分別以 Protease A、Protease M、Protease N、Alcalase、Flavourzyme 和 Protamex 六種不同之商業酵素水解所得之水解產物。於體外研究中，Protease N 水解液具最佳之 angiotensin converting enzyme (ACE) 抑制能力(IC₅₀=1.14 mg crude protein/mL)，且其總抗氧化力、清除 DPPH 自由基之能力及抑制 VLDL-LDL 脂質過氧化之能力三項測定中，抗氧化活性皆較其他水解液優異。經由超過濾分離，Protease N 水解液分子量小於 1,000 Da 之區分具有最佳之 ACE 抑制能力及抗氧化活性(總抗氧化力及清除 DPPH 自由基之能力)；膠體層析分離後可得三個區分，其中分子量約為 530 Da 之區分 1 具最佳之 ACE 抑制能力及抗氧化活性(總抗氧化力、清除 DPPH 自由基之能力)。體內研究方面，將 Protease N 水解液管餵自發性高血壓大鼠(SHR)給予 100 或 300 mg/kg bw 之劑量，於 4 小時後即可顯著將低其收縮壓(p</p>
摘要 (英)	<p>Chicken essence residues derived from industrial by-product in the process of chicken essence are usually discarded as animal feeds. The purposes of this study were to investigate the antihypertensive and antioxidative capacities of enzymatic hydrolysates from chicken essence residues. The defatted chicken essence residues were hydrolyzed by six commercial enzymes, i.e., Protease A, Protease M, Protease N, Alcalase, Flavorzyme and Protamex. In vitro studies, indicated that Protease N hydrolysate had the highest angiotensin converting enzyme (ACE) inhibitory activity (IC₅₀=1.14 mg crude protein/mL) as well as the greatest activity in Trolox equivalent antioxidant capacity (TEAC), 2,2-diphenyl-1-picryl-hydrazyl (DPPH) radical scavenging activity, and inhibitory activity on lipid peroxidation of VLDL-LDL. After ultrafiltration, the fraction of molecular weight less than 1,000 Da had the highest ACE inhibitory activity and antioxidant activity (included TEAC and DPPH radical scavenging activity). After the fraction of molecular weight less than 1,000 Da was separated into 3 fractions by Sephadex G-15 column, the first fraction had the highest activities (included ACE inhibitory activity, included TEAC and DPPH radical scavenging activity). In animal studies, oral administration with the does of 100 or 300 mg/kg bw to spontaneously hypertensive rat (SHR) exerted a significant lowering effect (p</p>
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