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Identification and evaluation of biological properties of bioactive peptides derived from tryptic hydrolysis of *Lens culinaris*

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Glycation alters protein structure thus impairs its functions, bioactive peptides might act as a protecting agent via trapping excess sugar. In this study, red and brown *Lens culinaris* protein hydrolysate was prepared by tryptic digestion, using an enzyme/substrate ratio of 1:20(g/g), at 37°C, 12h. Protective ability against protein glycation, antioxidant and antiproliferative activities (on MCF-7, PC3 and HepG2 cell lines) of hydrolysate fractions <3 kDa were assayed *in vitro*. Peptide fractions were sequenced by HPLC-MS-MS. Results showed that those peptide fractions exhibited antiglycation, antioxidant and antiproliferative activities. Three novel peptides were identified from red and brown *Lens culinaris* for the first time.

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