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Bioactive peptide aglycin for the prevention and treatment of diabetes and non-alcoholic fatty liver

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Aglycin, a natural peptide extracted from legume seeds such as pea and soybean, is composed of 37 amino acids with highly conserved amino acid residues. It has strong resistance to the hydrolysis of digestive proteases to reveal the excellent stability. Aglycin has an obvious function of stimulating intestinal insulin signaling like GLP-1, thereby promoting the synthesis and secretion of insulin, and reducing blood glucose level in an animal model with hyperglycemia. Meanwhile, it also has anti-inflammatory functions in islets to protect the aging and damage of islet beta cells. The underlying mechanisms are highly correlated with the biosynthesis of glucose transporter-4 and the activation of the insulin receptor, as well as the enhanced insulin sensitivity. Moreover, this polypeptide also can promote β -oxidation of fatty acids in hepatocytes and inhibit the production of hepatocytes. Taken together, aglycin can be used as a potential oral polypeptide drug or supplements to prevent and treat diabetes and non-alcoholic fatty liver disease.

Biography

Zhengwang Chen has completed his PhD Karolinska Institute in Sweden. He is a Professor in School of Life Science and Technology at Huazhong University of Science and Technology. He is also a senior research scientist of Zhong-Shi-Du-Qing Biotechnology Co. Ltd., Shandong Tianjiu Industrial Group in China. He has separated, purified and identified several natural polypeptides with a series of bioactive functions for the prevention and treatment of chronic diseases, which have been patented for the potential candidates of natural medicines and supplements.

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