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## *Porphyra haitanesis*-derived anti-proliferation peptides

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**P**orphyra is cold water seaweed belonging to red algae phylum of Laver species. The marine red alga *Porphyra* has been cultivated extensively in many Asian countries as edible seaweed, known as laver, nori and amanori (Japanese), zakai and gim (Korean), zicai (Chinese). In this study, *Porphyra haitanesis* proteins were extracted and hydrolysed with trypsin. Three polypeptides were isolated, which exhibited anti-proliferation activities on five cancer cells (MCF-7, HepG-2, SGC-7901, A549 and HT-29). Two new peptides VPGTPKNLDSPR and MPAPSCALPRSVVPPR were identified, the former exhibited good inhibition activities on cancer cells MCF-7 and HepG-2, with the IC<sub>50</sub> values of 200.97 µg/mL and 276.85 µg/mL, respectively, but low inhibition on normal liver cells LO-2 (7.1%), at 500 µg/mL. Subsequently, flow cytometry demonstrated that cell cycle was arrested in G<sub>0</sub>/G<sub>1</sub> phase and apoptosis was induced in MCF-7 cells treated with the synthesized peptide VPGTPKNLDSPR.

### Biography

Xuewu Zhang obtained his PhD from Zhongshan University in 1993. Subsequently, he worked as a postdoctor in Hong Kong University, University of British Columbia, University of Manitoba and University of California at Los Angeles. Then, he come back to Hong Kong University as a Research Assistant Professor in 2003. At last, he joined South China University of Technology as a professor in 2005. His research interests focus on Food Science, Omics technologies and nanotechnology. He has published more than 80 papers in reputed journals and served as editorial board members of several journals.

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