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Potential use of biopolymer from *Bacillus subtilis* WD161 as mucoadhesive film for proliferation of oral cancer cell lines

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Biological activity of biopolymer from *Bacillus subtilis* WD161 and formulation as mucoadhesive film for proliferation of oral cancer cell lines were investigated. Among many biological activities tested, the biopolymer WD161 exhibited positive result against oral tongue squamous carcinoma cell lines (HN13 cell lines) which is the sixth most common cancer worldwide. *In vitro* cytotoxicity test by PrestoBlue™ reagent assay revealed the effective dose of the purified biopolymer. The mucoadhesive film containing the biopolymer WD161 was formulated which was consisted of polycarbophil (as bioadhesive polymer), glycerol (as plasticizer) and the biopolymer WD161 (as bioactive compound). The release of the biopolymer WD161 from the mucoadhesive film was found to be 70.76% (using Franz cell assay in the artificial saliva at 37 °C) within 180 min.

Biography

Poonsuk Prasertsan has completed her PhD in 1987 from The University of Queensland, Australia. She has published more than 55 papers in reputed journals and has been serving as a Reviewer in many international journals.

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