

**Title** Effect of an antifungal peptide from oyster enzymatic hydrolysates for control of gray mold (*Botrytis cinerea*) on harvested strawberries

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#### **Abstract**

A novel peptide *CgPep33*, with high inhibitory activity against *Botrytis cinerea* growth has been isolated from enzymatic hydrolysates from the Pacific oyster (*Crassostrea gigas*), and purified by DEAE Sephadex A-25 ion exchange, Sephadex G-25 gel filtration and HPLC. *CgPep33* inhibited the in vitro growth of *B. cinerea* by 50% at 20–40  $\mu\text{g mL}^{-1}$  and by 100% at 120  $\mu\text{g mL}^{-1}$ . The disease incidence and lesion diameter of *CgPep33*-treated fruit were 76% and 6.3 mm, respectively, lower than that of the fruit without *CgPep33* treatment on the 3rd day after inoculation. The results suggest that this peptide should provide an alternative to fungicides for controlling postharvest disease.