MASTER'S THESIS

Molecular cloning of ribosome-inactivating proteins

Choi, Wai To

Date of Award:
1996

Molecular Cloning of Ribosome-Inactivating Proteins

CHOI Wai To

A thesis submitted in partial fulfilment of the requirements
for the degree of
Master of Philosophy

May 1996

Hong Kong Baptist University

Abstract

Two ribosome-inactivating protein (RIP) genomic clones were obtained from a *Trichosanthes kirilowii* genomic library using trichosanthin (TCS) cDNA as hybridization probe. The coding sequence of the gene was amplified by polymerase chain reaction (PCR) followed by subcloning into pUC18 plasmid vector for dideoxy DNA sequencing. Comparing our sequencing data with previously reported TCS cDNA sequence, there were 24 nucleotide residues alternation leading to 15 substitutions in amino acid residues. The gene would be subcloned into an expression vector, pKK223-3 for high level recombinant protein expression in *E. coli* under the control of *tac* promoter.

Contents