

**MOLECULAR CHARACTERIZATION OF SINGLE CHAIN VARIABLE  
FRAGMENT SPECIFIC TO HIV-1 PROTEASE SUBSTRATE FOR  
THE DESIGN OF BACULOVIRUS-DISPLAYED METHOD AND  
SIMPLIFIED PROTEASE ACTIVITY ASSAY**

**KUNTIDA KITIDEE**

**DOCTOR OF PHILOSOPHY  
IN BIOMEDICAL SCIENCE**

**THE GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY**

**MARCH 2012**

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**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN BIOMEDICAL SCIENCE**

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**MARCH 2012**

THESIS UNDER THE CO-DIRECTED THESIS CONVENTION BETWEEN  
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THIS THESIS HAS BEEN APPROVED  
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS  
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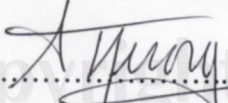
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