

**THE DEVELOPMENT OF COST EFFECTIVE AND RELIABLE  
REAL-TIME PCR FOR QUANTITATION OF HIV-1 RNA  
IN PLASMA**

**KANITTAPON SUPADEJ**

**MASTER OF SCIENCE  
IN MEDICAL TECHNOLOGY**

**THE GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY**

**SEPTEMBER 2012**

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**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS  
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**THIS THESIS HAS BEEN APPROVED  
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS  
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**EXAMINING COMMITTEE**

**THESIS ADVISOR**

*Rith W.*

.....**CHAIRPERSON**

**Assoc. Prof. Dr. Rith Watthanachaiyingcharoen**

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.....**Dr. Sorasak Intorasoot**

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*S. Intorasoot*

.....**MEMBER**

**Dr. Sorasak Intorasoot**

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