

**AMINO ACID CHANGES IN THE PR-M JUNCTION THAT  
AFFECT RELEASE OF DENGUE VIRUS PARTICLES**

**MATTHAWEE LAUSUMPAO**

**MASTER OF SCIENCE**

**IN MICROBIOLOGY**

**ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่**

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**THE GRADUATE SCHOOL**

**CHIANG MAI UNIVERSITY**

**APRIL 2008**

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The seal of Chiang Mai University is a large, faint watermark in the background. It is circular with a double border. The outer border contains the university's name in Thai script at the top and 'CHIANG MAI UNIVERSITY 1964' in English at the bottom, separated by two floral motifs. The inner circle features a central emblem of a torch with a flame, positioned above a detailed illustration of an elephant facing left.

**MATTHAWEE LAUSUMPAO**

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS  
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THIS THESIS HAS BEEN APPROVED  
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9 April 2008

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