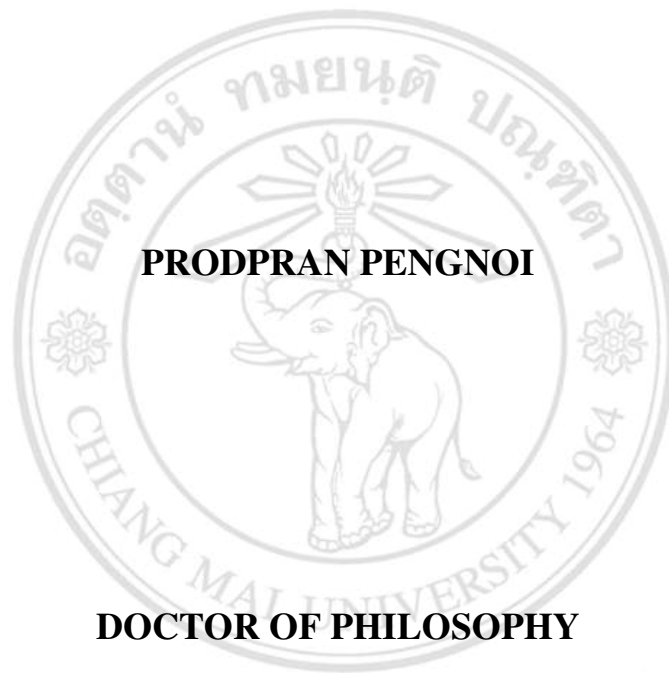


**DEVELOPMENT OF HIGH MONACOLIN K AND LOW  
CITRININ GENERATING WILD TYPE AND MUTANT  
STRAINS OF *Monascus purpureus* FOR  
RED MOLD RICE PRODUCTION**



**PRODPRAN PENGNOI**

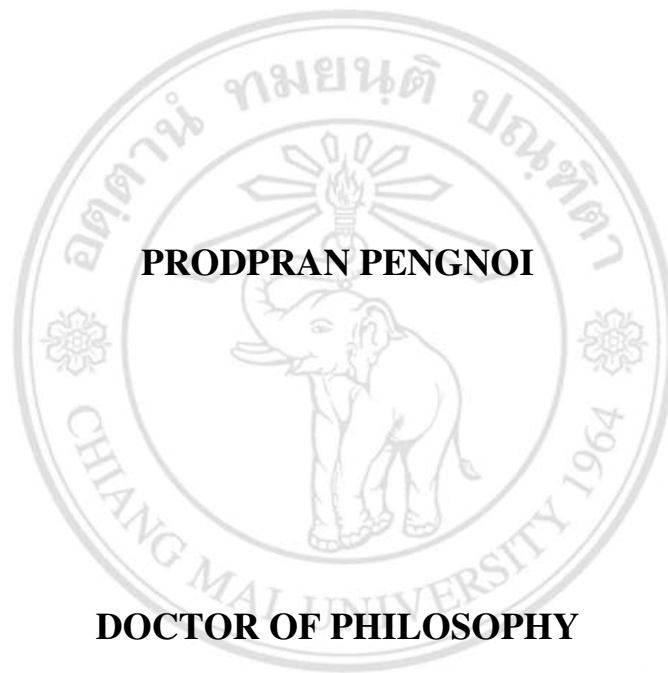
**DOCTOR OF PHILOSOPHY**

**IN APPLIED MICROBIOLOGY**

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DECEMBER 2016**

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**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
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A THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT  
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8 December 2016

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*To my beloved family*



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Prodpran Pengnoi