

**EFFECTS OF PURPLE RICE (*Oryza sativa* L. *indica*)  
EXTRACT ON TESTOSTERONE-INDUCED  
PROSTATIC HYPERPLASIA IN RATS  
AND ON GROWTH INHIBITION  
AGAINST HUMAN PROSTATE  
CANCER CELL LINE**

**CHANARAT KIRIYA**

**MASTER OF SCIENCE  
IN BIOCHEMISTRY**

**GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY  
DECEMBER 2016**

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**CHANARAT KIRIYA**

**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN BIOCHEMISTRY**

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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN BIOCHEMISTRY

**Examination Committee:**

**Advisor:**

.....Chairman

(Asst. Prof. Dr. Korawinwich Boonpisuttinant)

.....*Teera Chewonarin*.....

(Asst. Prof. Dr. Teera Chewonarin)

.....*Teera Chewonarin*.....Member

(Asst. Prof. Dr. Teera Chewonarin)

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.....*P. Pitchakarn*.....Member

(Lect. Dr. Pornsiri Pitchakarn)

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