

**EFFECT OF PLAI (*ZINGIBER CASSUMUNAR* Roxb.) EXTRACT ON HYALURONAN  
AND PROTEOGLYCAN DEGRADATION IN CARTILAGE EXPLANT**

**RUJIREK CHAIWONGSA**

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
PARTIAL FUFILLMENT OF THE REQUIREMENTS**

**FOR THE DEGREE OF  
MASTER OF SCIENCE**

**IN BIOCHEMISTRY**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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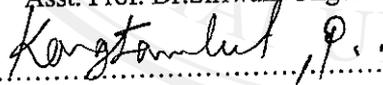
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THIS THESIS HAS BEEN APPROVED  
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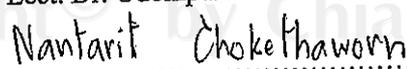
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