

# CONTENTS

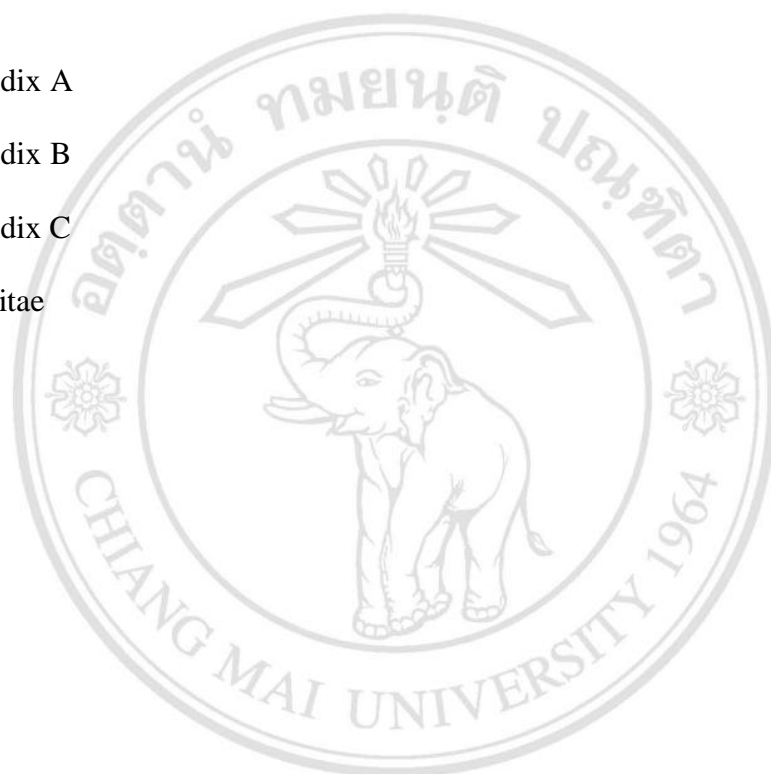
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## LIST OF ABBREVIATIONS

7-AAD	7-aminoactinomycin D
Akt	Protein kinase B
AP-1	Activator protein 1
APS	Ammonium persulfate
BER	Bas excision repair
BRAF	B-raf proto-oncogene
BRCA	Breast cancer susceptibility gene
CI	Combination index
cIAP-2	Baculoviral IAP repeat-containing protein 3
Cisplatin	<i>Cis</i> -diamminedichloroplatinum-II
CN	Crebanine
CTR1	Copper transporter 1
DTT	Dithiothreitol
EDTA	Ethylene diamine tertaacetic acid
EGTA	Ethylene glycol-bis ( $\beta$ -aminoethyl ether) tetraacetic acid
ERCC1	Excision repair cross complementation group 1
ERK	Extracellular signal-regulated kinase
FBS	Fetal bovine serum
HEPES	4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
IL-6	Interleukin-6
JNK	c-Jun N-terminal kinase
KCl	Potassium chloride
kDa	Kilodaltons
KRAS	Kristen ras oncogene
MAPK	Mitogen activated protein kinase
ml	Mililiter
mM	Milimolar

MMPs	Matrix metalloproteinase
MRP	Multidrug resistant related protein
MT1-MMP	Membrane type 1 metalloproteinase
MTT	3-(4, 5-dimethylthiazol2-yl)-2, 5-diphenyltetrazolium bromide
NaCl	Sodium chloride
NER	Nucleotide excision repair
NF-κB	Nuclear Factor kappa-light-chain-enhancer of activated B cells
NMTHP	<i>N</i> -methyl tetrahydropalmitine
OMBC	<i>O</i> -methylbulbocapnine
NP 40	Nonidet P-40
pg	Picogram
PI3K	Phosphatidylinositol 3-kinase
PMSF	Phenylmethylsulfonyl fluoride
PS	Phosphatidylserine
SDS	Sodium dodecyl sulfate
STAT3	Signal transducer and activator of transcription 3
TBS	Tris Buffered Saline
TEMED	Tetramethylethylenediamine
THP	Tetrahydropalmitine
TMB	Tetramethylbenzidine
μg	Microgram
XRCC1	X-ray repair cross-complementing group 1

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## ข้อความแห่งการริเริ่ม

- 1) ปัญหาหลักของการรักษาโรคมะเร็งรังไข่คือการดื้อยาในกลุ่มแพลตตินัมและการกลับมาเป็นโรคซ้ำเนื่องมาจากข้อจำกัดของการรักษามะเร็งรังไข่ ดังนั้นจึงเป็นที่น่าสนใจหากมีองค์ความรู้ที่มีประสิทธิภาพในการรักษามะเร็งรังไข่ ดังนั้นการศึกษาค้นคว้าจึงมุ่งเน้นในการลดการดื้อยาและปรับปรุงการรักษามะเร็งรังไข่
- 2) การศึกษาค้นคว้ามุ่งเน้นในการศึกษาประสิทธิภาพการเพิ่มความไวต่อยาเคมีบำบัดของครีบาโนนและอนุพันธ์ชนิด โอ-เมทิลบูโบแคฟีนในเซลล์มะเร็งรังไข่ที่ดื้อยาเคมีบำบัด โดยครีบาโนนและโอ-เมทิลบูโบแคฟีนที่อาจจะสามารถใช้เป็นสารช่วยเสริมประสิทธิภาพการเพิ่มความไวของยาเคมีบำบัดชนิดแพลตตินัม
- 3) จากผลการทดลองพบว่าผลของครีบาโนนและโอ-เมทิลบูโบแคฟีนในการเพิ่มความไวของยาเคมีบำบัดสามารถนำไปประยุกต์ใช้และพัฒนาเพื่อจุดประสงค์ในปรับปรุงการรักษามะเร็งรังไข่ได้ กล่าวอีกนัยหนึ่งคือ ผลการศึกษาในเซลล์มะเร็งที่แยกได้จากผู้ป่วยมะเร็งรังไข่เป็นองค์ความรู้ที่ลึกกว่าเดิมที่จะช่วยประเมินการตอบสนองต่อยาเคมีบำบัดสำหรับผู้ป่วยมะเร็งรังไข่แต่ละราย

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## STATEMENT OF ORIGINALITY

1. The major problems in the management of ovarian cancer is the platinum drug resistance and recurrence. Because of the limited efficacy of current treatments for advanced ovarian cancer, novel and more effective therapies are investigated. Thereby, investigations aiming to overcome the drug resistance and to improve the therapeutic strategies for the disease are still necessary and interesting.
2. This thesis was proposed for the chemosensitizing effects of CN and OMBC on ovarian cancer cells. The study results presented that CN and OMBC would be an effective adjuvant agent to sensitize the platinum-based chemotherapeutic drugs.
3. By the study results, advantage effects of CN and OMBC would be further applied and developed in aiming to improve the therapeutic strategies for ovarian cancer. On the other hand, the current results of *ex-vivo* studies from tumor tissue of ovarian cancer patients serves as the basis for a deeper investigation into drug responses and the establishment of personalized cancer therapy for ovarian cancer patients.

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