

**PCR BASED ASSAY OF MITOCHONDRIAL DNA
MUTATIONS IN ORAL LEUKOPLAKIA: CORRELATION
WITH COX-2 EXPRESSION**

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَاقُلْ رَبِّيَ رَبُّنَا
رَبُّنَا رَبُّنَا رَبُّنَا

صَدَقَ اللَّهُ الْعَظِيمُ

*To Mom and Dad,
who always picked me up on time and inspire me
by love, encouragement and support....*

*To my beloved husband, Ehab,
and my dear sons, Mohannad and Eyad
Thank you for your support and patience....*

*To all who will read this one day and
find it useful,
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List of Abbreviations

ANOVA:	Analysis of Variance
ATP:	Adenosine Tri-Phosphate
Bcl-2:	B-cell lymphoma-2
BLAST:	Basic Local Alignment Search Tool
COX:	Cyclo-oxygenase
Cyt-c:	cytochrome -c
DAB:	Diamino Benzidine
D-loop:	Displacement Loop
DNA:	Deoxyribonucleic Acid
dNTP:	deoxyribonucleotide triphosphate
DPX:	Distrene, Plasticiser, Xylene
EB:	Ethidium Bromide
EBV:	Epstein Barr Virus
EDTA:	Ethylene Diamine Tetra Acetic Acid
H&E:	Hematoxylin and Eosin
HBV:	Hepatitis B Virus
HIF:	Hypoxia Inducible Factor
HIV:	Human Immunodeficiency Virus
HNSCC:	Head and Neck Squamous Cell Carcinoma
HPV:	Human Papilloma Virus
HSV:	Herpes Simplex Virus
MDB:	Membrane Desalting Buffer
MOMP:	Mitochondrial Outer Membrane Permeabilization
MtDNA:	Mitochondrial DNA
MW:	Molecular Weight
NADH:	reduced Nicotinamide Adenine Dinucleotide

List of abbreviations

NSAIDs: Non-Steroidal Anti-Inflammatory Drugs

OED: Oral Epithelial Dysplasia

OSCC: Oral Squamous Cell Carcinoma

PBS: Phosphate Buffer Saline

PCR: Polymerase Chain Reaction

PGs: Prostaglandins

pH: Power of Hydrogen

PKB: Protein Kinase B

PMDs: Potentially Malignant Disorders

PTEN: Phosphatase and Tensin homolog

PTP: Permeability Transition Pore

ROS: Reactive Oxygen Species

rpm: revolution per minute

SPSS: Statistical Package for Social Science

TAE: Tris-Acetate EDTA

Taq: *Thermus aquaticus*

TCA: Tricarboxylic Acid

tRNA: transfer Ribonucleic Acid

UV: Ultra Violet

WHO: World Health Organization

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