Effect of Resveratrol and Lycopene on Laryngeal Carcinoma Cell Line

Thesis submitted for the partial fulfillment of requirements of the Doctor of philosophy degree (PhD) in Oral Pathology

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List of Abbreviations

ACD Accidental cell death

AMPK AMP-activated protein kinase

ANOVA Analysis of variance

ATG Autophagy related genes

BAD BCL2 associated agonist of cell death

BAX BCL2 associated x protein

BCL2 B-cell lymphoma 2

BH3 Bcl-2 homology

BECN1 Beclin-1

Bif-1 Bax-interacting factor

cDNA Complementary DNA

CD4 Cluster of differentiation 4

CMA Chaperone mediated autophagy

COPD Chronic obstructive pulmonary disease

COX-1 Cyclooxygenase-1

CVD Cardiovascular disease

DAPK Death-associated protein kinase

ΔΔCT Delta, cycle threshold

DNA Deoxyribonucleic acid

DMSO Dimethyl sulfoxide

DRAM Death-regulated autophagy modulator

dT Deoxythyamine

E-MEM Eagle's minimum essential medium
EDTA Ethylene-Diamine-Tetra-Acetic acid

FBS Foetal bovine serum

FLIP Flice inhibitory protein

HCV Hepatitis C virus

HDL High density lipoprotein

HEp-2 Human epithelial type-2

HNC Head and neck cancer

HPLC Highly purified liquid chromatography

HSV-1 Herpes simplex virus type-1IC50 Inhibitory concentration 50%

IL Interleukin

LAMP2 Lysosome-associated membrane protein-2

LC3 Light chain protein-3

LIR LC3-interacting region

Lkb1 Liver kinase b1

MCL1 Myeloid leukemia cell differentiation protein

MCF Methane conversion factor

MHC Major histocompatibility complex

miRNA Micro RNA

MICA Major histocompatibility complex class I chain-related

proteins A

MICB Major histocompatibility complex class I chain-related

proteins B

μl Micro litre

μm Micro mole

MMPs Matrix metalloproteinases

MP Matrix protein

mRNA Messenger RNA

mTOR Mammalian TOR

MTT Methyl thiazol tetrazolium

NCCD Nomenclature committee on cell death

OD Optical density

OSCC Oral squamous cell carcinoma

Parkin Parkinson protein-2

PBS Phosphate buffer saline

PCD Programmed cell death

PCNA Proliferating cell nuclear antigen

PCR Polymerase chain reaction

PI3k Phosphatidylinositol-3 kinase

PINK1 Induced putative kinase 1

PKB Protein kinase B

PRAS40 Proline-rich AKT substrate-40

PTEN Phosphate and tensin homologue

q-PCR Real time quantitative polymerase chain reaction

RCD Regulated cell death

RISC RNA induced silencing complex

RNA Ribonucleic acid

ROS Reactive oxygen species

SCC Squamous cell carcinoma

SD Standard deviation

SMURF1 Smad ubiquitination related factor 1

SNPs Single nucleotide polymorphism

SPSS Statistical package for the social sciences

SQSTM1 Sequestome 1

SYBR Synergy brands

TIMPs Tissue inhibitor of metalloproteinase proteins

Tm Temperature of Melting

TOR Target of rapamycin

UTR Untranslated region

UVRAG Ultraviolet Resistance Associated Gene

WHO World health organization