

## DAFTAR ISI

HALAMAN JUDUL.....	i
HALAMAN PENGESAHAN.....	i
PERNYATAAN.....	iii
PRAKATA.....	iv
DAFTAR ISI.....	vii
DAFTAR SINGKATAN.....	ix
INTISARI.....	x
ABSTRACT.....	xi
BAB I. PENDAHULUAN.....	1
I.1 Latar Belakang.....	1
I.2 Perumusan Masalah.....	4
I.3 Tujuan Penelitian.....	5
I.4 Keaslian Penelitian.....	6
I.5 Manfaat Penelitian.....	7
BAB II. TINJAUAN PUSTAKA.....	8
II.1 Pengertian Karsinoma Nasofarings.....	8
II.2 Epidemiologi Karsinoma Nasofarings.....	9
II.3 Etiologi Karsinoma Nasofarings.....	10
II.4 Metilasi DNA.....	13
II.5 Metilasi DNA dan Karsinoma Nasofarings.....	14
II.6 Metilasi DNA dan Kebiasaan Merokok.....	17
II.7 Metilasi DNA pada Jaringan dan Darah.....	20
II.8 <i>WNT Inhibitory Factor 1 (WIF1)</i> .....	22
II.9 MS-PCR ( <i>Methylation Specific Polymerase Chain Reaction</i> ).....	25
II.10 Landasan Teori.....	27
II.11 Kerangka Konsep.....	29
II.12 Hipotesis.....	30
BAB III. METODE PENELITIAN.....	31
III.1 Jenis dan Rancangan Penelitian.....	31
III.2 Tempat dan Waktu Penelitian.....	31

III.3 Populasi, Subjek dan Sampel Penelitian .....	31
III.4 Variabel Penelitian .....	33
III.5 Definisi Operasional Variabel .....	33
III.6 Bahan dan Alat .....	34
III.6.A Bahan .....	34
III.6.B Alat .....	35
III.7 Cara Penelitian .....	35
III.7.A Teknik Pengambilan Sampel .....	35
III.7.B Pemeriksaan DNA secara kuantitatif dan kualitatif .....	35
III.7.C Modifikasi Bisulfit .....	37
III.7.D <i>Methylation Specific Polymerase Chain Reaction (MSP)</i> .....	40
III.8 Analisis Hasil .....	43
BAB IV. HASIL DAN PEMBAHASAN .....	45
IV.1 Hasil .....	45
IV.1.A Gambaran Umum Subjek Penelitian .....	45
IV.1.B Deteksi Status Metilasi menggunakan MSP .....	46
IV.1.C Uji Beda antara Status Metilasi Promoter Gen <i>WIF1</i> dengan Kasus Kontrol .....	47
IV.1.D Uji Beda antara Status Metilasi promoter Gen <i>WIF1</i> dan Status Merokok .....	48
IV.1.E Hubungan antara Metilasi Promoter Gen <i>WIF1</i> dengan Kebiasaan Merokok .....	48
IV.2 Pembahasan .....	49
IV.2.A Gambaran Umum Subjek Penelitian .....	49
IV.2.B Perbandingan Metilasi Promoter Gen <i>WIF1</i> pada Kontrol dan Kasus ..	52
IV.2.C Perbandingan Metilasi Promoter Gen <i>WIF1</i> pada Perokok dan Non Perokok .....	54
IV. 3 Keterbatasan Penelitian .....	55
BAB V. PENUTUP .....	57
IV.1 Kesimpulan .....	57
IV.2 Saran .....	57
IV.3 Ringkasan .....	58
DAFTAR PUSTAKA .....	61

## DAFTAR SINGKATAN

AHRR	: <i>Aryl-Hydrocarbon Receptor Repressor</i>
CpG	: <i>C—phosphate—G</i>
DAPK1	: <i>Death Associated Protein Kinase 1</i>
DNMT	: <i>DNA methyltransferase</i>
EBNA1	: <i>Epstein–Barr virus nuclear antigen 1</i>
EBV	: <i>Epstein-Barr Virus</i>
EWAS	: <i>Epigenome-Wide DNA methylation</i>
FFPE	: <i>Formalin-fixed, paraffin-embedded</i>
HIF-1 $\alpha$	: <i>Hypoxia-inducible factors 1 alfa</i>
KNF	: <i>Karsinoma Nasofarings</i>
MAT2A	: <i>Methionin Adenosyl Transferase 2A</i>
MSE	: <i>Mainstream cigarette-Smoke Extract</i>
MSP	: <i>Methylation-specific PCR</i>
NP brushing	: <i>Nasopharyngeal Brushing</i>
NSCLC	: <i>Non-small cell lung cancer</i>
RASSF1	: <i>Ras Association Domain Family Member 1</i>
SSE	: <i>Sidestream cigarette-Smoke Extract</i>
TSG	: <i>Tumor Suppresor Gene</i>
WHO	: <i>World Health Organization</i>
WIF1	: <i>WNT Inhibitory Factor 1</i>
Wnt	: <i>Wingless-Type MMTV Integration Site Family</i>