LIST OF ABBREVIATIONS

- = Minus

% = Percentage

°C = Degree Celsius

 $\mu g = Microgram$ $\mu l = Microliter$ $\mu M = Micromolar$

μs = microsecond

5-mC = 5-methylCytocine 6-DMAP = 6-Dimethylamino purine

ANOVA = Analysis of variance

bp = Base pair

BSA = Bovine serum albumin

BTS = Beltsville Thawing Solution

 $CaCl_2.2H_2O$ = Calcium chloride dihydrate

cDNA = Complementary deoxyribonucleic acid

Class II = Class 1
Class IIa = Class 2a
Class IIb = Class 2b
Class III = Class 3
Class IV = Class

 CO_2 = Carbon dioxide

COCs = Cumulus-oocyte complexes

dbcAMP = Dibutyryl cAMP

DMSO = Dimethyl sulfoxide

DNMT1 = DNA methyltransferase 1

DNMT3A = DNA methyltransferase 3 alpha DNMT3B = DNA Methyltransferase 3 Beta

DNMTs = DNA methyltransferases
DNMTs = DNA methyltransferases

EDTA = Ethylenediaminetetraacetic acid

EGF = Epidermal growth factor

FBS = Fetal bovine serum

LIST OF ABBREVIATIONS (Continued)

GAPDH = Glyceraldehyde-3-phosphate dehydrogenase

GV = Germinal vesicle

h = Hour

H1 = Histone 1 H2A = Histone 2A H2B = Histone 2B H3 = Histone 3

H3K14ac = Lysine14 acetylation of Histone3 H3K27me3 = Lysine 27 trimethylation of Histone H3K4me3 = Lysine 4 trimethylation of Histone 3

H3K9 = Histone 3 Lysine 9

H3K9ac = Lysine9 acetylation of Histone3 H3K9me3 = Lysine9 trimethylation of Histone3

H4 = Histone 4

H4K8 = Histone 4 Lysine 8

HAT = Histone acetyltransferase

HCG = Human chorionic gonadotropin

HDAC = Histone deacetylase

HDAC1 = Histone deacetylase 1

HDAC2 = Histone deacetylase 2

HDAC3 = Histone deacetylase 3

HDACi = Histone deactylase inhibitors

HEPES = 4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid

Hoechst 33342= Bisbenzimide

HSD = Honest Significant Difference

ICC = Immunocytochemistry
IU = The international unit

LOS = Large offspring syndrome

mDPBS = Modified Dulbecco's phosphate buffered saline

me = Monomethylation

LIST OF ABBREVIATIONS (Continued)

me2 = Demethylation me3 = Trimethylation

MEK = Mitogen-activated protein kinase $MgSO_4.7H_2O$ = Magnesium Sulfate Heptahydrate

MI = Metaphase I

MII = Metaphase II

mM = Milimolar

mm = Millimeter

mRNA = Messenger ribonucleic acid

 N_2 = Nitrogen

NaCl = Sodium chloride NANOG = Nanog Homeobox

ng = Nanogram

NMMII = Nonmuscle myosin II

OCT4 = Homeodomain transcription factor of the POU family

PBS = Phosphate-buffered saline

PcG = Polycomb group

Pig-FM = Pig fertilization medium

PMSG = Pregnant mare serum gonadotropin

PN = Pronuclear stage

POM = Porcine oocyte medium POU5F1 = POU Class 5 Homeobox 1

PVP = Polyvinylpyrolidone

PZM-3 = porcine zygote medium-3

qPCR = Quantitative polymerase chain reaction

Reversine = 2-(4-morpholinoanilino)-6-cyclohexylamino-purine analogue

RNA = Ribonucleic acid

SAHA = Suberoylanilide hydroxamic acid
SCNT = Somatic cell nuclear transfer
SEM = Standard error of the mean
SOX2 = SRY-Box Transcription Factor 2

Suv39H1/2 = Histone Lysine Methyltransferase of variegation 39H1/2

TCM199 = Medium 19

Tet = Ten-eleven translocation

LIST OF ABBREVIATIONS (Continued)

TrxG = Trithorax group
TSA = Trichostatin A

V = Voltage

XCI = Chromosome inactivation

 α MEM = Alpha modification