

IN VIVO CHARACTERIZATION OF THE ROLE OF
HISTONE DEACETYLASE 3 IN METABOLIC
AND TRANSCRIPTIONAL REGULATION

By

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	ii
LIST OF FIGURES.....	viii
LIST OF TABLES.....	xi
LIST OF ABBREVIATIONS.....	xii
 Chapter	
I. INTRODUCTION.....	1
Nucleosomes.....	1
Chromatin.....	1
Histones.....	2
Heterochromatin and Euchromatin.....	6
Genetic Studies.....	6
Chemical Studies.....	7
A Repeating Unit.....	9
Histone Modifications.....	13
N-terminal Histone Tails.....	13
The Histone Code.....	15
Transcriptional Regulation.....	16
Replication and Chromosome Condensation.....	18
DNA Repair.....	20
Histone Acetylation.....	21
Histone Deacetylases.....	24
Identification and Classification.....	24
Class I.....	25
Class IIa, IIb, and IV.....	27
Class III (Sirtuins).....	32
Inhibitors and Role in Disease.....	33
Histone Deacetylase 3.....	41
Transcription Factor and Nuclear Receptor Interactions.....	45
 II. MATERIALS AND METHODS.....	 51
Cell Culture and Plasmids.....	51
<i>In vitro</i> Transcription and Translation.....	51

Luciferase Assays	52
Co-Immunoprecipitation	52
Flow Cytometry Analysis.....	53
Methylcellulose Assay (MCA).....	53
Antibodies	53
Generation of <i>Hdac3</i> Knockout Mice.....	54
Generation of Liver-specific <i>Hdac3</i> Knockout Mice	57
<i>In vivo</i> Inhibitor Treatment.....	57
Genotyping of Conditional and Transgenic <i>Hdac3</i> Deletion Mice	58
Preparation of Bone Marrow and Liver Lysates	59
Histology and Immunohistochemistry	59
Liver DNA and RNA Extraction, Q-RT-PCR, and Microarray Analysis	60
Chromatin Immunoprecipitation (ChIP).....	61
Metabolic Analysis	65
Transmission Electron Microscopy (TEM).....	65
III. REGULATION OF HEMATOPOIETIC TRANSCRIPTION FACTOR RUNX1 AND BONE MARROW HOMEOSTASIS BY HISTONE DEACETYLASE 3	66
Background and Significance.....	66
Results	69
Chromatin remodeling enzymes bind RD2 of RUNX1	69
RUNX1 RD2 is required for transcriptional repression	73
Conditional deletion of the Runx1 interacting protein Hdac3 in total bone marrow.....	75
Loss of <i>Hdac3</i> affects the hematopoietic stem cell compartment....	77
Discussion	79
IV. LIVER-SPECIFIC DELETION OF <i>HISTONE DEACETYLASE 3</i> DISRUPTS METABOLIC TRANSCRIPTIONAL NETWORKS	84
Background and Significance.....	84
Results	85
Liver-specific deletion of <i>Hdac3</i> results in organ hypertrophy	85
Deletion of <i>Hdac3</i> leads to increased hepatocellular damage	89
Loss of <i>Hdac3</i> disrupts metabolic homeostasis	90
Lipid and cholesterol biosynthesis regulatory genes are de-repressed after in activation of <i>Hdac3</i>	94
<i>Hdac3</i> inactivation affects histone acetylation	99
Loss of <i>Hdac3</i> increases <i>Pparγ</i> expression and activity in hepatocytes.....	100
Inhibition of mTOR affects lipid levels in <i>Alb:Hdac3^{fl/-}</i> mice	103
Discussion	106

V.	LOSS OF <i>HISTONE DEACETYLASE 3</i> INCREASES SUSCEPTIBILITY FOR GENOMIC DAMAGE AND DISEASE DEVELOPMENT	109
	Background and Significance	109
	Results	112
	Prolonged loss of <i>Hdac3</i> leads to endogenous DNA damage and increased sensitivity to irradiation	112
	Symptoms of NASH develop in <i>Hdac3</i> -null livers.....	117
	Liver-specific loss of <i>Hdac3</i> leads to hepatocellular carcinoma ...	119
	Discussion	125
VI.	SUMMARY AND FUTURE DIRECTIONS	129
	REFERENCES	136

LIST OF FIGURES

Figure	Page
1. Schematic of mitosis.....	3
2. Original purification scheme for histone proteins.....	5
3. Genetics of heterochromatin and euchromatin in the mealy bug.....	8
4. Nucleosome structure	12
5. The histone fold motif	14
6. Post-translational modifications of human histone N-terminal tails	17
7. Inhibition of RNA polymerase by deacetylated histones	22
8. Regulation of cellular localization of class IIa HDACs	29
9. Histone deacetylase inhibitors.....	36
10. SAHA binding at the active site in the <i>Aquifex aeolicus</i> histone deacetylase-like protein (HDLP).....	38
11. Structural organization of HDAC3.....	42
12. Transcriptional regulation of nuclear receptors	49
13. Definition of C-terminal sites in RUNX1 that contact HDAC1 and HDAC3	71
14. HDACs and SUV39H1 contact sites within the RUNX1 RD2.....	72
15. RUNX1 binds two separate SUV39H1 domains <i>in vitro</i>	74
16. Residues within the RUNX1 RD2 are required for transcriptional repression.....	75
17. Targeting construct for generation of the <i>Hdac3</i> conditional allele.....	76
18. Down-regulation of <i>Hdac3</i> expression in total bone marrow of <i>Mx:Hdac3^{fl/-}</i> mice	77
19. General schematic of murine hematopoiesis.....	78

20.	Hematopoietic stem cells are affected by loss of <i>Hdac3</i>	80
21.	Conditional and inducible deletion of <i>Hdac3</i> in liver using <i>Mx1-Cre</i>	86
22.	Constitutive deletion of <i>Hdac3</i> using liver-specific <i>Alb-Cre</i>	88
23.	Analysis of hepatocyte cell proliferation and death in <i>Alb:Hdac3^{fl/-}</i> mice	89
24.	Loss of <i>Hdac3</i> significantly alters metabolism.....	91
25.	<i>Alb:Hdac3^{fl/-}</i> mice are hypoglycemic and are insulin sensitive	95
26.	Validation of up-regulated transcripts from P17 microarray analysis by Q-RT-PCR.....	98
27.	Histone acetylation increases in <i>Alb:Hdac3^{fl/-}</i> mice	99
28.	Ingenuity Pathway Analysis of P17 and P28 microarray data.....	101
29.	<i>Pparγ</i> is up-regulated in the absence of <i>Hdac3</i>	104
30.	Loss of <i>Hdac3</i> activates mTOR, which contributes to disrupted metabolism	105
31.	Endogenous DNA damage occurs after chronic loss of <i>Hdac3</i>	113
32.	Up-regulated genes related to DNA damage in <i>Alb:Hdac3^{fl/-}</i> mice	114
33.	Nuclei of <i>Hdac3</i> -null cells have decreased amounts of heterochromatin	115
34.	<i>Alb:Hdac3^{fl/-}</i> mice are more susceptible to DNA damage induced by irradiation.....	116
35.	Chronic loss of <i>Hdac3</i> leads to symptoms of NASH	118
36.	Activation of hepatic progenitors in <i>Alb:Hdac3^{fl/-}</i> mice.....	120
37.	Cytokeratin expression increases upon loss of <i>Hdac3</i>	121
38.	Gross histology and representative cellular morphology of HCC in aging old <i>Alb:Hdac3^{fl/-}</i> mice	122
39.	Proliferation assessment in <i>Alb:Hdac3^{fl/-}</i> regions of tumor and benign adenoma.....	123
40.	Tumor-laden livers remain null for <i>Hdac3</i>	123

41.	Expression levels of HCC molecular markers are increased in <i>Hdac3</i> -null liver	125
42.	Peripheral organs are affected in <i>Alb:Hdac3^{fl/-}</i> mice which develop HCC	126
43.	Presence of nuclear β -catenin in P28 <i>Alb:Hdac3^{fl/-}</i> mice	134

LIST OF TABLES

Table	Page
1. Primer sequences for generation of Runx1 Δ 379-430 deletion construct	51
2. Transgenic and knockout mouse genotyping primer sequences	58
3. Q-RT-PCR primer sets.....	62
4. Primer sequences for amplification of designated promoter regions analyzed in CHIP assay	64
5. Representative analysis of differentiated hematopoietic lineages in <i>Mx:Hdac3</i> mice 2 days and 1 week post-injection of pIpC	79
6. Quantification of metabolic parameters in <i>Alb:Hdac3</i> liver tissue	93
7. Quantification of metabolic parameters in <i>Alb:Hdac3</i> serum.....	94
8. Transcriptional changes in <i>Alb:Hdac3^{fl/-}</i> at P17 and P28	97

ABBREVIATIONS

ac- acetylated

ADP- adenine diphosphate

ALL- acute lymphoblastic leukemia

ALT- alanine transaminase

AML- acute myeloid leukemia

ATRA- all-*trans* retinoic acid

bp- base pair

BrdU- bromodeoxy uridine

CaMK- calcium/calmodulin-dependent protein kinase

CHAP1- cyclic hydroxamic acid-containing peptide

ChIP- chromatin immunoprecipitation

CK2- casein kinase 2

CLP- common lymphoid progenitor

CML- chronic myelogenous leukemia

CMP- common myeloid progenitor

CoA- Coenzyme A

DAD- deacetylase domain

DNA- deoxynucleic acid

DNA-PK- deoxynucleic acid-protein kinase

DOC- sodium deoxycholate

DSB- double strand break

DTT- dithiothreitol

ECM- extracellular matrix

EDTA- ethylene diamine tetraacetic acid

EM- electron microscopy

ER- estrogen receptor

ESC- embryonic stem cell

EtOH- ethanol

FACS- fluorescent activated cell sorting

GDH- glutamate dehydrogenase

GGT1- gamma-glutamyl transpeptidase 1

GPS2- G-protein pathway suppressor 2

GR- glucocorticoid receptor

Gy- gray (measurement of radiation absorption)

H&E- hematoxylin and eosin

HAT- histone acetyltransferase

HCC- hepatocellular carcinoma

HDAC- histone deacetylase

HDI- histone deacetylase inhibitor

HDL- high density lipoprotein

IGF2- insulin-like growth factor 2

IP- intraperitoneal

IR- irradiation

kDa- kilodalton

LDL- low density lipoprotein

LOH- loss of heterozygosity

LSK- lineage negative/c-kit⁺/Sca-1⁺ hematopoietic population

LXR- liver X receptor

MCA-methycellulose assay

MDa- megadalton

MEF- mouse embryonic fibroblast

MEF2- myocyte enhancing factor 2

MetS- metabolic syndrome

MPP- multi-potent progenitor

MTG- myeloid translocation gene

mTOR- mammalian target of rapamycin

MW- molecular weight

N-CoR- nuclear corepressor

NAFLD- non-alcoholic fatty liver disease

NASH- non-alcoholic steatohepatitis

NER- nucleotide excision repair

NES- nuclear export signal

NLS- nuclear localization signal

NMR- nuclear magnetic resonance

NR- nuclear receptor

O/N- overnight

PAS- periodic acid Schiff stain

PDB- protein database

PBS- phosphate buffered saline

PCR- polymerase chain reaction

PEG- polyethylene glycol

PHx- partial hepatectomy

pIpC- polyinosinic acid-polycytidylic acid

PML- promyelogenous leukemia

PMSF- phenylmethanesulphonylfluoride

PPAR- peroxisome proliferator-activated receptor

PPRE- peroxisome proliferators response element

PVDF- polyvinylidene fluoride

Q-PCR- quantitative polymerase chain reaction

Q-RT-PCR- quantitative reverse transcriptase polymerase chain reaction

RD- repression domain

RNA- ribonucleic acid

ROS- reactive oxygen species

RT- room temp

RXR- retinoid X receptor

SAHA- suberoylanilide hydroxamic acid

SANT- Swi3/Ada2/N-CoR/TFIIIB

SDS- sodium dodecyl sulfate

SDS-PAGE- sodium dodecyl sulfate polyacrylamide gel electrophoresis

SIR- silent information regulator

siRNA- small interfering RNA

SMRT- silencing mediator of retinoic and thyroid receptors

SOE- splicing by overlap extension

SUMO- small ubiquitin-like modifier

T₃- thyroid hormone

TBL1- transducin β -like 1

TEM-electron microscopy

TR- thyroid hormone receptor

TSA- trichostatin A

TUNEL- terminal transferase dUTP nick end labeling

TZD- thiazolidinediones

VDR- vitamin D receptor

VPA- valproic acid

WCL- whole cell lysate