

The Histone Methyltransferase Setdb2 Modulates TIMP-MMP Activity During Abdominal Aortic Aneurysm Development

Authors

Frank M. Davis, M.D.¹; William J. Melvin, M.D.¹; Kevin Mangum, M.D.¹; Lam C. Tsoi, Ph.D.^{2,3,4};
Rachael Wasikowski, MS²; Amrita D. Joshi¹, Ph.D.¹; Qing Cai, MS¹; Peter K. Henke, M.D.¹;
Johann E. Gudjonsson, M.D., Ph.D.²; Katherine A. Gallagher, M.D.^{1,5}

Affiliations

1Section of Vascular Surgery, Department of Surgery, University of Michigan, Ann Arbor, MI

2Department of Dermatology, University of Michigan, Ann Arbor, MI

3Department of Computation Medicine and Bioinformatics, University of Michigan, Ann Arbor, MI

4Department of Biostatistics, University of Michigan, Ann Arbor, MI

5Department of Pathology, University of Michigan, Ann Arbor, MI

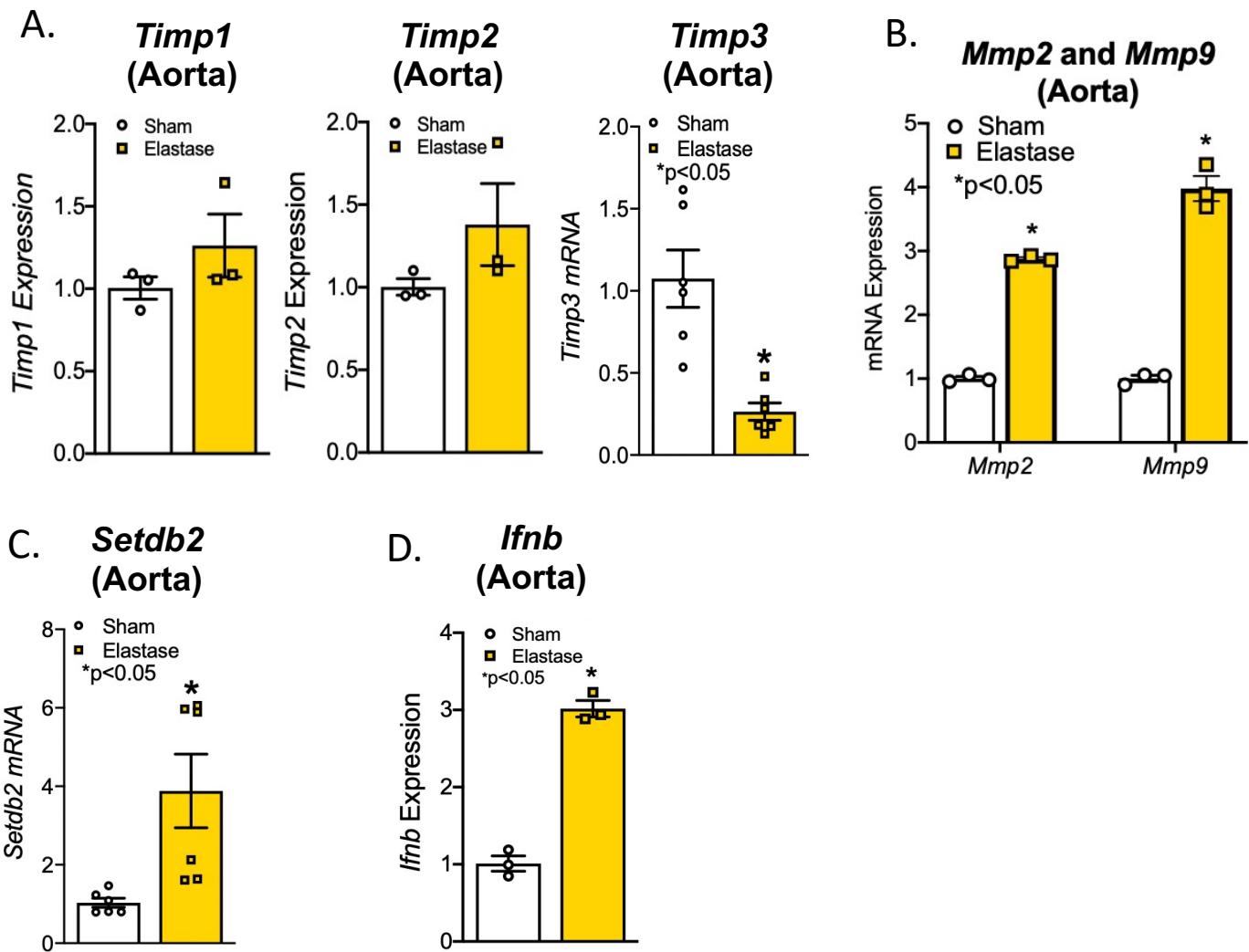
6Department Microbiology and Immunology, University of Michigan, Ann Arbor, MI

Supplemental Materials

-Online Figures 1-3

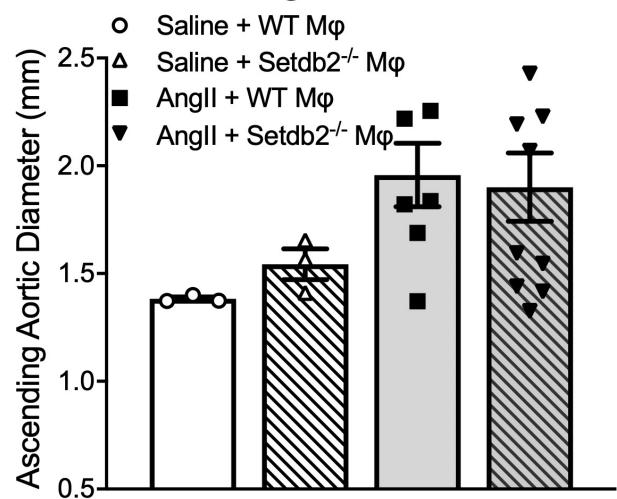
-Online Tables I-III

Supplemental Figure 1



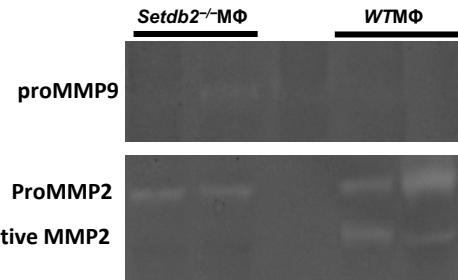
Supplemental Figure 2

A. Ascending Aortic Diameter

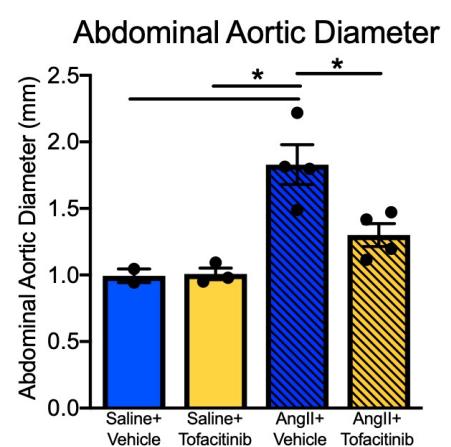
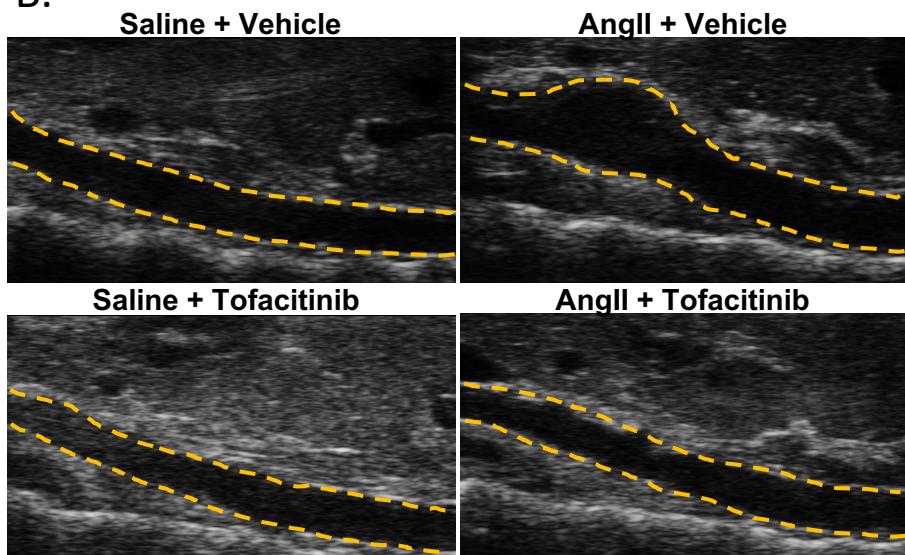


Supplemental Figure 3

A.



B.



Supplemental Table I Primer Sequences

Gene	Forward Primer	Reverse Primer
<i>Timp1</i>	5' TCCCTTATTCAACCAACTGCC 3'	5' AGGGAGAGTTGGGACCTCTT 3'
<i>Timp2</i>	5' ATCCTCGGAGCGCAATAAAA 3'	5' TGCCTTCTATGGCTGTGTT 3'
<i>Timp3</i>	5' TCATACTAGCACAAATGCC 3'	5' GGTAAATTGCCATTGGGGTA 3'

Supplemental Table II Human AAA and Atherosclerotic Tissue Cohort

Demographic	Control (n=3)	AAA (n=19)
Gender (% male)	2 (66.7)	15 (78.9)
Age (SD)	67.7 (7.5)	66.4 (7.3)
BMI (SD)	29.0 (6.3)	27.1 (4.9)
Aortic Diameter (SD, mm)	---	53.7 (12.8)
Tobacco abuse (prior/current)	2 (66.7)	17 (88.8)
Hypertension	2 (66.7)	17 (77.7)
Hyperlipidemia	2 (66.7)	12 (63.2)
Coronary artery disease	2 (66.7)	6 (31.5)
Diabetes	0 (0)	1 (5.2)
COPD	2 (66.7)	4 (21.0)
Renal Failure	0 (0)	1 (5.2)

BMI, body mass index; COPD, chronic obstructive pulmonary disease; SD, standard deviation

Continuous variable are summarized by mean (standard deviation) and categorical variables are summarized by N (%).

Supplemental Table III Human AAA and Atherosclerotic Single Cell RNA-Sequencing Cohort

Demographic	Control (n=2)	AAA (n=4)
Gender (% male)	2 (100)	2 (50)
Age (SD)	59.8 (2.1)	67.2 (15.5)
BMI (SD)	33.7 (4.0)	33.7 (6.0)
Aortic Diameter (SD, mm)	---	59.7 (3.3)
Tobacco abuse (prior/current)	2 (100)	2 (50.0)
Hypertension	2 (100)	2 (50.0)
Hyperlipidemia	2 (100)	2 (50.0)
Coronary artery disease	0 (0)	0 (0)
Diabetes	0 (0)	0 (0)
COPD	0 (0)	1 (25.0)
Renal Failure	0 (0)	0 (0)

BMI, body mass index; COPD, chronic obstructive pulmonary disease; SD, standard deviation

Continuous variable are summarized by mean (standard deviation) and categorical variables are summarized by N (%).