

Characterization of mouse coagulation (regulatory) genes with use of RNAi

Safdar, H.

Citation

Safdar, H. (2014, November 4). *Characterization of mouse coagulation (regulatory) genes with use of RNAi*. Retrieved from https://hdl.handle.net/1887/29594

Version: Corrected Publisher's Version

License: License agreement concerning inclusion of doctoral thesis in the

Institutional Repository of the University of Leiden

Downloaded from: https://hdl.handle.net/1887/29594

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle http://hdl.handle.net/1887/29594 holds various files of this Leiden University dissertation

Author: Safdar, Huma

Title: Characterization of mouse coagulation (regulatory) genes with use of RNAi

Issue Date: 2014-11-04

Characterization of mouse coagulation (regulatory) genes with use of RNAi

Huma Safdar

Characterization of mouse coagulation (regulatory) genes with use of RNAi

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. dr. mr. C.J.J.M. Stolker
volgens besluit van het College voor Promoties
te verdedigen op dinsdag 04 november 2014
klokke 13:45 uur

door

Huma Safdar

Geboren te Lahore, Pakistan in 1979

Promotiecommissie

Promotor:

Prof. dr. P.H. Reitsma

Co-promotor:

dr. B.J.M. van Vlijmen

Overige leden:

Prof. dr. S.J.H. van Deventer

Prof. dr. C.J.M. van Vries (University of Amsterdam)

Prof. dr. J. Kuiper

The research described in this was financially supported by the Dutch Organisation for Scientific Research (NWO-TOP Grant #40-00812-98-07-045) and was performed at the Einthoven Laboratory for Experimental Vascular Medicine, Department of Thrombosis and Hemostasis of the Leiden University Medical Center in Leiden, the Netherlands.

Financial support by the Dutch Heart Foundation for the publication of this thesis is gratefully acknowledged.

Additional support was kindly provided by Life Technologies.

Cover illustration: cross section (hematoxyline/eosin staining) of a mouse liver depleted with protein C and antithrombin.

© 2014 H. Safdar

ISBN: 978-94-6203-662-8

Printed by: CPI Koninklijke Wöhrmann

If you can dream it, you can do it. (Walt Disney, 1901-1966)

Table of contents

Chapter 1	General introduction	9
Chapter 2	The role of hepatocyte nuclear factor 4α in regulating mouse hepatic anticoagulation and fibrinolysis gene transcript levels	39
Chapter 3	Modulation of mouse coagulation gene transcription following acute $\it in vivo$ delivery of synthetic small interfering RNAs targeting HNF4 α and C/EBP α	47
Chapter 4	The Role of FOXA1 in mouse hepatic estrogen receptor α signaling	75
Chapter 5	Acute and severe coagulopathy in adult mice following silencing of hepatic antithrombin and protein C production	101
Chapter 6	Regulation of the <i>F11</i> , <i>Klkb1</i> , <i>Cyp4v3</i> gene cluster in livers of metabolically challenged mice	113
Chapter 7	General discussion	139
Chapter 8	Summary	
	Summary in Dutch (Samenvatting)	
Acknowledger	ments	175
Curriculum Vit	rae	181
Publications		183