



Universiteit
Leiden
The Netherlands

Unraveling mechanisms of vascular remodeling in arteriovenous fistulas for hemodialysis

Wong, C.Y.

Citation

Wong, C. Y. (2017, March 8). *Unraveling mechanisms of vascular remodeling in arteriovenous fistulas for hemodialysis*. Retrieved from <https://hdl.handle.net/1887/46406>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/46406>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/46406> holds various files of this Leiden University dissertation.

Author: Wong, C.Y.

Title: Unraveling mechanisms of vascular remodeling in arteriovenous fistulas for hemodialysis

Issue Date: 2017-03-08

Unraveling Mechanisms of Vascular Remodeling in Arteriovenous Fistulas for Hemodialysis

C.Y. Wong

Cover design Esther Scheide | Proefschriftomslag.nl
Layout Esther Scheide | Proefschriftomslag.nl
Printed by Gildeprint BV
ISBN 978-94-92332-18-9

Copyright C.Y. Wong, 2017, Leiden, The Netherlands.

All rights reserved. No parts of this thesis may be reproduced, distributed, stored in a retrieval system or transmitted in any form or by any means, without permission of the author.

Unraveling Mechanisms of Vascular Remodeling in Arteriovenous Fistulas for Hemodialysis

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van de Rector Magnificus prof. mr. C.J.J.M. Stolker,
volgens besluit van het College voor Promoties
ter verdedigen op woensdag 8 maart 2017
klokke 16:15 uur

door

ChunYu Wong
Geboren te Leidschendam
in 1982

Promotores	Prof. dr. A.J. Rabelink Prof. dr. P.H.A. Quax	
Co-Promotores	dr. J.I. Rotmans	
Promotiecommissie	dr. K.E.A. van der Bogt Prof. dr. H.J.M. Verhagen Prof. dr. C.J.M. de Vries Prof. dr. J.F. Hamming	Heelkunde, ErasmusMC Medische Biochemie, AMC

The research described in this thesis was supported by a grant by the Dutch Kidney Foundation.

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

Financial support by the Alrijne zorggroep is gratefully acknowledged. Publication of the thesis was further supported by Krijnen Medical, Fresenius Medical Care BV, Enceladus Pharmaceuticals BV, Astellas Pharma BV and Chipsoft.

Table of Contents

Chapter 1	General Introduction	7
Chapter 2	Arteriovenous access failure: More than just intimal hyperplasia? <i>Nephrol Dial Transplant. 2013 May;28(5):1085-92</i>	17
Chapter 3	Vascular remodeling and intimal hyperplasia in a novel murine model of arteriovenous fistula failure <i>J Vasc Surg. 2014 Jan;59(1):192-201</i>	35
Chapter 4	A Novel Murine Model of Arteriovenous Fistula Failure: The Surgical Procedure in Detail <i>J Vis Exp. 2016 Feb 3;(108)</i>	59
Chapter 5	Elastin is a key regulator of outward remodeling in arteriovenous fistulas <i>Eur J Vasc Endovasc Surg. 2015 Apr;49(4):480-6</i>	77
Chapter 6	Liposomal prednisolone inhibits vascular inflammation and enhances venous outward remodeling in a murine arteriovenous fistula model <i>Sci Rep. 2016 Jul 27;6:30439</i>	93
Chapter 7	Deficiency of TLR4 homologue Radio(R) Protective(P)-105 impairs outward remodeling in a murine model of arteriovenous fistula failure <i>-Submitted-</i>	117
Chapter 8	Summary and Discussion	139
Chapter 9	Nederlandse Samenvatting	155
	Curriculum Vitae	161
	List of Publications	163
	Dankwoord	165

