



Universiteit  
Leiden  
The Netherlands

## Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

Parker, J.

### Citation

Parker, J. (2017, July 4). *Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty*. Retrieved from <https://hdl.handle.net/1887/50484>

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/1887/50484>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/50484> holds various files of this Leiden University dissertation

**Author:** Parker, Jack

**Title:** Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

**Issue Date:** 2017-07-04



# Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

Jack Parker

Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

© 2017 Jack Parker

ISBN: 978-94-92683-62-5

Printing and Layout: Optima Grafische Communicatie, Rotterdam, The Netherlands

Cover design: Jack Parker

The research described in this thesis was performed at the Netherlands Institute for Innovative Ocular Surgery.

# Recent innovations in minimally invasive anterior and posterior lamellar keratoplasty

Proefschrift

Ter verkrijging van de graad van  
Doctor aan de Universiteit Leiden  
op gezag van Rector Magnificus prof.dr. C.J.J.M. Stolker,  
volgens besluit van het College voor Promoties  
te verdedigen op dinsdag 4 juli 2017  
te klokke 16.15 uur

door

John Steven Parker Jr  
geboren te Birmingham, Alabama, USA  
in 1986

**Promotoren**

Prof.dr. M.J. Jager

Dr. G.R.J. Melles

**Leden Promotiecommissie**

Prof.dr. M-J. Tassignon, Universiteit van Antwerpen

Prof.dr. C. Cursiefen, Universiteit van Keulen

Dr. Y.Y.Y. Cheng

## TABLE OF CONTENTS

Chapter 1	General Introduction	7
<b>Part I</b>	<b>Bowman Layer Transplantation</b>	
Chapter 2	Treatment Options for Advanced Keratoconus: A Review. <i>Surv. Ophthalmol.</i> 2015;60:459-480	25
Chapter 3	Mid-stromal isolated Bowman layer graft to reduce and stabilize advanced keratoconus as an alternative to penetrating or deep anterior lamellar keratoplasty. <i>JAMA Ophthalmol.</i> 2014;132:495-501	73
Chapter 4	Bowman Layer Transplantation for Advanced Keratoconus: The First American Case.	87
Chapter 5	Updates in Anterior Lamellar Keratoplasty: The State of the Debates <i>Expert Rev Ophthalmol.</i> 2016;11:339-346.	97
<b>Part II</b>	<b>Descemet membrane endothelial keratoplasty</b>	
Chapter 6	Descemet membrane endothelial keratoplasty (DMEK): a review. <i>US Ophthalmic Review,</i> 2013;6:29-32	117
Chapter 7	Endothelial cell density after Descemet Membrane Endothelial Keratoplasty: 1- to 4-Year Follow-up. <i>Am J Ophthalmol.</i> 2011;151:1107-1107.e2	133
Chapter 8	Outcome of Descemet membrane endothelial keratoplasty in phakic eyes. <i>J Cataract Refract Surg.</i> 2012;38:871-877	139
Chapter 9	Summary and conclusions <i>Based on US Ophthalmic Review</i> 2015;8:33-34	167
Chapter 10	Dutch Summary	155
	List of publications	179
	Acknowledgments	181
	CV	183

