



Universiteit  
Leiden  
The Netherlands

## **Innate, adaptive and regulatory immune responses in human schistosomiasis in Gabon**

Łabuda, Ł.

### **Citation**

Łabuda, Ł. (2014, November 11). *Innate, adaptive and regulatory immune responses in human schistosomiasis in Gabon*. Retrieved from <https://hdl.handle.net/1887/29659>

Version: Corrected Publisher's Version

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

Downloaded from: <https://hdl.handle.net/1887/29659>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/29659> holds various files of this Leiden University dissertation

**Author:** Łabuda, Łucja

**Title:** Innate, adaptive and regulatory immune responses in human schistosomiasis in Gabon

**Issue Date:** 2014-11-11

**Innate, adaptive and regulatory  
immune responses in human  
schistosomiasis in Gabon**

ISBN: 978-94-6182-512-4

The printing of this thesis was financially supported by BD Biosciences & Leiden University.

Cover design: Łucja Łabuda

Layout: Łucja Łabuda

Printing: Off Page ([www.offpage.nl](http://www.offpage.nl))

© 2014 Łucja Łabuda

# Innate, adaptive and regulatory immune responses in human schistosomiasis in Gabon

## **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  
te verdedigen op dinsdag 11 november 2014  
klokke 11:15 uur

door

Łucja Łabuda  
geboren te Polen

## **Promotiecommissie:**

### **Promotor:**

Prof. Dr. M. Yazdanbakhsh

### **Copromotores:**

Dr. A.A. Adegnika (CERMEL, Centre de Recherches Médicales de Lambaréné)

Dr. H.H. Smits

### **Overige leden:**

Prof. Dr. A.M. Deelder

Prof. Dr. D.W. Dunne (University of Cambridge)

Prof. Dr. S.M. van Ham (University of Amsterdam)

Prof. Dr. P.G. Kremsner (University of Tübingen)

Prof. Dr. A.C.M. Kroes

Prof. Dr. L.G. Visser

***Mojej rodzinie.***





# Contents

<b>Chapter 1:</b>	General Introduction.	9
<b>Chapter 2:</b>	Differences in innate cytokine responses between European and African children. <b>Labuda LA*</b> , de Jong SE*, Meurs L, Amoah AS, Mbow M, Ateba-Ngoa U, van der Ham AJ, Knulst AC, Yazdanbakhsh M, Adegnika AA. <i>PLoS One. 2014 Apr 17;9(4):e95241.</i>	19
<b>Chapter 3:</b>	Enhanced pro-inflammatory cytokine responses following Toll-like-receptor ligation in <i>Schistosoma haematobium</i> -infected schoolchildren from rural Gabon. <b>Labuda L*</b> , Meurs L*, Amoah AS#, Mbow M#, Ngoa UA, Boakye DA, Mboup S, Dièye TN, Mountford AP, Turner JD, Kreamsner PG, Polman K, Yazdanbakhsh M, Adegnika AA. <i>PLoS One. 2011;6(9):e24393.</i>	37
<b>Chapter 4:</b>	Praziquantel treatment shows that down-regulation of antigen specific immune responses in human schistosomiasis is associated with CD4 <sup>+</sup> CD25 <sup>+</sup> FOXP3 <sup>+</sup> T cells. <b>Labuda LA</b> , Ateba-Ngoa U, Amoah AS, Lima HM, Meurs L, Feugap EN, Mbow M, Zinsou JF, Smits HH, Kreamsner PG, Yazdanbakhsh M, Adegnika AA. <i>Manuscript submitted.</i>	51
<b>Chapter 5:</b>	Pronounced CD4 <sup>+</sup> CD25 <sup>+</sup> FOXP3 <sup>+</sup> regulatory T cell activity in human schistosomiasis before and after treatment with praziquantel. Schmiedel Y*, Mombo-Ngoma G*, <b>Labuda LA</b> , de Gier B, Adegnika AA, Fillié YE, Issifou S, Kreamsner PG, Smits HH, Yazdanbakhsh M <i>Manuscript in preparation.</i>	73
<b>Chapter 6:</b>	Schistosomes induce regulatory features in human and mouse CD1d(hi) B cells: inhibition of allergic inflammation by IL-10 and regulatory T cells. van der Vlugt LE, <b>Labuda LA</b> , Ozir-Fazalalikhani A, Lievers E, Gloudemans AK, Liu KY, Barr TA, Sparwasser T, Boon L, Ngoa UA, Feugap EN, Adegnika AA, Kreamsner PG, Gray D, Yazdanbakhsh M,	89

Smits HH.  
*PLoS One*. 2012;7(2):e30883.

<b>Chapter 7:</b>	Alterations in peripheral blood B cell subsets and dynamics of B cell responses during human schistosomiasis.	111
	<b>Labuda LA</b> , Ateba-Ngoa U, Feugap EN, Heeringa JJ, van der Vlugt LE, Pires RB, Mewono L, Kreamsner PG, van Zelm MC, Adegnika AA, Yazdanbakhsh M, Smits HH. <i>PLoS Negl Trop Dis</i> . 2013;7(3):e2094.	
<b>Chapter 8:</b>	General Discussion.	133
<b>Addendum:</b>	English Summary	148
	Nederlandse Samenvatting	151
	Curriculum Vitae	154
	List of publications	155
	Acknowledgements	156