



Universiteit
Leiden
The Netherlands

Pathogenesis of congenital cytomegalovirus infection : finding prognostic markers and correlates of protection

Rovito, R.

Citation

Rovito, R. (2018, October 16). *Pathogenesis of congenital cytomegalovirus infection : finding prognostic markers and correlates of protection*. Retrieved from <https://hdl.handle.net/1887/66319>

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/1887/66319>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/66319> holds various files of this Leiden University dissertation.

Author: Rovito, R.

Title: Thesis of congenital cytomegalovirus infection : finding prognostic markers and correlates of protection

Issue Date: 2018-10-16

**PATHOGENESIS OF CONGENITAL
CYTOMEGALOVIRUS INFECTION:
FINDING PROGNOSTIC MARKERS AND
CORRELATES OF PROTECTION**

ROBERTA ROVITO

The research described in this thesis was performed at the Department of Medical Microbiology of the Leiden University Medical Center, Leiden, The Netherlands and was funded by the EU under the FP7 Marie Curie Action VacTrain (Grant number: 316655). Financial support for the publication of this thesis was provided by the Leiden University Medical Center.

ISBN: 978-94-6182-911-5

Covers design: Monica Petronzi, <https://monicapetronzi.wixsite.com/moony>

Layout and printing production: Off Page, Amsterdam

© All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of the author or the copyright-owning journals and the publishers for previous published chapters.

**PATHOGENESIS OF CONGENITAL
CYTOMEGALOVIRUS INFECTION:
FINDING PROGNOSTIC MARKERS AND
CORRELATES OF PROTECTION**

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolk,
volgens besluit van het College voor Promoties
te verdedigen op dinsdag 16 oktober 2018
klokke 16:15 uur

door

ROBERTA ROVITO
geboren te Torino
in 1988

PROMOTOR

Prof. dr. A.C.M. Kroes

CO-PROMOTOR

Dr. A.C.T.M. Vossen

LEDEN PROMOTIECOMMISSIE

Prof. dr. E. Lopriore

Prof. dr. B.A.M. van der Zeijst

Prof. dr. R.A.W. van Lier (*Sanquin, Amsterdam*)

Prof. dr. D. van Baarle (*National Institute for Public Health and Environment, RIVM, Bilthoven, The Netherlands*)

TABLE OF CONTENTS

Chapter 1	General Introduction	9
Chapter 2	T and B cell markers in dried blood spots of neonates with congenital cytomegalovirus infection: B cell numbers at birth are associated with long-term outcome <i>J Immunol</i> 2017 198(1):102-109	41
Chapter 3	Neonatal screening parameters in infants with congenital cytomegalovirus infection <i>Clin Chim Acta</i> 2017 473:191-197	63
Chapter 4	Impact of Congenital Cytomegalovirus infection on transcriptomes from archived dried blood spots in relation to long-term clinical outcome <i>PLoS One.</i> 2018 Jul 19;13(7):e0200652. doi: 10.1371/journal.pone.0200652	81
Chapter 5	Congenital Cytomegalovirus Infection: Maternal-Child HLA-C, HLA-E and HLA-G Affect Clinical Outcome <i>Front Immunol.</i> 2018 Jan 5;8:1904. doi: 10.3389/fimmu.2017.01904. eCollection 2017	107
Chapter 6	Maternal and child human leukocyte antigens in congenital cytomegalovirus infection <i>J Reprod Immunol.</i> 2018 Apr;126:39-45. doi: 10.1016/j.jri.2018.01.002. Epub 2018 Jan 31	133
Chapter 7	General discussion	163
Appendix	Abbreviations	183
	English summary	187
	Samenvatting	191
	Italian summary	197
	List Of Publications	201
	Acknowledgements	203
	CV	205
	Notes	206

To all children

Look for happiness, everyday, continuously.

We always have to think about happiness,

And even if sometimes it forgets about us,

We must not ever forget about it,

Till the last day of our life!

Roberto Benigni, 2014