



Universiteit
Leiden
The Netherlands

Respiratory tract infection: prevention, early detection and attenuation of immune response

Groeneveld, G.H.

Citation

Groeneveld, G. H. (2020, March 11). *Respiratory tract infection: prevention, early detection and attenuation of immune response*. Retrieved from <https://hdl.handle.net/1887/86287>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/86287>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/86287> holds various files of this Leiden University dissertation.

Author: Groeneveld, G.H.

Title: Respiratory tract infection: prevention, early detection and attenuation of immune response

Issue Date: 2020-03-11

Respiratory tract infection: prevention, early detection and attenuation of immune response

Geert H. Groeneveld

Financial support for the clinical studies by The Netherlands Organisation for Health Research and Development, ZonMW [grant number 204000001], by the Virgo consortium, funded by the Dutch government [grant number FES0908], the Netherlands Genomics Initiative (NGI) [grant number 050-060-452], and the Franje Foundation is gratefully acknowledged.

ISBN: 978-94-6361-392-7

©Copyright 2020 Geert H. Groeneveld, The Netherlands

Cover image: Pneumonia, by Monica Schroeder © Science Source

Layout: Optima Grafische Communicatie BV

Print: Optima Grafische Communicatie BV

Respiratory tract infection: prevention, early detection and attenuation of immune response

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 woensdag 11 maart 2020
klokke 16.15 uur

Door

Geert Hendrik Groeneveld
geboren te Leiden
in 1978

Promotor

Prof. J.T. van Dissel

Co-promotor

Dr. J.E. van Steenbergen

Leden promotiecommissie

Prof. dr. E.H.D. Bel (Universiteit van Amsterdam)

Prof. dr. M.D. de Jong (Universiteit van Amsterdam)

Prof. dr. E. de Jonge

Prof. dr. L.G. Visser

Prof. dr. M.E. Numans

Contents

Chapter 1	Introduction and outline of this thesis	7
	<i>Public Health and Respiratory Tract Infections</i>	
Chapter 2	ICARES: a real-time automated detection tool for clusters of infectious diseases in the Netherlands.	29
Chapter 3	Acute respiratory infections in secondary care versus influenza-like illness in primary care in the Netherlands: hospital incidence peaks first.	49
	<i>Primary Care and Respiratory Tract Infections</i>	
Chapter 4	Clinical factors, C-reactive protein point of care test and chest X-ray in patients with pneumonia: a survey in primary care.	71
Chapter 5	Prediction model for pneumonia in primary care patients with an acute respiratory tract infection: role of symptoms, signs, and biomarkers.	87
	<i>Vaccination and Respiratory Tract Infections</i>	
Chapter 6	Influenza vaccination in patients with lung cancer receiving anti-programmed death receptor 1 immunotherapy does not induce immune-related adverse events.	117
Chapter 7	The severe flu season of 2017-2018: making a case for the vaccination of healthcare professionals.	131
	<i>Hospital care and Respiratory Tract Infections</i>	
Chapter 8	Effectiveness of oseltamivir in reduction of complications and 30-day mortality in severe influenza infection.	145
Chapter 9	Non-lytic antibiotic treatment in community-acquired pneumococcal pneumonia does not attenuate inflammation: the PRISTINE trial.	165
Chapter 10	Influenza season and ARDS after cardiac surgery	195
Chapter 11	Summary and general discussion	215
	Nederlandse samenvatting	245
	Dankwoord	257
	List of publications	259
	Curriculum Vitae	263