



University of Groningen

Characterization of allergen-specific T cell subsets in allergy

Van Hemelen, Dries

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version Publisher's PDF, also known as Version of record

Publication date: 2016

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Van Hemelen, D. (2016). Characterization of allergen-specific T cell subsets in allergy: With a goal for improvement of allergen-specific immunotherapy. Rijksuniversiteit Groningen.

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policyIf you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 27-11-2020

Characterization of allergen-specific T cell subsets in allergy

with a goal for improvement of allergen-specific immunotherapy

ISBN: 978-94-6299-298-6 © 2016 Dries Van Hemelen All rights reserved. No parts of this thesis book may be reproduced or transmitted in any form or any means without previous written permission from the author. Printed by: Ridderprint BV – www.ridderprint.nl Layout: Ridderprint BV – www.ridderprint.nl Cover Layout: Linda van Zijp (Studio Lin) The research presented in this thesis was funded by Hal-Allergy, ALK-Abello, MedAmon, the graduate school of Medical Sciences Groningen (Guide) and the Jan Kornelis de Cock Foundation.

The Publication of this Thesis was financially supported by the University of Groningen



Characterization of allergen-specific T cell subsets in allergy

with a goal for improvement of allergen-specific immunotherapy

Proefschrift

ter verkrijging van de graad van doctor aan de Rijksuniversiteit Groningen op gezag van de rector magnificus prof. dr. E. Sterken en volgens besluit van het College voor Promoties.

De openbare verdediging zal plaatsvinden op

maandag 29 februari 2016 om 16.15

door

Dries Van Hemelen

geboren op 02 januari 1984 te Herentals, België

Promotor

Prof. dr. A.J.M. van Oosterhout

Copromotores

Dr. M.C. Nawijn Dr. J.N.G. Oude Elberink

Beoordelingscomissie

Prof. dr. D.M.A. Bullens Prof. dr. E.C. de Jong Prof. dr. A.E.J. Dubois

TABLE OF CONTENTS

Chapter 1:	General introduction and Aim of this thesis	7
Chapter 2:	Flow cytometric analysis of cytokine expression in short-term allergen-stimulated T cells mirrors the phenotype of proliferating T cells in long-term cultures	29
Chapter 3:	HLA-class II peptide tetramers vs. allergen-induced proliferation for identification of allergen-specific CD4 T cells	45
Chapter 4:	Cryopreservation does not alter the frequency of regulatory T cells in peripheral blood mononuclear cells	65
Chapter 5:	Absence of Th2 cell suppression during venom immunotherapy in wasp-venom allergic, indolent systemic mastocytosis patients.	73
Chapter 6:	The efficacy of Vitamin D3 as an adjuvant to allergen-specific immunotherapy. An exploratory placebo controlled trial.	97
Chapter 7:	1α ,25(OH) ₂ VitD3 adjuvant increases IL-10+ Th cells after subcutaneous grass-pollen allergoid immunotherapy	119
Chapter 8:	Summary, Discussion and Future Perspectives	135
Chapter 9:	Abbreviations	155
Chapter 10:	Nederlandse samenvatting	159
Chapter 11:	Dankwoord	167