



Universiteit
Leiden
The Netherlands

Antigen handling and cross-presentation by dendritic cells

Ho, N.I.S.C.

Citation

Ho, N. I. S. C. (2020, July 9). *Antigen handling and cross-presentation by dendritic cells*. Retrieved from <https://hdl.handle.net/1887/123272>

Version: 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/1887/123272>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/123272> holds various files of this Leiden University dissertation.

Author: Ho, N.I.S.C.

Title: Antigen handling and cross-presentation by dendritic cells

Issue Date: 2020-07-09

Antigen handling and cross-presentation by dendritic cells

Nataschja Ho

Antigen handling and cross-presentation by dendritic cells

Nataschja Ho

The research described in this thesis was performed at the department of Immunohematology and Blood Transfusion of the Leiden University Medical Center, Leiden, The Netherlands. This work was supported by ZonMW TOP 91211011. Printing of this thesis was sponsored by Leiden University.

Lay-out: Elisa Calamita, persoonlijkproefschrift.nl

Cover and illustrations: Andreas M.K. Löfman

Printing: Ridderprint | www.ridderprint.nl

ISBN: 978-94-6375-924-3

All rights reserved. Nothing from this thesis may be reproduced in any form without permission from the author.

Copyright © 2020 N.I. Ho

Antigen handling and cross-presentation by dendritic cells

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolker,
volgens besluit van het College voor Promoties
te verdedigen op

donderdag 9 juli 2020, klokke 11:15 uur

door
Nataschja Isabel Suet-Ching Ho
geboren te Amsterdam in 1986

Promotor	Prof. dr. F.A. Ossendorp
Co-promotor	Dr. D.V. Filippov
Leden promotiecommissie	Prof. dr. J.G. Borst Prof. dr. J.J.C. Neefjes Dr. J.M.M. den Haan (Amsterdam UMC) Dr. S.I. van Kasteren

TABLE OF CONTENTS

Chapter 1	General introduction	7
Chapter 2	Sustained cross-presentation capacity of murine splenic dendritic cell subsets in vivo	31
Chapter 3	C1q-dependent dendritic cell cross-presentation of in vivo-formed antigen-antibody complexes	53
Chapter 4	Characterization of antigen-containing compartments after Fc γ receptor or C-type lectin receptor-mediated uptake in dendritic cells	75
Chapter 5	Glycan modification of antigen alters its intracellular routing in dendritic cells, promoting priming of T cells	103
Chapter 6	Autophagy regulates long-term cross-presentation by dendritic cells	137
Chapter 7	Synthesis and evaluation of fluorescent TLR ligand-peptide conjugates in dendritic cells	159
Chapter 8	Summary and general discussion	173
Appendices	Nederlandse samenvatting	196
	Acknowledgements	200
	Curriculum vitae	202
	List of publications	203