



Universiteit
Leiden

The Netherlands

Chemokines in atherosclerotic lesion development and stability : from mice to man

Jager, S.C.A. de

Citation

Jager, S. C. A. de. (2008, October 23). *Chemokines in atherosclerotic lesion development and stability : from mice to man*. Faculty of Science, Leiden University|Department of Biopharmaceutics, Leiden Amsterdam Center for Drug Research. Retrieved from <https://hdl.handle.net/1887/13158>

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/1887/13158>

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

Chemokines in Atherosclerotic Lesion Development and Stability

From Mice to Man



Saskia C.A. de Jager

Chemokines in Atherosclerotic Lesion
Development and Stability

From Mice to Man

Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.mr. P.F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op donderdag 23 oktober 2008
klokke 15.00 uur

door

Saskia Christel Antoinette de Jager
geboren te Culemborg
in 1979

Promotiecommissie

Promotor:	Prof. Dr. T.J.C. van Berkel Prof. Dr. Ir. E.A.L. Biessen
Referent:	Prof. Dr. D.R. Greaves (University of Oxford)
Overige Leden:	Prof. Dr. J.W. Jukema Prof. Dr. M. Danhof Prof. Dr. C.J. Heijnen (Universiteit Utrecht) Prof. Dr. M.J. Smit (Vrije Universiteit, Amsterdam)

The research described in this thesis was supported by a grant of the Netherlands Heart Foundation (NHF-2003T201).

Financial support by the Netherlands Heart Foundation for the publication of this thesis is gratefully acknowledged.

The realization of this thesis was also financially supported by:

- Leiden University
- LACDR

*More oneness, less categories
Open hearts, no strategies
Decisions based upon faith and not fear
People who live right now and right here
I want the wisdom that wise men revere*

Maxi Jazz



Aan mijn ouders
Voor Ruben

Cover Design: Ruben Eggers & Saskia de Jager
Difuse trail of traffic lights representing a chemokine gradient in the vasculature.

Printing: Wöhrmann Print Service

ISBN: 978-90-9023249-2

de Jager, Saskia Christel Antoinette
Chemokines in Atherosclerotic Lesion Progression and Stability – From Mice to Man
Proefschrift Leiden
Met literatuur opgave - Met samenvatting in het Nederlands

© 2008 SCA de Jager

No part of this thesis may be reproduced or transmitted in any form or by any means, without permission of the author.



Table of Contents

Page

9	Chapter 1 Introduction
29	Chapter 2 Chemokines and atherosclerotic plaque progression: towards therapeutic targeting?
51	Chapter 3 CCL5 (RANTES) and CCL18 (PARC) are specific markers of refractory unstable angina pectoris and are transiently raised during severe ischemic symptoms
71	Chapter 4 CCL3 (MIP-1 α) levels are elevated during acute coronary syndromes and show strong prognostic power for future ischemic events
85	Chapter 5 Leukocyte specific Macrophage Inhibitory Protein 1 alpha (MIP1a/CCL3) deficiency attenuates atherosclerotic lesion development by impairment of neutrophil migration
99	Chapter 6 The CXCR3 antagonist NBI-74330 attenuates atherosclerotic plaque formation in LDL receptor deficient mice
113	Chapter 7 Hematopoietic Macrophage Inhibitory Cytokine-1 deficiency protects against atherosclerosis by modulating leukocyte recruitment and homeostasis in a strictly CCR2 and TGF β R-II dependent manner
131	Chapter 8 Partial disruption of leukocyte GRK2 attenuates atherosclerotic lesion formation and modulates plaque phenotype

141	Chapter 9 Perivascular Mast Cells promote atherogenesis and induce plaque destabilization in ApoE deficient mice
163	Chapter 10 Impaired effector memory T Cell regulation facilitates Graft versus Host Disease in CCR7 deficient bone marrow transplant chimeras
177	Chapter 11 General discussion and perspectives
191	Nederlandse samenvatting
199	Curriculum Vitae
201	List of publications
205	Appendix 1: List of abbreviations