



Universiteit  
Leiden  
The Netherlands

## Targeting autoimmunity in renal diseases: focus on neutrophil extracellular traps and autoreactive B-cells

Dam, L.S. van

### Citation

Dam, L. S. van. (2022, February 22). *Targeting autoimmunity in renal diseases: focus on neutrophil extracellular traps and autoreactive B-cells*. Retrieved from <https://hdl.handle.net/1887/3275833>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

License: <https://hdl.handle.net/1887/3275833>

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

# TARGETING AUTOIMMUNITY IN RENAL DISEASES

Focus on Neutrophil Extracellular  
Traps and Autoreactive B-cells

Laura Sophie van Dam

**ISBN**

978-94-6416-934-8

**Cover design and layout**

© evelienjagtman.com

**Printed by**

Ridderprint

**Copyright**

© 2022 by Laura Sophie van Dam

All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means, without permission of the copyright owners.

The research described in this thesis was performed with financial support from FOREUM (consortium for SLE); the Dutch Kidney Foundation (KJPB12.028 &17OKG04) and a Clinical Fellowship from the Netherlands Organization for Scientific Research (90713460).

The printing of this thesis was financially supported by: Stichting NVLE fonds and Vasculitis Stichting.

# TARGETING AUTOIMMUNITY IN RENAL DISEASES

## Focus on Neutrophil Extracellular Traps and Autoreactive B-cells

PROEFSCHRIFT

ter verkrijging van  
de graad van doctor aan de Universiteit Leiden  
op gezag van rector magnificus prof. dr. Ir. H. Bijl  
volgens besluit van het college voor promoties  
te verdedigen op dinsdag 22 februari 2022  
klokke 16:15 uur

door

**Laura Sophie van Dam**  
geboren te Eindhoven in 1989

<b>Promotores</b>	Prof. dr. C. van Kooten Prof. dr. T.J. Rabelink
<b>Co-promotor</b>	dr. Y.K.O. Teng
<b>Promotiecommissie</b>	Prof. Dr. J.J.M. van Dongen dr. D. van der Woude Prof. Dr. S. Florquin Prof. Dr. P. Heeringa, Universitair Medisch Centrum Groningen dr. P. van Paassen, Maastricht Universitair Medisch Centrum

# TABLE OF CONTENTS

<b>Chapter 1</b>	General introduction and outline	7
<b>Chapter 2</b>	Clinical implications of excessive neutrophil extracellular trap formation in renal autoimmune diseases <i>Kidney International Reports</i> 2019	23
<b>Chapter 3</b>	A high-throughput assay to assess and quantify neutrophil extracellular trap formation <i>Journal of Visualized Experiments</i> 2019	61
<b>Chapter 4</b>	Intrinsically distinct role of neutrophil extracellular trap formation in antineutrophil cytoplasmic antibody-associated vasculitis compared to systemic lupus erythematosus <i>Arthritis and Rheumatology</i> 2019	77
<b>Chapter 5</b>	A reverse translational study on the effect of rituximab, rituximab plus belimumab or bortezomib on the humoral autoimmune response in SLE <i>Rheumatology</i> 2020	103
<b>Chapter 6</b>	PR3-ANCA's predict relapses in ANCA-associated vasculitis patients after rituximab <i>Nephrology Dialysis Transplantation</i> 2020	127
<b>Chapter 7</b>	Highly sensitive flow cytometric detection of residual B-cells after rituximab in antineutrophil cytoplasmic antibody-associated vasculitis patients <i>Frontiers in Immunology</i> 2020	151
<b>Chapter 8</b>	Summary and discussion	177
<b>Chapter 9</b>	Appendices	
	A Nederlandse samenvatting	199
	B Curriculum vitae	207
	C List of publications	211
	D Congress presentations and prizes	217
	E Dankwoord	223

