



Universiteit
Leiden
The Netherlands

Exploring the world of non-coding genes in stem cells and autoimmunity.
Messemaker, T.C.

Citation

Messemaker, T. C. (2018, April 3). *Exploring the world of non-coding genes in stem cells and autoimmunity*. Retrieved from <https://hdl.handle.net/1887/61075>

Version: Not Applicable (or Unknown)

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

Downloaded from: <https://hdl.handle.net/1887/61075>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/61075> holds various files of this Leiden University dissertation.

Author: Messemaker, T.C.

Title: Exploring the world of non-coding genes in stem cells and autoimmunity

Issue Date: 2018-04-03

Exploring the world of non-coding
genes in stem cells and
autoimmunity

Tobias Casper Messemaker

Cover design by Hennie Messemaker

Printed by Ipskamp printing

ISBN: 978-94-028-0959-6

The work presented in this thesis was supported by the Dutch Arthritis Foundation (Reumafonds). Printing of this thesis was financially supported by the Leiden University.

Copyright © Tobias C. Messemaker, 2018

All rights are 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.

Exploring the world of non-coding genes in stem cells and autoimmunity

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 dinsdag 3 april 2018
klokke 10.00 uur

door

Tobias Casper Messemaker
geboren te Katwijk aan Zee
in 1988

Promotor: Prof. dr. R.E.M. Toes

Co-Promotores: Dr. B.A.S. Kurreeman
Dr. H.M.M. Mikkers

Leden promotiecommissie: Prof. dr. T.W.J. Huizinga
Prof. dr. R.C. Hoeben
Prof. dr. J.H. Gribnau (Erasmusc MC)
Prof. dr. A.P. Zhernakova (UMC Groningen)

The research presented in this thesis was performed at the department of Molecular Cell Biology and the department of rheumatology, Leiden University Medical Center, Leiden, The Netherlands.

Table of contents

Chapter 1	General introduction	7
Chapter 2	Inflammatory genes TNF α and IL6 display no signs of increased H3K4me3 in circulating monocytes from untreated rheumatoid arthritis patients	35
Chapter 3	Immunogenetics of rheumatoid arthritis: Understanding functional implications	51
Chapter 4	Comment on “Functional analysis of a complement polymorphism (rs17611) associated with Rheumatoid Arthritis”	75
Chapter 5	A novel long non-coding RNA in the rheumatoid arthritis risk locus <i>TRAF1-C5</i> influences C5 mRNA levels	81
Chapter 6	Antisense long non-coding RNAs are deregulated in skin tissue of patients with systemic sclerosis	105
Chapter 7	Allele-specific repression of <i>Sox2</i> through the long non-coding RNA <i>Sox2ot</i>	127
Chapter 8	Summarizing discussion	155
Chapter 9	Addendum: Nederlandse samenvatting List of publications Curriculum Vitae Dankwoord	167

