

University of Groningen

## Cell fate after DNA damage

Heijink, Anne Margriet

**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:*

2018

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Heijink, A. M. (2018). Cell fate after DNA damage [Groningen]: Rijksuniversiteit Groningen

**Copyright**

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 policy**

If 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.*

The work described in this thesis was conducted at the Department of Medical Oncology, University Medical Center Groningen, University of Groningen, the Netherlands.

ISBN:	978-94-623-3915-6
Cover:	Gerhard Heijink
Lay-out design:	Anne Margriet Heijink
Printing:	Gildeprint

Printing of this thesis was supported by:

- UMCG Graduate School of Medical Sciences
- Stichting Werkgroep Interne Oncologie
- University of Groningen

© Copyright 2018, A.M. Heijink. All rights reserved. No part of this thesis may be reproduced, stored or transmitted in any form without permission by the author.



rijksuniversiteit  
 groningen

# Cell fate after DNA damage

## 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  
woensdag 28 maart 2018 om 14.30 uur

door

**Anne Margriet Heijink**

geboren op 19 maart 1987  
te Zaandam

**Promotores**

Prof. dr. M.A.T.M. van Vugt

Prof. dr. E.G.E. de Vries

**Beoordelingscommissie**

Prof. dr. M. Heinemann

Prof. dr. M.G. Rots

Prof. dr. H. van Attikum

## CONTENTS

<b>Chapter 1</b>	Introduction & outline of the thesis	7
<b>Chapter 2</b>	The DNA damage response during mitosis <i>Mutation Research, 2013</i>	15
<b>Chapter 3</b>	Forced activation of CDK1 via WEE1 inhibition impairs homologous recombination <i>Oncogene, 2013</i>	37
<b>Chapter 4</b>	A haploid genetic screen identifies the G1/S regulatory machinery as a determinant of WEE1 inhibitor sensitivity <i>Proceedings of the National Academy of Sciences, 2015</i>	55
<b>Chapter 5</b>	Modeling of cisplatin-induced signaling dynamics in triple-negative breast cancer cells reveals mediators of cisplatin sensitivity <i>Submitted</i>	81
<b>Chapter 6</b>	BRCA2 deficiency confers sensitivity to TNF $\alpha$ -mediated cytotoxicity <i>Submitted</i>	111
<b>Chapter 7</b>	Summarizing discussion	141
<b>Appendices</b>	Nederlandse samenvatting	156
	Biography	163
	List of publications	164
	Dankwoord	165

