

University of Groningen

Mapping of EGFR treatment effects and uncovering DNA repair mechanisms using quantitative proteomics

de Boer, Harmen Rudolf

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:
2017

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

Citation for published version (APA):

de Boer, H. R. (2017). *Mapping of EGFR treatment effects and uncovering DNA repair mechanisms using quantitative proteomics*. 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.

**Mapping of EGFR treatment effects and
uncovering DNA repair mechanisms
using quantitative proteomics**

The studies described in this thesis were performed at the Department of Medical Oncology of the University Medical Center Groningen in Groningen, The Netherlands.

ISBN: 978-94-034-0298-7
Cover: JoWeir.com
lay-out design: H.R. de Boer & N. van den Tempel
Printing: Ipskamp Printing

Copyright © 2017, H.R. de Boer
All rights reserved. No part of this thesis may be reproduced, stored or transmitted in any form or by any means without permission of the author



rijksuniversiteit
 groningen

Mapping of EGFR treatment effects and uncovering DNA repair mechanisms using quantitative proteomics

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 13 december 2017 om 12:45 uur

door

Harmen Rudolf de Boer

geboren op 16 mei 1986
 te Oosterhout

Promotores

Prof. dr. M.A.T.M. van Vugt
Prof. dr. E.G.E. de Vries

Beoordelingscommissie

Prof. dr. R.H. Medema
Prof. dr. S. de Jong
Prof. dr. J.G.W. Kosterink

Table of contents

Chapter 1	General introduction	7
Chapter 2	Harnessing integrative omics to facilitate molecular imaging of the human epidermal growth factor receptor family for precision medicine <i>Theranostics (2017) 7:2111-2133</i>	11
Chapter 3	Quantitative proteomics analysis identifies MUC1 as an effect sensor of EGFR inhibition <i>Submitted</i>	47
Chapter 4	Proteomic interrogation of cellular responses to epidermal growth factor receptor targeting or DNA damaging agents for discovery of effect sensors <i>Manuscript</i>	71
Chapter 5	Controlling the response to DNA damage by the APC/C-Cdh1 <i>Cellular and Molecular Life Sciences (2016) 73:2985–2998</i>	83
Chapter 6	APC/C-Cdh1 controls CtIP stability during the cell cycle and in response to DNA damage <i>The EMBO Journal (2014) 33:2860-2879</i>	105
Chapter 7	Rif1 is required for resolution of Ultrafine DNA bridges in anaphase to ensure genome stability <i>Developmental Cell (2015) 34:1-9</i>	141
Chapter 8	Summary and discussion	163

Appendix	
Nederlandse samenvatting	174
Dankwoord	176

