

University of Groningen

Targeted induction of apoptosis for cancer therapy

Bremer, Edwin

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:

2006

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

Citation for published version (APA):

Bremer, E. (2006). *Targeted induction of apoptosis for cancer therapy*. [s.n.].

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).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

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.

Targeted induction of apoptosis for cancer therapy

The research described in this dissertation was supported by grants from the Dutch Cancer Society (RuG 2002-2668), the Dutch Brain Foundation, the van Leersum Fonds van de KNAW, the Jan Cornelis de Cock Stichting and the Jan DekkerStichting & Dr. Ludgardine BouwmanStichting.

The author gratefully acknowledges the financial support of the Groningen University Institute for Drug Exploration (GUIDE), NeXins and the Dutch Cancer Society in printing of this dissertation.

Cover design: <theFactor.e>

Lay-out: Frank Roossink

Printed by: Printpartners Ipskamp

© E. Bremer, 2006

You are cordially invited to disseminate the contents of this publication without the prior permission of the author.

ISBN: 90-367-2792-8 (hardcopy)
90-367-2973-6 (electronic version)



RIJKSUNIVERSITEIT GRONINGEN

Targeted induction of apoptosis for cancer therapy

Proefschrift

ter verkrijging van het doctoraat in de
Medische Wetenschappen
aan de Rijksuniversiteit Groningen
op gezag van de
Rector Magnificus, Dr. F. Zwarts,
in het openbaar te verdedigen op
maandag 6 november 2006
om 14:45 uur

door

Edwin Bremer

geboren op 21 juli 1978
te Wouterswoude

Promotores: Prof. Dr. L.F.M.H. de Leij
Prof. Dr. J.J.A Mooij

Copromotor: Dr. W. Helfrich

Beoordelingscommissie: Prof. Dr. H.J. Haisma
Prof. Dr. H. Moshage
Prof. Dr. W. Timens

Table of contents

Chapter 1	Introduction to the thesis	7
Chapter 2	Targeted induction of apoptosis for cancer therapy – current progress and prospects	13
Chapter 3	Target cell-restricted and -enhanced apoptosis induction by an scFv:sTRAIL fusion protein with specificity for the pancarcinoma-associated antigen EGP2	37
Chapter 4	Exceptionally potent anti-tumour bystander activity of an scFv:sTRAIL fusion protein with specificity for EGP2 towards target antigen-negative tumour cells.	58
Chapter 5	Simultaneous inhibition of EGFR signalling and enhanced activation of TRAIL-R-mediated apoptosis induction by an scFv:sTRAIL fusion protein with specificity for human EGFR.	81
Chapter 6	Target cell-restricted apoptosis induction of acute leukemic T-cells by a recombinant TRAIL fusion protein with specificity for human CD7.	103
Chapter 7	CD7-restricted activation of Fas-mediated apoptosis: a novel therapeutic approach for acute T-cell leukemia.	127
Chapter 8	Summary and perspectives	149
Chapter 9	Nederlandse samenvatting	157
Chapter 10	Dankwoord	167

