

# Exploiting tumor hypoxia for cancer treatment

Citation for published version (APA):

Niemans, R. S. T. (2018). *Exploiting tumor hypoxia for cancer treatment*. [Doctoral Thesis, Maastricht University]. Gildeprint Drukkerijen. <https://doi.org/10.26481/dis.20180626rn>

## Document status and date:

Published: 01/01/2018

## DOI:

[10.26481/dis.20180626rn](https://doi.org/10.26481/dis.20180626rn)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

## General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

[www.umlib.nl/taverne-license](http://www.umlib.nl/taverne-license)

## Take down policy

If you believe that this document breaches copyright please contact us at:

[repository@maastrichtuniversity.nl](mailto:repository@maastrichtuniversity.nl)

providing details and we will investigate your claim.

# Exploiting tumor hypoxia for cancer treatment

1. Novel  $^{68}\text{Ga}$ -labeled CA IX targeting small-molecule PET tracers can reliably image tumoral CA IX in a noninvasive manner. *This thesis.*
2. Dual-target drugs are of interest as anticancer agents but require extensive preclinical characterization. *This thesis.*
3. The novel hypoxia-activated prodrug CP-506 is a promising candidate for further preclinical evaluation and clinical efficacy validation in combination with other anticancer treatments. *This thesis.*
4. Stratification of patients in clinical trials based on hypoxia status of the tumors likely increases the chance to proof the beneficial effect of hypoxia-activated prodrugs. *This thesis.*
5. Exploiting tumor hypoxia can provide new tools that improve survival of cancer patients and reduce the impact of cancer on society. *This thesis; valorization.*
6. Tumor hypoxia is a promising therapeutic target to exploit in cancer treatment.
7. “Despite its lack of immediate success, the field of hypoxia-activated prodrug development has produced a wealth of knowledge, understanding and expertise.” *Roger M. Phillips (Professor of Cancer Pharmacology at the University of Huddersfield, England)*
8. “Medicine [...] does not consist of compounding pills and plasters; it deals with the very processes of life, which must be understood before they may be guided.” *Paracelsus (Swiss physician, alchemist, and astrologer; 1493/4 – 1541)*
9. “Good books don’t give up all their secrets at once.” *Stephen King (American novelist)*
10. “Be careful when speaking. You create the world around you with your words.” *Quote attributed to the Diné (Navajo) storytelling tradition.*
11. Don’t stress :-)