

Hypoxia-induced metastasis : the role of the unfolded protein response

Citation for published version (APA):

Mujcic, H. (2013). *Hypoxia-induced metastasis : the role of the unfolded protein response*. Datawyse / Universitaire Pers Maastricht.

Document status and date:

Published: 01/01/2013

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

Take down policy

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

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

PROPOSITIONS
belonging to the thesis

**Hypoxia-Induced Metastasis:
The Role of the Unfolded Protein Response**

1. The growth of distant metastases is determined by the intrinsic properties of the tumor cells, the local microenvironment at the metastatic site, as well as the primary tumor microenvironment. (this thesis)
2. The unfolded protein response (UPR) is an important mediator of hypoxia-driven metastasis. (this thesis)
3. Hypoxic activation of the UPR promotes metastasis by increasing the tolerance of tumor cells to hypoxia and by inducing the expression of the metastasis-associated gene LAMP3. (this thesis)
4. Targeting HIF and/or UPR signaling presents a potential therapeutic strategy to prevent development of metastases. Strategies to target hypoxic cells should be combined with radiotherapy and chemotherapy, which are aimed at eliminating well-oxygenated tumor cells, including those with increased metastatic potential. (this thesis)
5. The amount of cancer research funding devoted to metastasis research is disproportionate to the clinical relevance of metastasis.
6. Personalized cancer medicine is the future of cancer treatment but faces copious practical challenges for widespread clinical implementation.
7. “Although the successful eradication of a cancer should require the elimination of all the cancer stem cells (CSCs), on the contrary side, the successful growth of a metastasis by definition requires the presence of at least 1 CSC.”
(Hill *et al.* 2007)
8. One of the many unresolved questions regarding metastasis is how disseminated tumor cells can sometimes remain in a dormant state for up to several years after successful treatment of the primary tumor prior to developing into clinically detectable metastases, and how this switch occurs. A better understanding of the signaling pathways underlying tumor dormancy might lead to the identification of novel therapeutic targets directed against dormant cells and the prevention of tumor recurrence.
9. “Life can only be understood backwards; but it must be lived forwards.”
(Søren Kierkegaard)