# Propositions accompanying the doctoral thesis

Exploring the potentials and limitations of solid tumor treatment by thermosensitive liposomes and hyperthermia

1. Thermosensitive liposome-mediated drug delivery is a treatment with high potential for many types of solid tumors. (*this thesis*)

2. Optimal treatment with doxorubicin-loaded thermosensitive liposomes is not solely dependent on an optimal formulation alone and is likely to be influenced by the interplay between release kinetics, doxorubicin saturation in the tumor area and effective tumor doxorubicin uptake. (*this thesis*)

3. The optimal doxorubicin-loaded thermosensitive liposome formulation needs to be designed keeping the clinical workflow in mind and should be selected based on extensive *in vivo* tests combined with blood kinetics modelling. (*this thesis*)

4. The organization of the extracellular matrix in a tumor can provide an important barrier for effective targeting of therapeutic compounds towards the tumor cell, which results in more therapy resistance. (*this thesis*)

5. As cancer treatment adapts towards a more personalized approach, a greater understanding of the possibilities and limitations of thermosensitive liposomes and hyperthermia based treatments for specific tumor (sub)types is important. (*this thesis*)

6. Many scientific articles, including reviews, are written as if funding agencies were the audience. There is typically great potential, a problem that is solved, but little mention of further problems to be addressed.
- *Helmuth Möhwald & Paul S. Weiss, ACS Nano, 2015*

7. Biological complexity and cancer heterogeneity has to be more adequately integrated in future nanoparticle-based research.

8. Novelty in nanomedicine design does not necessarily lead to greater clinical relevance.

9. Those diseases which medicines do not cure, iron cures; those which iron cannot cure, fire cures; and those which fire cannot cure, are to be reckoned wholly incurable.
- *Hippocrates*

10. Negative results are just what I want. They're just as valuable to me as positive results. I can never find the thing that does the job best until I find the ones that don't.
- *Thomas Edison*

11. It is not the strongest of the species that survive, nor the most intelligent, but the one most adaptable to change.
- *Charles Darwin*

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