

University of Groningen

## Liposome interactions with biological systems: a journey into cells

Yang, Keni

DOI:  
[10.33612/diss.123825197](https://doi.org/10.33612/diss.123825197)

**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:*  
2020

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

*Citation for published version (APA):*  
Yang, K. (2020). *Liposome interactions with biological systems: a journey into cells*. University of Groningen. <https://doi.org/10.33612/diss.123825197>

### 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.*

# Propositions

Associated with the PhD Thesis

## Liposome Interactions with Biological Systems: A Journey into Cells

By Keni Yang

1. A deeper knowledge on how complex biological systems affect nanomaterial behavior will help to tune nanomaterial physicochemical properties to achieve the desired biological outcomes at cell and organism levels, and ultimately accelerate the development of efficient nanomedicines and their clinical translation. (This Thesis)
2. Rather than the bare nanoparticle surface, it is the nanoparticle-corona complex that constitutes the real biological unit that is actually ‘seen’ by cells. (This Thesis)
3. Biomimetic nanotechnology is important as an alternative strategy to fabricate nanoparticles with defined interactions with biological systems. (This Thesis)
4. The cancer nanomedicine field is heading in two directions — debating whether the clinical translation of nanomaterials should be accelerated or whether some of the long-standing drug delivery paradigms have to be challenged first. (Editorial, *Nature Nanotechnology* 2019. In my view we need both.)
5. The nanomedicine field can learn from the ‘liposome experience’ (as the most successful nanomedicines family), and should seriously take into account the challenges and opportunities which biology brings to the table of nanomedicine designers. (Crommelin et al., *Journal of Control Release* 2020)
6. The future of the drug delivery field depends on how effectively we can find talented young scientists with motivation, cultivate them with resources, provide them with an environment for the free exchange of ideas, and nurture them with purpose, passion, and the conviction of doing meaningful science. (Kinam Park, *Journal of Control Release* 2017)
7. Success is not final, failure is not fatal: it is the courage to continue that counts. (Winston Churchill)
8. 三人行，必有我师焉。择其善者而从之，其不善者而改之。(孔子)  
When I walk along with two others, I am sure to find teachers among them. I will select their good qualities and follow them, their bad qualities and avoid them. (Confucius)