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Towards a mechanistic understanding of nanoparticle behavior using zebrafish

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Towards a Mechanistic Understanding of Nanoparticle Behavior *using* Zebrafish

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M. Gabriela Arias Alpízar

Ph.D. Thesis, Leiden University, November 2021

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About the cover: In front, the caudal region of the zebrafish containing lipid nanoparticles (LNPs, cyan) and expressing GFP (yellow) in the scavenging endothelial cells after 24 h of *i.v.* administration. Macrophages in magenta. In the back, tissue exposed macrophages (magenta) containing LNPs (cyan) and expressing GFP (yellow).

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Door

María Gabriela Arias Alpízar
geboren te San José, Costa Rica
op 22 april 1984

"Para empezar un gran proyecto, hace falta valentía.
Para terminar un gran proyecto, hace falta perseverancia"

To Valeria, Bernal, my parents and Sebastian,
for being an inspiration.

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