Integrating cellular and tissue dynamics with cell fate decisions through computational modeling

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About the Author

Muriel Milena Heldring was born in Amsterdam, the Netherlands, on August 24, 1990. In 2008, Muriel started her studies in Natural and Social sciences at the University of Amsterdam (UvA). She chose Human Geography and Mathematics as major, but eventually restarted a bachelor's in Biology at VU Amsterdam with a minor in Ecology. After obtaining her degree, she continued with the UvA/VU joint degree master's programme in Bioinformatics and Systems Biology. During her masters, Muriel used differential coexpression analysis to identify rewiring in oxidative stress and hypoxic stress-specific protein-protein interaction networks. She graduated cum laude with a specialization in Systems Biology. In 2018, Muriel started her PhD research project "Integrating Cellular and Tissue Dynamics with Cell Fate Decisions through Computational Modeling" in the Division of Drug Discovery and Safety at the Leiden Academic Center for Drug Research (Leiden University) under supervision of Dr. Joost Beltman and Prof.dr. Bob van de Water. Muriel is currently employed at Rijkswaterstaat as an advisor for water quality models.

List of Publications

Heldring, M.M., Shaw, A.H. & Beltman, J.B. Unraveling the effect of intra- and intercellular processes on acetaminophen-induced liver injury. *NPJ Syst Biol Appl* **8**, 27 (2022).

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Heldring, M.M., Duijndam, B., Kyriakidou, A., van der Meer, O.M., Tedeschi, M., van der Laan, J.W., van de Water, B. & Beltman, J.B. Interdependency of estradiol-mediated ERα activation and subsequent PR and GREB1 induction to control cell cycle progression. *In revision at iScience.*

Heldring, M.M., Wijaya L.S., Le Dévédec S.E., van de Water B. & Beltman J.B. Data-driven kinetic modeling of p53 signaling linked to cell cycle progression. *In preparation.*

Zobl, W., Bitsch, A., Blum, J., Boei, J.J., Capinha, L., Carta, G., Castell, J.V., Davoli, E., Drake, C., Fisher, C., **Heldring, M.M.**, Islam, B., Jennings, P., Leist, M., Pellegrino-Coppola, D., Schimming, J.P., Snijders, K.E., Tolosa, L., van de Water, B., van Vugt-Lussenburg, B.M.A., Walker, P., Wehr, M.M., Wijaya, L.S. & Escher, S.E. Protectiveness of NAM-based hazard assessment – which testing scope is required? *Submitted at ALTEX.*

Burger, G.A., **Heldring, M.M.** & Wink, S. Create unique track identifiers for CellProfiler tracking output.
`https://github.com/burgerga/CPTrackR`.