Investigations on the role of impaired lysosomes of macrophages in disease

Lienden, M.J.C. van der

List of publications

1. Aerts, J.M.F.G., Ferraz M.J., Mirzaian M., Gaspar P., van Oussoren S., Wisse P., Kuo C.-L., Lelieveld L.T, Kytidou K., Hazeu M.D., Boer D.E.C., Meijer R., van der Lienden M.J.C., Chao D.H.M., Gabriel T.L., Aten J., Overkleeft H.S., van Eijk M., Boot R.G. & Marques A.R.A. Lysosomal storage diseases. For better or worse: adapting to defective lysosomal glycosphingolipid breakdown. *eLS* 1–13 (2017).

2. Tol, M. J., van der Lienden, M. J. C., Gabriel, T. L., Hagen, J. J., Scheij, S., Veenendaal, T., Klumperman, J., Donker-Koopman, W.E., Verhoeven, A.J., Overkleeft H.S., Aerts, J.M.F.G., Argmann, C.A. & van Eijk, M. HEPES activates a MiT/TFE-dependent lysosomal-autophagic gene network in cultured cells: A call for caution. *Autophagy* **14**, 1–13 (2018).

3. Artola, M., Kuo, C.-L., McMahon, S. A., Oehler, V., Hansen, T., van der Lienden, M., He, X., van den Elst, H., Florea, B. I., Kermode, A. R., van der Marel, G. A., Gloster, T. M., Codée, J. D. C., Overkleeft, H. S. & Aerts, J. M. F. G. New irreversible α- l -iduronidase inhibitors and activity-based probes. *Chemistry - A European Journal* **24**, 19081–19088 (2018).

4. van der Lienden, M. J. C., Gaspar, P., Boot, R., Aerts, J. M. F. G. & van Eijk, M. Glycoprotein non-metastatic protein B: an emerging biomarker for lysosomal dysfunction in macrophages. *International Journal of Molecular Sciences,* **20**, 66 (2018).

5. van Meel, E., Bos, E., van der Lienden, M. J. C., Overkleeft, H. S., van Kasteren, S. I., Koster, A. J. & Aerts, J. M. F. G. Localization of active endogenous and exogenous β-glucocerebrosidase by correlative light-electron microscopy in human fibroblasts. *Traffic* **20**, 346–356 (2019).

6. Aerts, J. M. F. G., Kuo, C. L., Lelieveld, L. T., Boer, D. E. C., van der Lienden, M. J. C., Overkleeft, H. S. & Artola, M. Glycosphingolipids and lysosomal storage disorders as illustrated by gaucher disease. *Current Opinion in Chemical Biology* **53** 204–215 (2019).

Curriculum vitae

Martijn van der Lienden was born on December 3rd 1990 in Gouda, The Netherlands. During his high school years (VWO, Emmouscollege in Rotterdam), he became interested in molecular biology through his specialization in the life sciences. In 2009, he started his bachelor Biomedical Sciences at the Leiden University Medical Centre. As part of an exchange program, he studied human physiology and immunology at Karolinska Instituted in Stockholm in the second year of his BSc. After a minor internship at the department of Rheumatology at the LUMC, he dedicated his bachelor thesis to immunological characteristics of colorectal tumours at the department of Surgery of the LUMC.

Martijn continued at the LUMC with a research-oriented Master study, of which the first year was centred around his internship at the department of Virology in the LUMC. Under supervision of Dr. H. Mikkers, he worked on improving the quality of hematopoietic stem cells with respect to lymphoid differentiation, originating from immunocompromised patient-derived induced pluripotent stem cells. He meanwhile guided a student swimming society in the capacity as secretary of swimming. The second internship during his Master's was performed at the University of Cambridge at the John van Geest Centre for Brain Repair (Addenbrooke's hospital). He conducted molecular studies on the relation between morphological and immunological responses of astrocytes upon neuron damage and in tauopathies under supervision of Dr. A. Lakatos.

After graduation, Martijn initiated his doctoral studies in at Medical Biochemistry in 2015 under supervision of Dr. M. van Eijk and Prof. Dr. J.M.F.G. Aerts. The aim was to study lysosomal function and signalling within the context of disease in cells and within the body. Research covered by this thesis was presented at the ESGLD meetings (2017 in Lyon, France and 2019 in Vic, Spain, oral presentations), the Dutch conference for Diabetes, ADDRM in Oosterbeek, The Netherlands(2018, oral presentation), EMBO Lysosome and Metabolism in Naples, Italy (2018, poster presentation) and the EWGGD in Clermont-Ferrand, France (2019, oral presentation).

Martijn is currently performing postdoctoral research at the Academic Medical Centre in Amsterdam, continuing studies on lipid-laden macrophages in inherited metabolic disorders.

Acknowledgements

This thesis is the work of many. I wouldn't have been able to do anything without the environment of the lab, the input of the collaborations and last but not least, the never ceasing support of my family and friends.

I would like to thank first and before all my promotors **Marco** and **Hans**. **Marco**, thank you for choosing me to study lysosomal stress in obese adipose tissue macrophages. You have introduced me to the world of obesity and lysosomal storage disorders, always encouraged me to engage myself with the scientific community and to critically think about the next steps in the countless (too many) projects. Besides that, I will remember the conversations Rotterdam, Hausmagger and other music, fish, football, and 'what further came on the table'. **Hans**, thank you for making me aware of the bigger picture through thorough consideration of every project. I especially value the Thorn-sessions in which every project got the attention it deserved, along with the necessary wine from the sunny hills of Thorn. **Jan**, thank you for being the third supervisor and for conveying the enthusiasm for histology. Without your input and effort, it wouldn't have been possible to write this thesis.

I am incredibly grateful to have spent four years among my colleagues from the department of Medical Biochemistry, who all created an incredibly pleasant atmosphere to work in. **Maria, Daphne** and **Marc**, thank you for being the Party office. I will miss the talks on exciting projects, the complaining about less exciting things, and I know, everything is my fault! **Lindsey, Kim, Kassi, Saskia, Rianne, Ethan, Bas, Marta, Rebecca and Remco**, it was great to work with you in the lab, share ups and downs, and for the (perhaps more than) occasional incubation time small talk. **Rolf**, I highly valued your critical input on every project, but perhaps even more I valued the occasional talk on the latest (or oldest) obscure music bands. **Wouter, Mina, Judith, Eline**, the lab I knew when I started has changed, but your expertise and contribution in the lab were incredibly inspiring and have taught me a lot. Dear **Marri**, you have been the driving force of almost everything in the lab. Thank you for managing everyone to keep track of whatever reagent they finished, and especially for the great vibe the lab.

Larissa, Yvonne, Sant, Daniël, it was a pleasure to have you as students and you have taught me a lot, including about myself. I hope our lab was a place that inspired you to choose whatever you are passionate about, and to leave whatever wasn't interesting at all.

Dear **Marc** and **Tanit**, you paved the way for me to work on lysosomal stress. It was great to meet you both and talk about science. Your scientific contributions have inspired me throughout the last four years and will keep on doing so.

During my projects, I have had the pleasure to work with people from several different institutes. Thank you, **Bruno** for listening to our idea, for your constructive and valuable input on our animal protocols, and for offering the infrastructure and resources to perform mouse experiments. Dear **Patrick**, I am very grateful for the days you sacrificed for guiding me in mouse experiments, and for being the perfect talking buddy during those days and on the yearly diabetes meetings. I value our conversations during those days, and I hope we can keep that up. Many thanks to **Myriam** and the lab at Karolinska Institutet, for the interest you showed in our project, and to go along with our project based on our mutual interest in the obese adipose

tissue macrophages and Kupffer cells. Your contributions allowed us to do the pivotal experiments for my diabetes type 2 project. **Nike, Roelof**, thank you for the incredibly valuable contributions to mouse and tissue related projects, and for the pleasant chats in the AMC. Of course, I would like to thank everyone from 'upstairs': **Tom, Annelot, Thomas, Timo, Bobby, Daniël, Floor**, it was great to pop by, troubleshoot, supervise practica, organize the 'Biosyn-Medical biochemistry combination' football team, complain (mostly about cell culture), dine, bowl, and borrel.

I would also like to thank **Andras** and **Giulia**, who allowed me to perform research within a very motivating atmosphere and giving me the freedom to develop as a researcher. In addition, **Patri, Jessica, Sebastian,** and the BRC-crew, it was great to meet you all, it provided me with an extra push to do a PhD.

I would also like to thank everyone outside my scientific bubble. Special thanks to **Ingmar**, for being a great housemate, it was a challenge to find common time to eat, but there was always time to chat and relax. Everyone from the 'Sweden-group': **Sanne, Jaeike, Elleke, Aster, Meghna, Marloes, Kirsten**, even though it gets more and more difficult to meet, we always manage somehow. Thanks for being there throughout our studies and beyond. To **Patrick** who has seen me unexpectedly often since you defended in Prague, despite the distance I hope we can keep the great dinners and visits up. Also thank you and **Dijana**, for making me feel at home, for the great chats, dinners, and parties. **Sander, Tycho, Robin, Luuk**, you were basically there since I can remember things, and sometimes until the moment I remember things, so to many bro-nights to come;)

Ik ben enorme dank verschuldigd aan **mijn familie**, en in het bijzonder **mijn ouders**: zonder jullie open blik was ik überhaupt nooit in staat geweest in de levenswetenschappen door te gaan en als promovendus te beginnen. **Joris en Corné**, met een onbevangen blik hebben we allemaal een plek gevonden in de levenswetenschappen, en die blik is volgens mij het mooiste om te blijven houden.

Finally, and especially, I would like to thank my love, **Sravya**. As the most passionate, talented, engaging, happy, loving, and caring person I know, you are in so many ways my example and completion of what I do. As our first chats were about dissection techniques and X-inactivation, we might also be one of the nerdiest couples on the planet. I am the happiest, to have you at my side and to share all the milestones we will achieve in our live.

Martijn

'My final point concerns the value of serendipity and, especially, of its necessary correlate, the freedom to follow a new trail opened by chance, irrespective of previous commitments. It is noteworthy that in the paper in which lysosomes are first mentioned, the Lilly Research Laboratories are acknowledged for their financial support, despite the fact that their major interest, insulin, is conspicuously absent from the paper. One could only wish that funding agencies might show the same liberal attitude today.'

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