Glycomic markers of inflammatory bowel disease and IgA nephropathy

Clerc, F.

Chapter 8

Acknowledgements

Chapter 9

Curriculum Vitae

Chapter 10

Published Articles

Acknowledgements

I am deeply grateful to all those who contributed to the completion of this thesis. I could not have done it without you.

Manfred, I greatly appreciate your unwavering support over the years, including during the period when I was no longer at LUMC. Your persistence and encouragement were decisive in bringing this work to completion.

Viktoria, your critical perspective and insightful guidance greatly strengthened the scientific rigor and clarity of the articles included in this thesis. Your input was invaluable in shaping the outcome.

Karli, thank you. You played a key role in introducing me to the principles of coding for automated scientific data processing and for the many stimulating theoretical discussions we shared that sharpened my critical thinking. Those skills remained highly relevant in my personal and professional life.

Noortje, our collaboration on numerous projects combined with the enjoyable experiences at and outside the LUMC added both scientific and personal enrichment to this journey.

Agnes, Carolien, your expertise in operating instruments and generating essential data provided the foundation upon which this thesis was built. Your precision and reliability were indispensable.

Guinevere, Rosina, Bas, Albert, and David. I am thankful to you all for the time and effort you dedicated to working with me on all those projects. I greatly benefited from your unique expertise.

I am deeply grateful to my parents for their continuous support, especially during my move to the Netherlands. Your encouragement and trust have been essential to the completion of this PhD.

To everyone who played a part in this work and made this accomplishment possible, thank you.

Curriculum Vitae

My name is Florent Clerc, and I come from Geneva in Switzerland. I am an analytical scientist by training and mindset. In 2007, I completed my secondary education at Collège de Saussure in Geneva, specializing in chemistry and physics. Following this, I pursued a Bachelor's degree in chemistry and later a Master's degree focused on industrial processes, as well as analytical and computational chemistry at the University of Geneva. After completing my Master in 2012, I undertook two six-month internships at the University of Geneva's School of Pharmacy. These internships allowed me to deepen my expertise in mass spectrometry, which remains my preferred analytical technique.

In 2013, I embarked on a doctoral journey at Leiden University Medical Center in the Netherlands under the guidance of Professor Dr. Manfred Wuhrer and Dr. Viktoria Dotz. My PhD research concentrated on identifying biomarkers for inflammatory bowel disease and IgA nephropathy. After I completed the usual four-year duration for my thesis, several research articles remained unpublished. Subsequently, I worked at ThermoFisher as a GC-MS specialist and later joined International Flavors & Fragrances (IFF) as a research investigator in the perfume industry. At IFF, I applied various chromatography and mass spectrometry techniques to analyze and decode competitors' fragrances.

In 2020, I returned to Switzerland to take up a role at Biogen, where I currently work as an analytical expert. My responsibilities involve overseeing the analysis of raw materials and drug substances at the production facility in Solothurn. Concurrently, I have been steadily working to finalize and publish my remaining PhD research articles, in order to formally submit my thesis to the doctoral committee

.

Published Articles

*Clerc, F., Reiding, K. R., de Haan, N., Koeleman, C. A. M., Hipgrave Ederveen, A. L., Manetti, N., Dotz, V., Annese, V., Wuhrer, M., Immunoglobulin a Glycosylation Differs between Crohn's Disease and Ulcerative Colitis. *Journal of Proteome Research* **2023,** *22* (10), 3213-3224.

*Dotz, V.[†], Visconti, A.[†], Lomax-Browne, H.[†], Clerc, F.[†], Ederveen, A. H., Medjeral-Thomas, N., Cook, H. T., Pickering, M., Wuhrer, M., Falchi, M., *O*-and *N*-Glycosylation of Serum Immunoglobulin a Is Associated with IgA Nephropathy and Glomerular Function. *Journal of the American Society of Nephrology* **2021,** *32* (10), 2455-2465.

Šimurina, M.[†], de Haan, N.[†], Vučković, F.[†], Kennedy, N.A., Štambuk, J., Falck, D., Trbojević-Akmačić, I., Clerc, F., Razdorov, G., Khon, A., Latiano, A., D'Incà, R., Danese, S., Targan, S., Landers, C., Dubinsky, M., IBD-BIOM consortium, McGovern, D.P.B., Annese, V., Wuhrer, M., Lauc, G., Glycosylation of Immunoglobulin G Associates with Clinical Features of Inflammatory Bowel Diseases. *Gastroenterology* **2018,** *154* (5), 1320-1333.

*Clerc, F.[†], Novokmet, M.[†], Dotz, V.[†], Reiding, K. R., de Haan, N., Kammeijer, G. S., Dalebout, H., Bladergroen, M. R., Vukovic, F., Rapp, E., IBD-BIOM Consortium, Targan, S.R., Barron, G., Manetti, N., Latiano, A., McGovern, D.P.B., Annese, V., Lauc, G., Wuhrer, M., Plasma *N*-Glycan Signatures Are Associated with Features of Inflammatory Bowel Diseases. *Gastroenterology* **2018**, 155 (3), 829-843.

*Clerc, F., Reiding, K. R., Jansen, B. C., Kammeijer, G. S. M., Bondt, A., Wuhrer, M., Human Plasma Protein *N*-Glycosylation. *Glycoconjugate Journal* **2016**, 33 (3), 309-43.

Bladergroen, M. R., Reiding, K. R., Hipgrave-Ederveen, A. L., Vreeker, G. C., Clerc, F., Holst, S., Bondt, A., Wuhrer, M., van der Burgt, Y. E., Automation of High-Throughput Mass Spectrometry-Based Plasma *N*-Glycome Analysis with Linkage-Specific Sialic Acid Esterification. *Journal of Proteome Research* **2015**.

Porus, M., Clerc, F., Maroni, P. and Borkovec, M., Ion-Specific Responsiveness of Polyamidoamine (Pamam) Dendrimers Adsorbed on Silica Substrates. *Macromolecules* **2012**, 45 (9), 3919-3927.

*First authors and shared first author ([†]) articles used in the thesis manuscript *Glycomic Markers of Inflammatory Bowel Disease and IgA Nephropathy*