Clinical pharmacological aspects of mitochondrial function in muscle

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List of Publications

VAN DIEMEN MPJ, HART EP, HAMEETEMAN PW, COPPEN EM, WINDER JY, DEN HEIJER J, MOERLAND M, KAN H, VAN DER GROND J, WEBB A, ROOS RAC, GROENEVELD GJ. *Brain Bio-Energetic State Does Not Correlate to Muscle Mitochondrial Function in Huntington's Disease.* J Huntingtons Dis. 2020;9(4):335-344.

VAN DIEMEN MPJ, HART EP, ABBRUSCATO A, MEAD L, VAN BEELEN I, BERGHEANU SC, HAMEETEMAN PW, COPPEN E, WINDER JY, MOERLAND M, KAN H, VAN DER GROND J, WEBB A, ROOS RAC, GROENEVELD GJ. *Safety, Pharmacokinetics and Pharmacodynamics of SBT-020 in Patients with Early Stage Huntington's Disease, a two-part study.* Br J Clin Pharmacol. 2020 Nov 16.

VAN DIEMEN MPJ, ANDREUX PA, HEEZEN MR, AUWERX J, RINSCH C, GROENEVELD GJ, SINGH A. *Mitochondrial function is impaired in the skeletal muscle of pre-frail elderly*. Sci Rep. 2018 Jun 4

MPJ VAN DIEMEN, R UBBINK, FM MÜNKER, EG MIK, GJ GROENEVELD. Measurement of Oxygen Metabolism In Vivo. p.315-322. Chapter 20 of Will Y, Dykens J.A. (Editors). *Mitochondrial Dysfunction Caused by Drugs and Environmental Toxicants.* Wiley 2018. ISBN 978-1-119-32974-9

VAN DIEMEN MPJ, BERENDS CL, AKRAM N, WEZEL J, TEEUWISSE WM, MIK BG, KAN HE, WEBB A, BEENAKKER JWM, GROENEVELD GJ. *Validation of a pharmacological model for mitochondrial dysfunction in healthy subjects using simvastatin: A randomized placebo-controlled proof-of-pharmacology study. Eur J Pharmacol. 2017 Nov 15*

Curriculum Vitae

Marcus Peter Johannes van Diemen, born in Haarlem on 27 November 1986, knew from a young age that he wanted to become a physician. After graduating from College Hageveld in Heemstede in 2005, Marcus went to Belgium to study Medicine at the Katholieke Universiteit Leuven, from which he graduated in 2012. Immediately after, he returned to the Netherlands and went to pursue a PhD career at the Centre for Human Drug Research under supervision of prof. dr. Adam Cohen and prof.dr. Geert Jan Groeneveld as a research physician and project leader at the Neurology department. From 2012 to 2018, he gradually focused on mitochondrial (dys)function in healthy volunteers and various patient populations. Whilst working at CHDR, he also certified as a clinical pharmacologist.

After CHDR, Marcus pursued a clinical career in orthopedics and surgery. During the first wave of the COVID-19 pandemic crisis, when orthopedic care was greatly reduced, he worked at the Intensive Care Unit of the IJsselland Hospital (Capelle aan de IJssel), where he developed an interest for anesthesiology and Critical Care Medicine. Marcus is currently working as a resident at the Intensive Care of the Amphia hospital (Breda) and wants to pursue a career in anesthesiology.

Acknowledgments

'And the stone that sits up on the very top
of the mountain's mighty face,
does it think that it's more important
than the stones that form the base?'

(Through Heaven's Eyes from Disney's *The Prince of Egypt)*

In front of you lies the end product of a 6-year long journey on the High Seas of clinical pharmacology and mitochondrial medicine. In September 2012 I boarded the CHDR and embarked my Odyssey, during which I have developed myself scientifically and as a person. Smooth sailing was frequently alternated by riding rough seas, but the ship has finally reached port. I am extremely proud of my achievements, but could not have done this alone. I want to thank my fellow voyagers, who inspired and supported me during this journey.

First of all, I want to thank my mum, Marja, for being one of the most important persons in my life. Your everlasting love and support has laid the early foundation of my path. You have taught me to never give up and to be a warm person. These essential skills have proven to be invaluable during my work as a physician. Thank you for being you.

I want to thank all my dear colleagues at CHDR. You have made me feel at home at CHDR for a good 6 years. Some say CHDR is a big family and it truly felt like that. From Christmas party madness to late-hour shots at the office, you gave color to the rather straight forward world of science.

I want to thank my paranymphs Marije and Martin for standing by my side during my trial. Marije, as my sister you have always been one of the closest persons in my life. We have shared good and sad times and grown more closely over the years. I have always admired your adventurous mind and desire to travel the world. Wherever you go, know that you are in my heart. And Martin, my good friend, Leuven would not have been the same without you. The great times at Doc's Bar, the Oude Markt and all the beer cantusses are too numerous to count and cheers to all that the future will bring.

I want to thank the members of my thesis committee, Prof. dr. J.M.A. van Gerven, Dr. E.G. Mik, Prof. dr. P.E. Slagboom and Prof. dr. T. Hankemeier for reading and judging my thesis.

I want to thank my thesis advisors, Rob and Adam for guiding me in clinical pharmacology and orthopedics. Your combined knowledge has turned this thesis into a peculiar hybrid between these two and you have proven the people wrong who thought that an orthopedic surgeon could not be familiar with clinical pharmacology and that a clinical pharmacologist could not possibly have the required knowledge of the musculoskeletal system. Thank you for always having believed in me and for having given me all the support after my time at CHDR.

And last but not least, I want to thank Geert Jan for being my primary mentor at CHDR. It was you who introduced me into the world of mitochondria and therefore shaped my scientific path. Thank you for always being there to consult when I needed support. You taught me to think in a critical way and to push forward when things were difficult. I will use this knowledge to continue my path in medicine and science.