Virtual patient populations for quantitative pharmacology with its application in antibiotic treatment optimization

Guo, Y.

Appendices

Curriculum vitae

Yuchen Guo (1997, Shaanxi, China) began her academic journey in 2015, enrolling in a Bachelor of Science program in Pharmaceutical Science and a Bachelor of Economics program at Peking University, China. In 2019, she completed dual Bachelor's degrees in Science and Economics. Following her undergraduate studies, Yuchen pursued a Master of Science in Pharmacometrics at Peking University under the supervision of Prof. Tianyan Zhou. During her Master's, she focused on anticancer drug development, integrating experimental PK/PD studies with population PK and translational PK/PD modeling. She earned her Master's degree in 2021. In December 2021, Yuchen relocated to the Netherlands to begin her Ph.D. at the Leiden Academic Centre for Drug Research (LACDR), under the guidance of Prof. Coen van Hasselt, Dr. Laura Zwep, and Dr. Tingjie Guo. Her doctoral research focused on generalizing virtual patient populations using copulas and optimizing antibiotic dosing through PK/PD modeling. Yuchen presented her PhD work at multiple symposia and conferences, including an oral presentation at the ACOP (2025), and received awards such as the best poster prize at the LACDR Symposium (2022, 2025) and the best oral presentation award at the Channel Network Conference (2023). She also received travel grants from the Douwe D. Breimer Research Fund (2025), the Leiden University Fund (2025), and Erasmus+ (2024). Since May 2026, Yuchen is a scientist working in the PKPD & PBPK department at Novo Nordisk in Denmark.

Publications related to this thesis

- **Guo, Y.**, Guo, T., Knibbe, C. A., van Hasselt, J. C, and Zwep, L. B., 2026. Joint distribution modelling of hepatic drug metabolizing enzymes and transporters expression for PBPK-driven virtual patient simulation. *Under review*
- **Guo, Y.**, Yin, J., Aulin, L.B., Ciofu, O., Moser, C., Upadhyay, P.J., Høiby, N., Wang, H., Guo, T. and van Hasselt, J.C., Pharmacodynamic modeling of colistin and imipenem against in vitro P. aeruginosa biofilms. *Under review*
- **Guo, Y.**, Guo, T., van Hasselt, J.C. and Zwep, L.B., 2026. Copulas for Covariate Simulation in Pharmacometrics. *CPT: Pharmacometrics & Systems Pharmacology*, *15*(4), p.e70242.
- **Guo, Y.**, Guo, T., Knibbe, C.A., Zwep, L.B. and van Hasselt, J.C., 2024. Generation of realistic virtual adult populations using a model-based copula approach. *Journal of pharmacokinetics and pharmacodynamics*, *51*(6), pp.735-746.
- **Guo, Y.**, Yin, J., Yonucu, S., Knibbe, C.A., Guo, T. and van Hasselt, J.C., 2025. Spatial Pharmacokinetic and Pharmacodynamic Modeling in Airway Mucus: Y. Guo et al. *Clinical Pharmacokinetics*, *64*(12), pp.1869-1883.

Publications not related to this thesis

- **Guo, Y.**, Yong, L., Yao, Q., Han, M., Xue, J., Jian, W. and Zhou, T., 2023. Application of a count data model to evaluate the anti-metastatic efficacy of QAP14 in 4T1 breast cancer allografts. *Journal of Theoretical Biology*, *557*, p.111323.
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- Zhang, R., Kong, D., Chen, R., **Guo, Y.**, Jian, W., Han, M. and Zhou, T., 2022. A model-based meta-analysis of immune-related adverse events during immune checkpoint inhibitors treatment for NSCLC. *CPT: Pharmacometrics & Systems Pharmacology*, *11*(8), pp.1135-1146.

Acknowledgements

My PhD has been a most unforgettable journey, and I feel incredibly fortunate to have had more than my fair share of reliable, competent and trustworthy people standing with me along the way.

First, I would like to thank my promotor, Prof. Coen van Hasselt. Thank you, Coen, for the opportunity you gave me to join this research group, which introduced me to a broader world of pharmacometrics and connected me with so many inspiring people. Your generous guidance and steady support empowered me to tackle challenging and intellectually fulfilling work, and helped shape me into the scientist I am today. You have been a true role model to me.

I would also like to thank my daily supervisor Dr. Laura Zwep. Working with you on the copula projects and beyond has been one of the highlights of this journey. Thank you for the insightful input, continuous support, and genuine care for my well-being. I especially appreciate how your helped make the final phase of my PhD far less stressful than it might have been, and for always encouraging me to make thoughtful life choices and maintain healthy work-life balance. Your wit, warmth, and dedication to inclusion have had a lasting impact on me.

I would also like to extend my gratitude to my daily supervisor Dr. Tingjie Guo. I am deeply grateful for your support through both the technical challenges of my PhD and the broader questions of career and life. I truly appreciate your openness and generosity in sharing your knowledge, perspective and vision, which has broadened my way of thinking and inspired me. The rigour and precision you bring to your work have set a standard I continue to aspire to. I feel there is always more I can learn from you.

I am also very grateful to Prof. Catherijne Knibbe for her insightful advice across multiple projects during my PhD and for always making time for discussion. I would also like to thank Elke, my PhD advisor, for her valuable and practical guidance on my personal development. My thanks also go to the collaborators from KU Leuven Hospital, Karel Allegaert and Anne Smits, and from Leiden University Medical Center, Johan van der Plas and Meta Roestenberg, for the fruitful collaborations that, while not included in this thesis, were a meaningful part of this journey.

I would like to express my heartfelt gratitude to my dear colleagues for their support and companionship these years. I am especially grateful to my paranymphs, Meng and Hidde. Meng, your care and our conversations about science and life have been a quiet anchor for me. Hidde, your drive, energy and embrace of life beyond the desk have inspired me to do the same. I am also grateful to Linda Aulin for her constructive input and thoughtful advice. My thanks go to Duc, Sebastian, Massinisa and Wisse for the stimulating scientific discussions. To my past and present officemates: Feiyan, Cathi, Marinda, Meng, Hidde, Qinhao, Onmia, and Toon, thank you for the chats and coffee/tea breaks that made the office such a pleasant place to be. Special thanks to Helle, Coen, Marinda, Annika, Mengxu, Berfin, and Daan, the amazing chefs in the vegan lunch club. I also thank Swantje, Divakar, and Laura Baars for the time we spent working together in the DEI group. To my students, Jenny, Dian and

Runyi, with whom I have grown together. Thanks to Monique, Jorn, Roelof, Eric and Dirk-Jan for keeping everything running smoothly behind the scenes. And to Maria, Dina, Asina, Suzanne, Janneke, Jesika, Ming, Lalitya, Maik, and everyone I have not been able to name individually, thank you for being part of the warmth I have come to associate with SPP, and for the many laughs and conversations we've shared.

I would also like to thank Yu, Tingjie, Anyue, Tan, Lu, and Yunjiao, who helped me settle into life in the Netherlands and gave me a sense of family when I first arrived. My thanks also go to Zhiyuan, Zhendong, Xuanlin, Chenyu, Yinru, Aole and Yan for the joyful moments and the delicious meals we shared. I am grateful to everyone in the field who has offered generous help, advice, and trust throughout this journey. And outside of SPP and pharmacometrics, I would like to thank Mengle and Minrui. We began our PhD journeys around the same time, witnessed each other's growth, and supported one another throughout.

Finally, to my parents, your unconditional love has carried me further than you know, and I am grateful for your support at every stage of my life. To Joost, thank you for your patience, care and practical help during this journey. Having you beside me has meant a great deal.