

## The impact of non-genetic factors on drug metabolism: towards better phenotype predictions Jong, L.M. de

## Citation

Jong, L. M. de. (2025, June 5). The impact of non-genetic factors on drug metabolism: towards better phenotype predictions. Retrieved from https://hdl.handle.net/1887/4249242

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## Stellingen

behorende bij het proefschrift

## The impact of non-genetic factors on drug metabolism: towards better phenotype predictions

- 1. Both genetic and non-genetic factors should be considered in the prediction of an individual's drug metabolizer phenotype. *This thesis*
- Drugs utilizing secondary or alternative routes via non-CYP metabolism may be less susceptible to the effects of inflammation as compared to drugs fully metabolized by CYP enzymes. This thesis
- 3. Changes in the abundance of drug-binding plasma proteins should be taken into account when using probe drug plasma clearance as a proxy for CYP enzyme activity under (patho)physiological conditions. *This thesis*
- 4. Clinical trials to test for disease-drug-drug interactions with immunomodulating monoclonal antibodies in patient populations with low-grade systematic inflammation are a waste of time, effort and resources. *Adapted from this thesis*
- 5. A patient's genotype provides only a fraction of the information needed to ensure the right drug at the right dose on the first attempt. *Adapted from Shah et al.*, *Br J Clin Pharmacol* (2015)
- 6. Type of disease and severity of inflammation should be the primary drivers in assessing the risk of disease-drug interactions. *Adapted from Coutant et al.*, *Clin Pharmacol Ther* (2022)
- 7. Robust in vitro data is a prerequisite for bottom-up physiologically-based pharmacokinetic modeling approaches. *Adapted from Ozbey et al.*, *Drug Metab Dispos* (2023)
- 8. Polypharmacy complicates CYP phenotype predictions and should be systematically accounted for in precision dosing models. *Adapted from Mostafa et al.*, *Pharmacogenomics* (2022)
- 9. Scientific progress thrives on reflection: researchers need more time to think. *Adapted from Nature* (2024)
- 10. Het toedienen van een geneesmiddel aan een patiënt is in feite een n=1 trial. D. Breimer
- 11. Onderzoek doen is net als tennis: succes hangt niet alleen af van technische vaardigheden, maar ook van mentale veerkracht op de cruciale momenten.