



Universiteit
Leiden

The Netherlands

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>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/4249242>

Note: To cite this publication please use the final published version (if applicable).

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*
2. 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 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.

Laura de Jong
Leiden, 5 juni 2025