PharmaPendium®

Fact Sheet

METABOLIZING ENZYMES AND TRANSPORTER PROTEINS MODULE (MET)

Uncover potential drug-drug interactions with access to a unique source of searchable preclinical and clinical metabolizing enzymes and transporter data.

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Introduction

PharmaPendium's Metabolizing Enzymes and Transporters Module is a major resource for the modelling of adverse drug interactions resulting from effects of drug-metabolizing enzymes and transporters. It provides preclinical researchers with a unique content source of unprecedented depth and curation for data on CYPs, Phase 2 Enzymes, Transporters and dynamic parameters (Cint, Vmax, Km, etc.). Refine searches by selecting the type of drug interaction such as drug as enzyme substrate, inhibitor or inducer. The same selection applies for transporters.

- Does your drug stimulate or inhibit any CYPs or transporters that are likely to affect its bioavailability?

- Will this drug be bioavailable at an efficacious dose?

- What data has been sent back for clarification or with the demand for supplementary studies?

DETAILED COMPARATIVE DATA FOR CONFIDENT DRUG CANDIDATE ASSESSMENTS

PharmaPendium's MET Module helps significantly improve drug development workflows by providing a streamlined method for comparative analyses. This data is used extensively by preclinical, clinical DMPK, and safety pharmacology scientists to help characterize drug candidates.

- Better understand and predict drug-drug interactions (DDI) under various conditions with different subject types.

- Assemble better drug-drug interaction modeling sets to profile and more accurately identify problems early.

- Prioritize the safest and most promising candidates for further investment.

Assess drug candidate's potential drug-drug interactions based on similarities with other drugs with the same targets, chemical structure, drug class or common adverse effects.

- Make drug development project risk assessments: e.g. will a certain drug-drug interaction lead to your candidate drug being delivered at a toxic dose?

- Understand potential pharmacodynamics potential: e.g. Which CYPs interact with my drug and at what rates?

- Determine regulatory pathway: e.g. What regulatory submission mistakes have been made in this area in the past?

INTELLIGENT SEARCH FUNCTIONS ENHANCES HIGH QUALITY DATA

Drug-drug interaction information is not always easy to find and the level of detail is often poor. Because PharmaPendium's MET Module draws from regulatory approval documents, it is the deepest most detailed database on available. It provides a level of data and context for drug-drug interactions that is not found in the literature.

Extracted data from more than 2.2 million pages, from:

- FDA Approval Packages (1938 to present)
- EMA EPARS (1995 to present)
- FDA Advisory Committee Meeting documents

PharmaPendium's MET Module provides a wealth of filterable experimental data in a depth that can help guide your drug development decisions in terms of uncovering critical drug-drug interactions that might lead to either lack of efficacy or a serious adverse event due to overdose.

All of these parameters can be searched, filtered, or sorted under multiple experimental conditions, for example:

- Drug name
- Metabolites created
- CYPs,
- Phase 2 Enzymes,
- Dynamic parameters
- Cint (Intrinsic Clearance)
- Km (Michaelis Constant)
- Vmax (maximum rate of enzyme reaction)

- Transporters and effects on transporters
- Drug as substrate, inducer, inhibitor
- DDI studies
- Concomitant drugs
- Dose
- Route
- Species

PharmaPendium's MET Module can help avoid late-stage drug failures due to unexpected change in a drug's bioavailable that can lead to toxicity or low efficacy from drug-drug interactions, potentially saving time and money.

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PharmaPendium informs critical drug development decisions on safety and efficacy, risk assessments and mitigation and study designs with fully searchable FDA and EMA drug approval documents and FAERS data, a drug-drug interaction risk calculator and comparative safety, pharmacokinetic, efficacy, and metabolizing enzyme and transporter data.

For more information about PharmaPendium, visit elsevier.com/solutions/pharmapendium-clinical-data

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