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A Review of Drug Metabolism and Pharmacokinetics

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Abstract

Drug Metabolism and Pharmacokinetics (DMPK) is a feld of study focused on understanding how drugs are processed and eliminated by the body. It encompasses drug metabolism, which involves the enzymatic conversion of drugs into metabolites, primarily in the liver. The metabolites can be inactive, active, or potentially toxic. Pharmacokinetics deals with the movement of drugs within the body, including their absorption, distribution, metabolism, and excretion (ADME). These processes infuence the concentration of drugs in the bloodstream over time and are infuenced by various factors such as drug formulation, route of administration, and patient-specifc characteristics. Understanding DMPK is crucial for the development of safe and efective medications, dosage determination, assessment of drug-drug interactions, and evaluation of drug toxicity. Pharmaceutical companies utilize DMPK data during drug development to optimize drug design and dosing strategies, ensuring the safety and e f cacy of medications.

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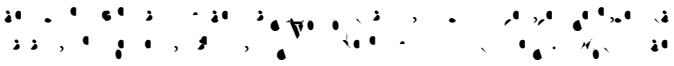

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