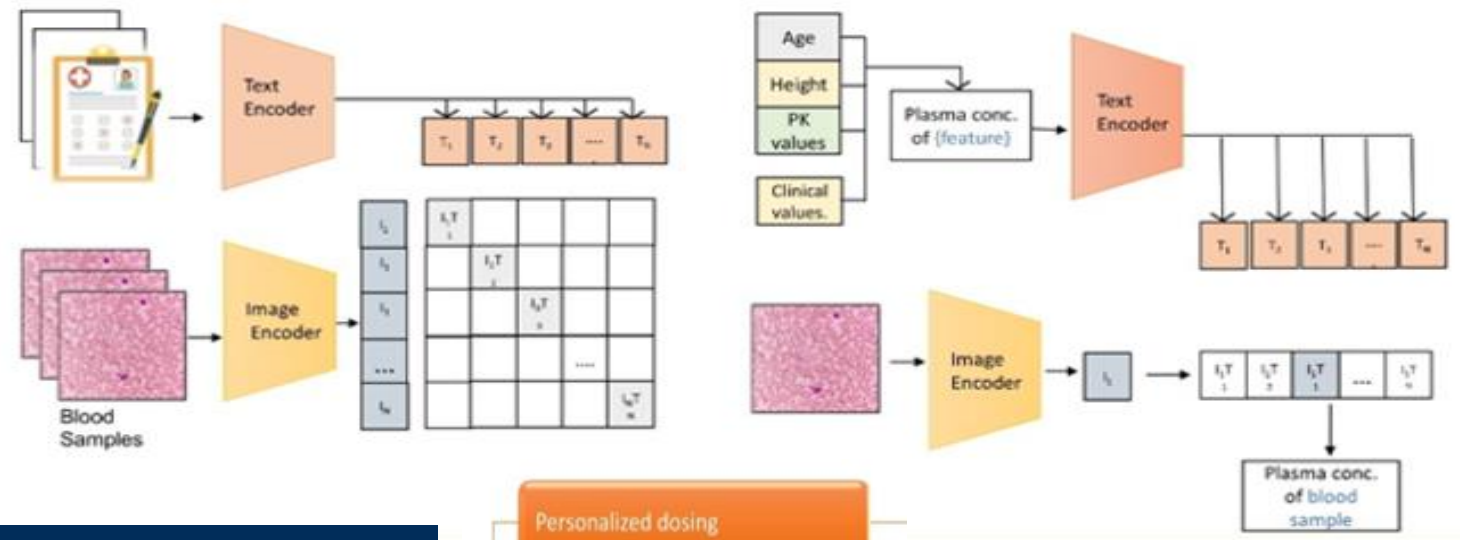# Development of an Artificial Intelligence driven Pharmacokinetics based algorithm as an aid to better management of drug resistance in tuberculosis

AMITY UNIVERSITY

PROJECT FUNDED BY

Ongoing Project @ ACAI

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AMITY CENTRE FOR ARTIFICIAL INTELLIGENCE

Limitations of Conventional TDM & Need for Advanced PK Tools
- To generate and enhance plasma concentration data of first-line anti-TB drugs (ATDs) in the Indian population using detailed pharmacokinetic (PK) modeling.

AI-Driven Limited Sampling Strategy (LSS)
- To develop an AI-based LSS model from collected data to predict detailed PK parameters of first-line ATDs.

Saliva–Plasma Correlation
- To assess the relationship between salivary and plasma drug concentrations.

Multimodal AI Tool for Drug Estimation
- To build an AI tool that estimates drug concentrations using blood sample images and clinical data.

Linking PK to Microbiological Outcomes
- To correlate early PK predictions with microbiological outcomes after 2 months of pulmonary TB treatment.