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A Novel Integrated Action Crossing Method for Drug-Drug Interaction Prediction in Non-Communicable Diseases

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#### ACCEPTED MANUSCRIPT

#### Highlights

- A new feature formulation technique, called IAC, for Drug-Drug Interactions (DDIs) analysis is introduced.
- We focus on Pharmacokinetics (PK) interactions of drugs used for NCDs.
- The IAC substantially reduces the size of features for training and testing processes.
- Using the new feature for non-communicable diseases (NCDs) DDIs delivers greater results than using the conventional method.
- The most excellent result from the proposed method is 83% (AUC 0.901).
- With the AIC, predictions of unreported DDIs are obtained with more than 80% of confidence.

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