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## **Drug-induced nephrotoxicity analysis in HIV therapy; case study using GOBIOM database**

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Early detection of drug-induced renal impairment is vital for any drug development program. Antiretroviral therapy, though made a significant impact on the mortality and morbidity of the patients with HIV infection, can cause severe nephrotoxicity which can lead to acute and chronic kidney diseases. Current research activities are focusing more on the identification of the biomarkers that might provide a more sensitive and rapid means of detecting acute kidney injury. Elevated levels of serum C-reactive protein (CRP) concentration have been shown to be of value in diagnosing drug-induced nephrotoxicity. Our objective was to assess the severity of ART-induced nephrotoxicity by tracking the levels of CRP in HIV patients. To do the analysis, we used the data from GVK BIO Online Biomarker Database (GOBIOM), which is a repository of all clinical, preclinical and exploratory biomarkers extracted from published literature, clinical trials and scientific conferences. Using the analysis tools of GOBIOM, we compared the percentage difference of CRP levels in HIV patients who underwent ART to assess the severity of the nephrotoxicity. Our finding suggested that though CRP levels are elevated for majority of the anti-retroviral drugs, it is the maximum when Tenofovir is administered either as a monotherapy or in combination with other agents. Measurement of such prominent biomarkers with high sensitivity and specificity might be a powerful tool for effective screening of nephrotoxicity.

### **Biography**

Madhukar Reddy Patlolla is a scientific associate in GVK Biosciences Private Limited, a leading contract research organization providing a spectrum of services and solutions such as scientific consulting and contract research services in the areas of Medicinal chemistry, Discovery biology, Informatics, Process R&D, Clinical research, Clinical data management and Clinical pharmacology. He has been associated with GVK BIO for 6 years and works on GVK BIO Online Biomarker Database (GOBIOM) database. His expertise includes identification of clinical targets, developing strategies for target identification, database optimization, data validation, maintaining data standards and evaluating therapeutic area related datasets.

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