

Herb-drug interactions for herbal medicines with claimed anticancer indications on drug metabolizing CYP450s



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Drugs have the potential to interact with each other upon concurrent administration. This drug-drug interaction (DDI) can be at the level of absorption, distribution, metabolism and excretion (ADME).With an estimation that 80% of the world population utilise herbal medicines for primary healthcare, there is a likelihood that some people will take both herbal and conventional medicines. This could present a risk for drugherb interactions (DHI) at the various levels of the ADME process. Most common DDI have been observed at metabolism level involving inhibition or induction of the major drug metabolising liver enzymes called cytochrome P450s.



## **Experiment Layout**

Plasma concentration-time curve indicating a) Toxicity effect b) Desired therapeutic effect c) Subtherapeutic effect





## **Conclusions to current work**

Extracts from herbal medicines with claimed anticancer activity from Zimbabwean medicinal plants exhibited potent inhibitory effects on a major liver drug metabolizing enzyme called CYP1A2. This result point to a need of further investigations of this effect as it might have clinical consequences of drug-herb interactions when the herbs are taken together with conventional drugs which are substrates of the inhibited enzyme.

## **Results of Current Work**



-20 -40 Plant extract MI WIZ WICH WCZ WICH Plant extract MI WIZ WICH WCZ WICH Plant extract

CYP1A2 inhibition profile by anticancer herbs

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