

UNIVERSITI TEKNOLOGI MARA

**MALAYSIAN TRADITIONAL HERBS:
INHIBITION OF MALAYSIAN TRADITIONAL
HERBS ON
CYP2D6 ISOZYMES**

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ABSTRACT

The use of herbal medicine is expanding at a surprising pace due to the great inputs from ethno medicinal practices being pooled from all over the world. The objective of this study is to provide information on the inhibitory effect of Malaysian traditional herb on CYP2D6 isozymes. The hypothesis is that the inhibition of herb on CYP2D6 enzymes will affect the metabolism CYP2D6 metabolizing drug and hence, there is herb-drug interaction. The Vivid[®] CYP450 2D6 Screening Kits, were used to assess the inhibition effect of 18 Malaysian herbs on the human cytochrome P450 involved in hepatic metabolism. The test compounds were prepared in concentration of 0.1 and 1 mg/ml. Quinidine was used as the positive control. 18 herbs were tested for their inhibition on the CYP2D6 isozymes and all the 18 herbs showed inhibition in the concentration of 1 mg/ml while only 10 herbs showed inhibition with a concentration of 0.1 mg/ml. At 1mg/ml, kayu lilit showed the highest percentage of inhibition of more than 100% while sembaranthu showed the lowest percentage of inhibition with 30.3 ± 0.3 %. At a lower concentration of 0.1mg/ml, kayu lilit again showed the highest inhibition percentage of 77.3 ± 0.3 % and the lowest percentage inhibition was shown by senduduk with 0.7 ± 0.5 %. In conclusion, there is interaction between herbs and CYP2D6 isozymes which can affect the metabolism of drug that are metabolised by CYP2D6 isozymes if there were given simultaneously.