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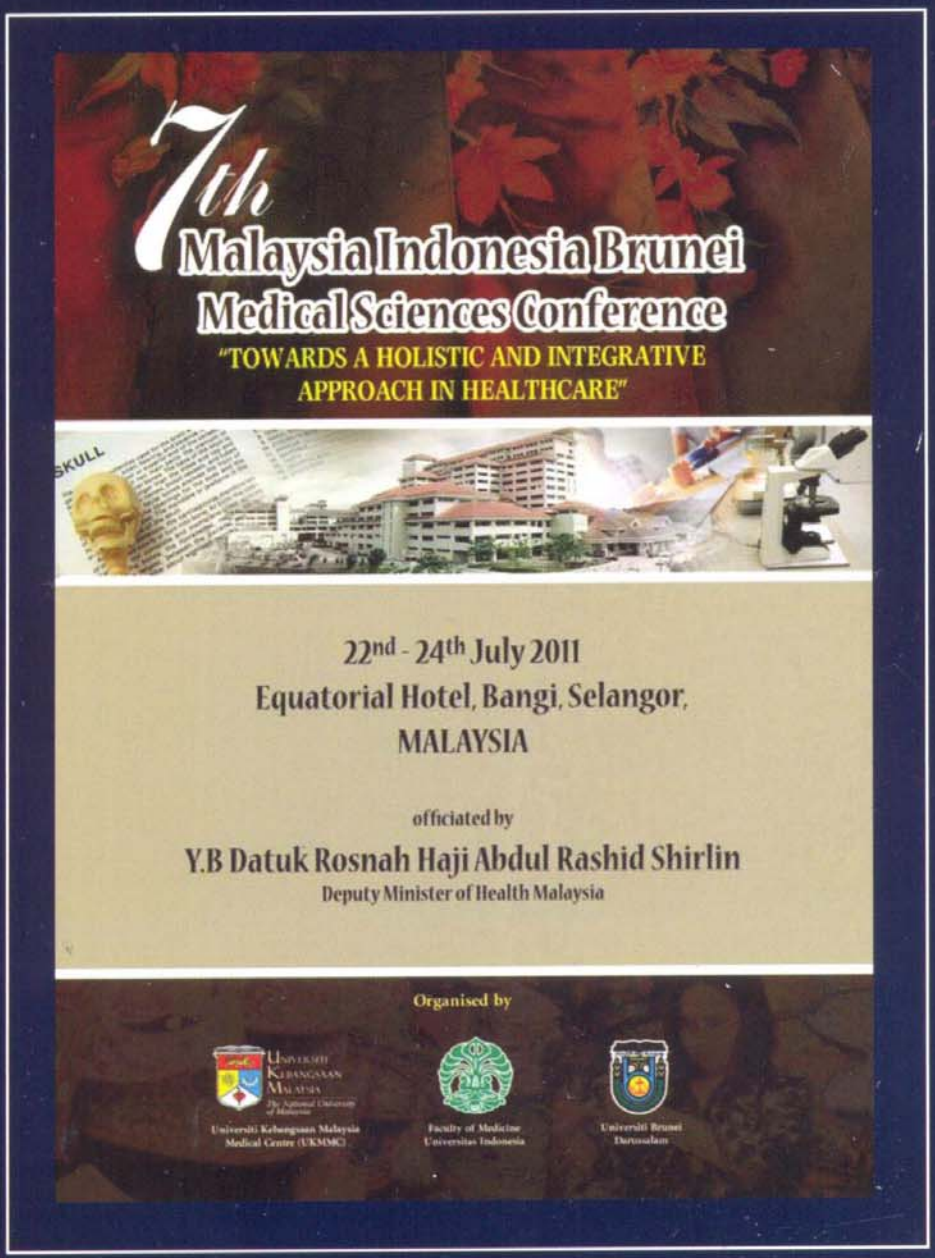

EFFECTS OF LABISIA PUMILA ON BONE HISTOMORPHOMETRIC PARAMETERS IN POSTMENOPAUSAL OSTEOPOROSIS RATS MODEL

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Background:
Estrogen Replacement Therapy (ERT) is the main treatment of postmenopausal osteoporosis. However, ERT may cause serious side-effects, such as cancers and thromboembolic problems. Kacip Fatimah or *Labisia pumila var. alata* (LP), a herb has the potential to be used as an alternative to ERT due to its phytoestrogenic activity. This study was conducted to determine the anti-osteoporotic effects of LP by measuring the bone histomorphometric changes in post menopausal osteoporosis rat model.

Materials and Methods:
Thirty two Wistar rats were equally divided into four groups, with eight rats in each group. The first group was sham operated (Sham), the second group acted as ovariectomized control (OVXC), the third group was ovariectomized and treated with 17.5 mg/kg of *Labisia pumila* (LP) and the fourth group was ovariectomized and treated with 64.5 µg/kg Premarin® (ERT). After two months of treatment, the left femurs were dissected out and the cellular and dynamic changes were analysed using bone histomorphometry.

Results:
OVXC rats were found to demonstrate osteoporotic changes. Supplementation of LP to ovariectomized rats for two months was able to prevent the osteoporotic changes in the static and dynamic bone histomorphometric parameters. LP was as effective as ERT in preventing these osteoporotic changes.

Conclusion:
LP is a good candidate for further studies on its potential as an alternative to ERT for prevention of postmenopausal osteoporosis.

Keywords:
Histomorphometry; *labisia pumila*; osteoporosis; estrogen; ovariectomy