

Testing of *Labisia pumila* for oestrogenic activity using a recombinant yeast screen

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Labisia pumila (Bl.) F.-Vill (Myrsinaceae) has been traditionally used by the Malay women in Malaysia in parturition. The water decoction of the root or the whole plant is often given to a pregnant woman between one and two months before she is due to give birth, as this is believed to induce and expedite labour (Burkill, 1935). The plant is also used in post-partum medication as mixed preparation to help contract birth channel, to delay fertility and to regain body strength (Zakaria and Mohd., 1994).

During later stages of pregnancy and labour, it is believed that oestrogen plays an important role in causing uterine contraction. Most known phytoestrogens (plant oestrogens) are also responsible in abortion and contraception. Therefore, in this experiment two varieties of *L. pumila* var. *alata* and *L. pumila* var. *pumila* were assessed for their oestrogenic activities by performing an *in vitro*

recombinant yeast-based oestrogen assay in 96-well microtitre plates (Routledge and Sumpter, 1996).

However, ethanol and water extracts of both *L. pumila* var. *alata* and *L. pumila* var. *pumila* roots and leaves did not show any significant oestrogenic activity (Figure 1 and 2). All extracts were tested over a concentration range of 1 to 1000 µg/ml and compared with a standard 17β-oestradiol (17β-E2). The negative results of oestrogenicity indicate that the phytoestrogens could either be absent in all the extracts or require microbial metabolic transformations in the intestine in order to become active.

Burkill, I.H., (1935) A dictionary of the economic products of the Malay Peninsula. Crown Agent, London.
 Routledge, E.J. and Sumpter, J.P.,(1996) Environmental Toxicology and Chemistry, 15 (3) 241-248.
 Zakaria, M. and Mohd, M.A., (1994) Traditional Malay medicinal plants. Penerbit Fajar Bakti, Kuala Lumpur.

FIGURE 1. Response of the oestrogen screen to 17β-oestradiol standard and ethanol extracts of *L. pumila* var. *alata* and *L. pumila* var. *pumila* leaves and roots

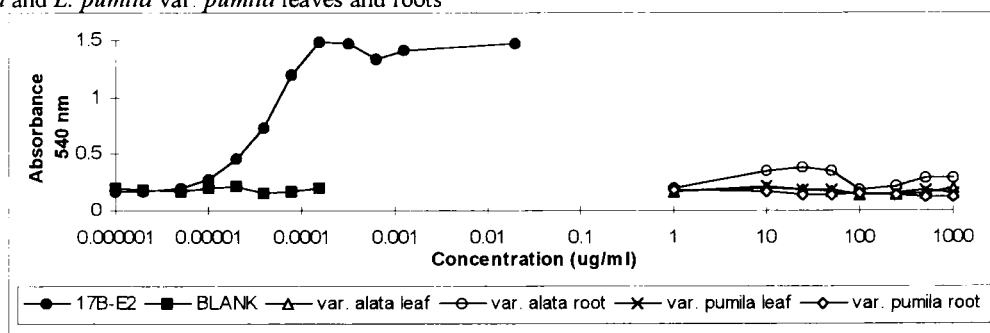


FIGURE 2 : Response of the oestrogen screen to 17β-oestradiol standard and water extracts of *L. pumila* var. *alata* and *L. pumila* var. *pumila* leaves and roots

