

## Poster

### ***Pimenta dioica* (L.) Merr.: An Herbal Therapeutic from Costa Rica for Women's Health**

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**Introduction.** The outcomes of the Women's Health Initiative demonstrated that hormone replacement therapy (HRT) has many adverse effects in menopausal women, thus the development of new alternative treatments for menopause has become a high priority. In Central America, many women never use HRT, but instead use natural herbal therapies for the treatment of menopausal symptoms. One such herb, *Pimenta dioica* (L.) Merr. (Myrtaceae), known commonly as allspice in English and *jamaica* in Spanish, is the focus of this study. While the dried berries are ground to make the culinary spice allspice, the leaves are dried and sold in Costa Rican herb markets for the treatment of menopausal symptoms. In addition, the herb is traditionally used to treat the pain associated with menstruation, specifically menstrual cramps.

**Objectives.** To scientifically validate the traditional use of allspice by testing for both estrogenic and anti-inflammatory activity.

**Methods.** Plant material was collected, dried, ground and extracted in MeOH. The crude MeOH extract was then tested in a competitive estrogen receptor binding assay, the ER-CALUX reporter gene assay, and the COX-2 EIA assay.

**Results.** The extract significantly inhibited binding of radio-labeled estradiol in a competitive estrogen receptor binding assay, and induced transcription of an estrogen responsive luciferase reporter gene in the ER-CALUX assay. In the COX-2 EIA assay, the extract significantly inhibited the COX-2 enzyme demonstrating potential anti-inflammatory activity.

**Conclusion.** Since hormone replacement therapy reduces the symptoms of menopause by increasing estrogen concentrations, and anti-inflammatory drugs are known to provide relief from pain associated with menstruation, our data support the use of *P. dioica* to treat menopausal symptoms and menstrual pain.

Keywords: menopause, herbal medicine, estrogen

#### Selected References

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