

Preface

The Q'eqchi' Maya of Belize have an extensive ethnopharmacopoeia of medicinal plants used traditionally for reproductive health and fertility. Ethnobotanical research was carried out in the Q'eqchi' communities of the Toledo District of Southern Belize from 2007–2011 on medicinal plant species used for reproductive health. Data was gathered primarily through semistructured interviews and plant collecting trips with 6 traditional healers, 3 midwives, and 12 female herbalists. The Belizean Q'eqchi' are utilizing more than 60 plant species for reproductive health treatments, with the most species from the black pepper family, Piperaceae.

Ten species were selected for investigation of their estrogenic activity using a reporter gene assay: *Clidemia crenulata* Gleason, *Drymonia serrulata* Jacq. (Mart.), *Gouania lupuloides* (L.) Urb., *Miconia oinochrophylla* Donn. Sm., *Mimosa pudica* L., *Piper jacquemontianum* Kunth, *Piper peltatum* L., *Psychotria acuminata* Benth., *Psychotria poeppigiana* Müll. Arg., and *Tococa guianensis* Aubl. These plants are used to treat female infertility, male infertility, menopausal symptoms, heavy menstruation, uterine fibroids, *k'uub'sa'* (a Q'eqchi' womb disorder), for miscarriage prevention, for use as female contraception, and for male contraception. Methanol extracts of the leaves of all species were assayed, as well as the stems of *G. lupuloides*, roots of *M. pudica*, and the roots of *P. peltatum*. All the extracts displayed estrogenic activity, except for *M. pudica* roots and *P. jacquemontianum* leaves, which were both cytotoxic to the MCF-7 breast cancer cell line. Nine of the species assayed were estrogenic, four of the species were also antiestrogenic, and two of the extracts were cytotoxic to the MCF-7 cell line.

Women's healing traditions are being lost in the Q'eqchi' communities of Belize at an accelerated rate, due to a combination of factors including: migration from Guatemala disrupting traditional familial lines of knowledge transmission; perceived disapproval by local biomedical authorities; women's limited mobility due to domestic obligations; and lack of confidence stemming from the devaluation of women's traditional knowledge. Medicinal plant knowledge is highly gendered with women and men commonly using different species in reproductive health treatments. Revitalizing women's healing practices is vital for maintaining the traditional knowledge needed to provide comprehensive healthcare for Belize's most remote indigenous communities.

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