Does Sérélys (Relizen™ Femal® Femalen®), a non-hormonal treatment for vasomotor symptoms, inhibit the CYP2D6 enzyme system?

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Tamoxifen is used to treat women with invasive breast cancer. It is converted to 4-hydroxy-tamoxifen by the cytochrome P450 (CYP) enzymes. Tamoxifen is known to initiate vasomotor symptoms (VMS). As systemic estrogenic-containing products are contraindicated in women taking tamoxifen, and concerns exist about the use of phytoestrogen-based products in these women, there are limited options available for the treatment of VMS in this population. Selective serotonin reuptake inhibitors (SSRIs) have been prescribed to alleviate tamoxifen-induced VMS. SSRIs are strong CYP2D6 inhibitors and their labels often contain a warning that they can reduce the efficacy of tamoxifen. Thus the value of a non-estrogen agent effective against VMS but with no effect on the CYP enzyme system is obvious. Sérélys, a non-hormonal purified pollen extract, has shown efficacy vs. placebo in treating VMS in a randomized, double-blind controlled trial. The objective of this study was to evaluate the in vitro effects of Sérélys on the CYP enzyme system.

Design
Sérélys, as a powder mixture of 75% purified cytoplasm of pollen, was tested for its potential to inhibit the human CYP isoenzyme, CYP2D6, in pooled human liver microsomes. Quinidine was used as a reference. The endpoint was conversion of Bufuralol to 1-OH-Bufuralol, analyzed using LC-MS/MS. Six concentrations of each compound were tested. Concentrations of Sérélys range from 1.65 ?g/ml to 400 ?g/ml. Quinidine dosing ranged from 2.06 nM to 500 nM. The usual human dose of Sérélys is approximately 80 ?g/ml, thus the highest test dose corresponds to five times the recommended daily dose.

Results
Inhibition of CYP2D6 with Sérélys was negligible at all concentrations and ranged from -1.23% to +7.16%. Inhibition of CYP2D6 enzyme with Quinidine increased in a linear dose related fashion from -7.07% at 2.06 nM to 84.05% at 500 nM.

Conclusion
Sérélys is a non-hormonal treatment of VMS that does not show inhibition of the CYP enzyme system. This may have important clinical utility for women using tamoxifen for breast cancer treatment or chemoprevention who experience VMS.

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