

## SCIENTIFIC HIGHLIGHTS OF ESTROG-100

Proven efficacy in vitro, in vivo, and in 2 published clinical studies, 1 ongoing:

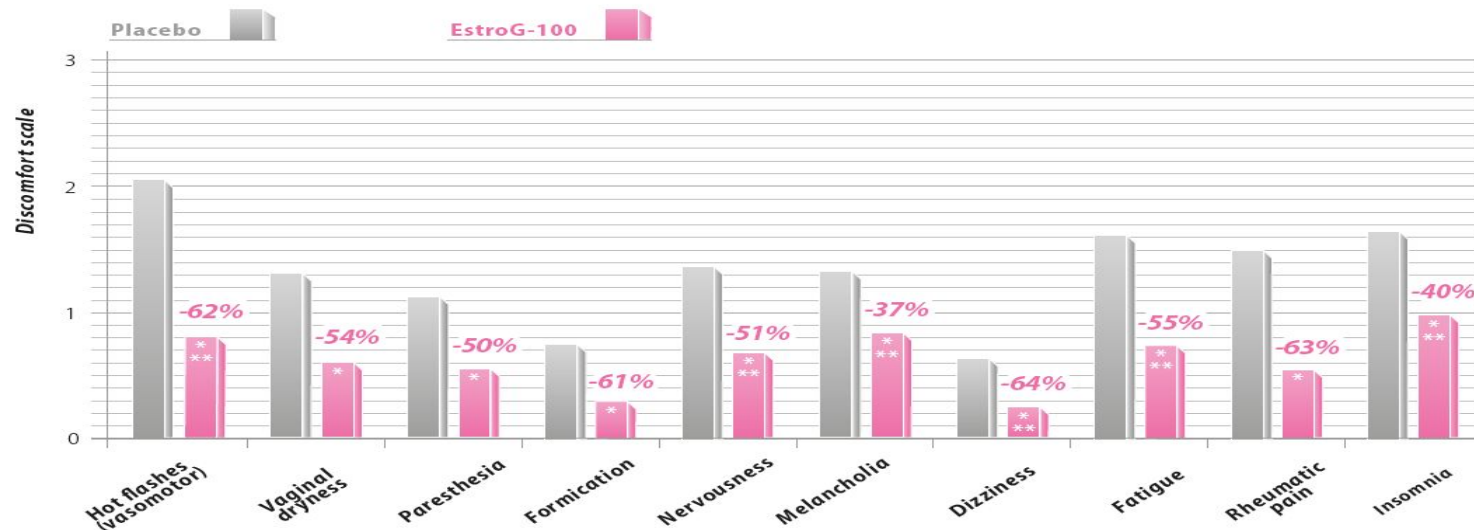
### CLINICAL STUDIES

12 month, randomized, double-blind, placebo-controlled study (N=47, Korea, Asian population, published)

3 month, randomized, double-blind, placebo-controlled study (N=61, USA, non-Asian population, published)

3 month, multi-center, randomized, double-blind, placebo-controlled study (N=104, Korea, Asian population, will be published in 2015)

**Comparison of menopausal symptoms scores during the 12 weeks of EstroG-100 supplementation<sup>1</sup>**



\*  $p < 0.01$  compared to baseline by paired t-test

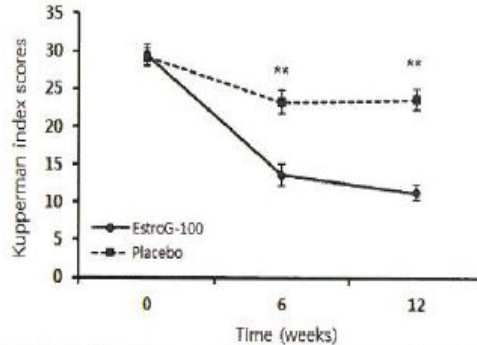
\*\*  $p < 0.01$  compared between groups by t-test



**After 12 weeks of supplementation, menopausal symptoms significantly decreased in women taking EstroG-100 vs. the placebo group. Improvement was already noticeable after 6 weeks of product intake.**

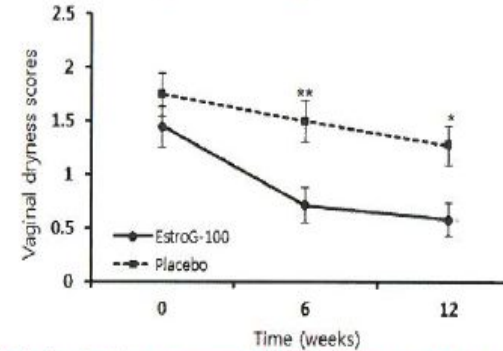
## SCIENTIFIC HIGHLIGHTS OF ESTROG-100

### Kupperman Index for Quality of Life



\*\* : Statistically significant compared between groups;  $p < 0.01$  by t-test(IT)

### Vaginal Dryness



\* : Statistically significant compared between groups;  $p < 0.05$  by t-test(IT)

\*\* : Statistically significant compared between groups;  $p < 0.01$  by t-test(IT)

## SAFETY

- No change in uterus and body, liver, kidney weights and BMI (while bone mineral density increased)
- No binding affinity to both ER  $\alpha$  and ER  $\beta$  in estrogen receptor binding affinity study
- Single-, repeated dose and genetic toxicity tests including Ames, micronucleus, and chromosome aberration test
- Inhibitory effect of proliferation of human breast cancer cell line (MCF-7)
- All three herbs are registered Korea Food Standard Codex as main food ingredient
- All three herbs have been documented for use as herbal remedy for 400+ years in Korea
- *Cynanchum wilfordii* and *Phlomis umbrosa* are reported to be liver protective herbs by WHO
- None of serious side effects reported in 3 clinical studies without E2, FSH level change
- No change in endometrial thickness in multicenter clinical study