Many women suffer from pain during menstruation, which is in the case of primary dysmenorrhea caused by painful uterus contractions without any existing condition. The prevalence of primary dysmenorrhea is very high, especially among adolescent women. Physiologically uterus contractions are mediated by several endogenous mediators, i.e. oxytocin, vasopressin and PGF2α.

Agnucaston® contains the Vitex agnus castus (VAC, chaste tree) dry extract BNO 1095. It is an effective herbal medicinal product against irregular menstrual cycles and premenstrual syndrome (PMS). Here we present new data demonstrating that BNO 1095 has anti-convulsive activity on isolated rat and human uterine smooth muscle-containing strips.

Uterus strips were mounted in organ baths containing oxygenated Krebs-Henseleit solution. Myometrical contractions were induced by adding 0.5 nM oxytocin, 0.05 µM vasopressin or 1 µM PGF2α. After contractions stabilized in amplitude and frequency, cumulative concentrations of VAC dry extract were added.

VAC completely inhibited oxytocin-induced contractions of rat uterus strips in a concentration-dependent manner (IC50 = ~140 µg/ml). Furthermore, the extract inhibited vasopressin- and PGF2α-induced uterus contractions with IC50 values of ~100 µg/ml and ~130 µg/ml, respectively. A comparable anti-convulsive activity was found when oxytocin-induced contractions of human uterine strips were investigated.

In summary we demonstrate that BNO 1095 was highly effective to prevent uterine smooth muscle contractions induced by physiological mediators (e.g. oxytocin, vasopressin and PGF2α). This holds true for uterine smooth muscle-containing strip preparations of rat and human origin. We conclude that Agnucaston® and the contained dry extract BNO 1095 seems to possess an excellent pharmacological profile for the effective treatment of primary dysmenorrhea.