



## UTERUS

### FUNCTIONAL PHARMACOLOGY ASSAYS

#### PATHOLOGIES OF INTEREST

- Preterm labour
- Dysmenorrhea

#### SPECIES

- Animal (rat, mouse, guinea-pig, rabbit, others upon request)

#### TISSUES

- Myometrial smooth muscle

#### FUNCTIONAL RECEPTORS / ENZYMES

- Oxytocin receptors
- $\beta_2$ -adrenoceptors
- Prostaglandin receptors
- Phosphodiesterases

#### MODEL DESCRIPTION

Myometrium is obtained from adult female rats. The myometrial muscles are cut into small strips and mounted under 1 g initial tension, in 5 ml organ baths containing oxygenated Krebs-Henseleit solution.

Contractile responses are measured using isometric tension transducers and recorded using a data acquisition system.

Examples of two experimental protocols:

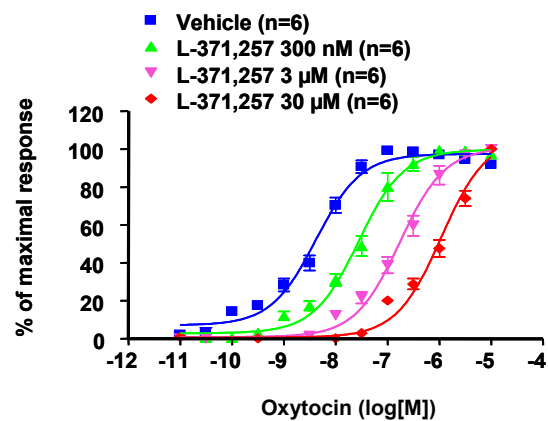
**Protocol A:** After pre-treatment with an oxytocin antagonist L-371,257, tissues are challenged with increasing concentrations of oxytocin.

**Protocol B:** After pre-treatment with a selective  $\beta_2$ -adrenoceptor antagonist ICI-118551, tissues are stimulated by 0.5 nM oxytocin followed by increasing concentrations of ritodrine (a selective  $\beta_2$ -adrenoceptor agonist).

#### SCIENTIFIC PUBLICATIONS

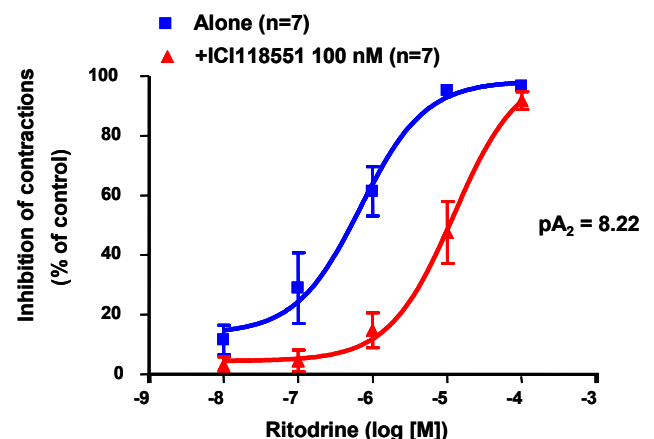
- Rouget C et al, *J Clin Endocrinol Metab* **90**:1644-50, 2005

#### Protocol A



Effect of the oxytocin antagonist L-371,257 on oxytocin-induced contractions in rat isolated myometrium.

#### Protocol B



Effect of the  $\beta_2$ - antagonist ICI-118551 on ritodrine-induced inhibition of rat myometrial contractions evoked by oxytocin.