- In vitro investigation of vaginal function from **normal rats** or **ovariectomized (OVX) rates** in organ baths.
- Useful to investigate the effect of drugs developed to improve vagina atrophy.
- Evaluation of the ability of drugs at modulating vaginal smooth muscle tone can be performed in organ bath studies:
  - on cholinergic contractile response elicited by muscarinic pharmacological stimulation (carbachol).
  - on contractions induced by electrical field stimulation (EFS) (stimulation of efferent nerve terminals presents in the tissue).
  - on KCl contractile response.
- Evaluation of mRNA by RT-PCR.
- Evaluation of protein expression: by immunohistochemistry (IHC) or western-blot (WB) in parallel of organ bath studies.

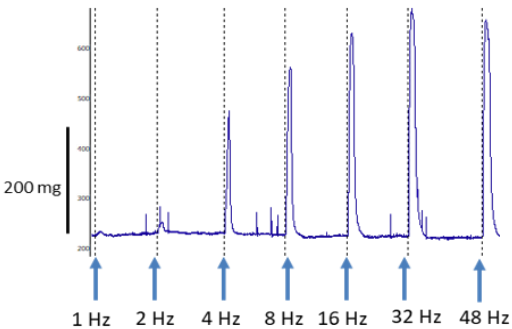

Figure 1: Original tracing showing a frequency-response curve to EFS (300 mA, 10 s, 3 ms, 1 to 48 Hz) in rat vaginal tissue. (Pelvipharm, internal data).

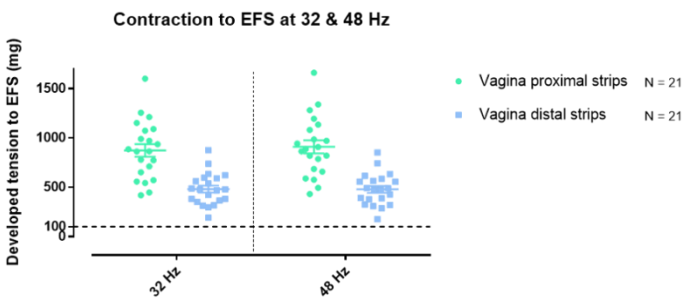

Figure 2: Results of contraction to EFS at 32 & 48 Hz on rat proximal and distal vaginal strips. (Pelvipharm, internal data).

Endpoints

- Evaluation of the capacity of a drug to inhibit human or rat myometrium smooth muscle contractions.
- Determination of potency **(EC50)** and efficiency **(Emax)** of a drug.
- Determination of the affinity **(pA2)** of a drug for a human or rat vagina receptor.

NB: Pelvipharm will gladly study the feasibility to fit this experimental model to its client's needs.