



# Human isolated tissues

## Pathologies of interest

- Overactive bladder (OAB)
- Neurogenic bladder
- Benign prostatic hyperplasia

## Evaluated parameters

- Evaluation of *ex-vivo* contraction or relaxation of tissues in physiological or pathological conditions
- Myogenic or neurogenic protocol:
  - myogenic contraction is chemically- or physically- induced via a direct stimulation of the smooth muscle
  - neurogenic contraction is the resultant of an indirect contraction of the smooth muscle by neurotransmitters release under electrical field stimulation of nerve endings
- Construction of concentration response curves for determination of potency ( $EC_{50}$ ), efficacy ( $E_{max}$ ) or affinity ( $pA_2$ )

## Regulatories

- Complies with bioethical French and European legislations
- Partnerships with French hospitals
- Serological controls (HIV1&2; HTLV1&2; HBV; HCV)

## Tissue collection

- Urinary bladder (detrusor): control or neurogenic
- Prostate: control or benign prostatic hyperplasia
- Urethra
- Ureter
- Others upon request

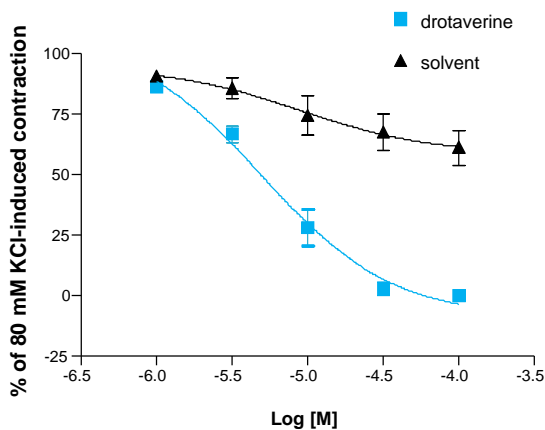
## References

- Rouget *et al.*, *Pharmacol Res* 80: 14-20, 2014
- Palea *et al.*, *Br J Pharmacol* 168: 618-631, 2013
- Rekik *et al.*, *Eur J Pharmacol* 650: 403-410, 2011

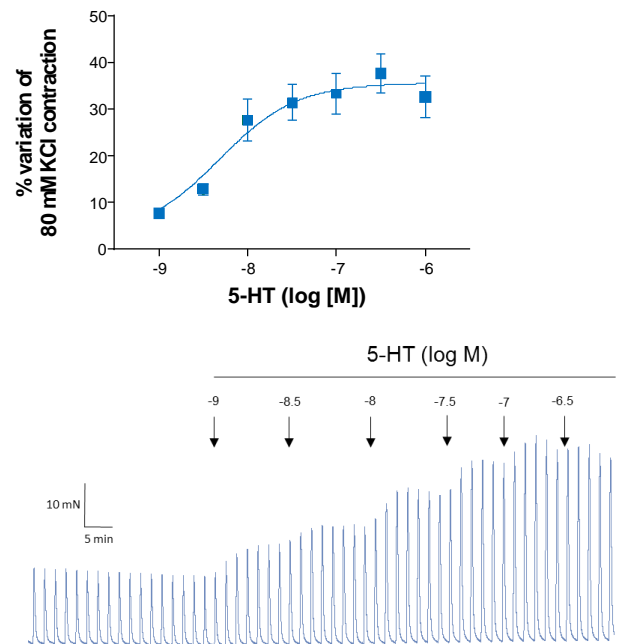
5 mL-organ baths apparatus for *ex vivo* functional studies on isolated tissues



Concentration-response curves to a phosphodiesterase 4 inhibitor (drotaverine) and its solvent on the plateau of contraction induced by 80 mM KCl in human ureter rings



Effects of increasing concentrations of serotonin (5-HT) on electrical field stimulation-induced contractions of human isolated urinary bladder and corresponding representative recording



Human prostatic adenoma: antagonism of norepinephrine-induced contraction by alfuzosin, an  $\alpha_1$ -adrenoceptor antagonist

