



PROSTATE

FUNCTIONAL PHARMACOLOGY ASSAYS

PATHOLOGIES OF INTEREST

- Benign Prostatic Hyperplasia (BPH)

SPECIES

- Human and animal (rat, mouse, guinea-pig, rabbit, dog, others upon request)

TISSUES

- Prostatic tissues

FUNCTIONAL RECEPTORS / ENZYMES

- Adrenoceptors (α_1)
- 5 α -reductase
- Endothelin receptors
- Phosphodiesterases
- Nitric oxide (NO) pathway

MODEL DESCRIPTION

Human prostate is obtained from patients undergoing prostate surgery due to BPH or from patients undergoing cystoprostatectomy due to bladder carcinoma.

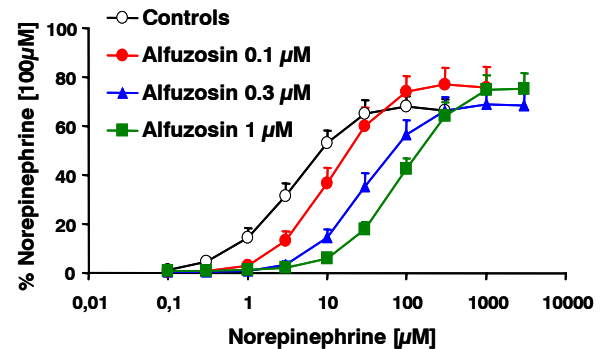
The prostatic tissue is cut into small strips and mounted under 1 g initial tension, in 5 ml organ baths containing oxygenated Krebs-Henseleit solution.

Contractile responses are measured using isometric tension transducers and recorded using a data acquisition system. A reference contraction to 30 μ M norepinephrine is performed on each strip.

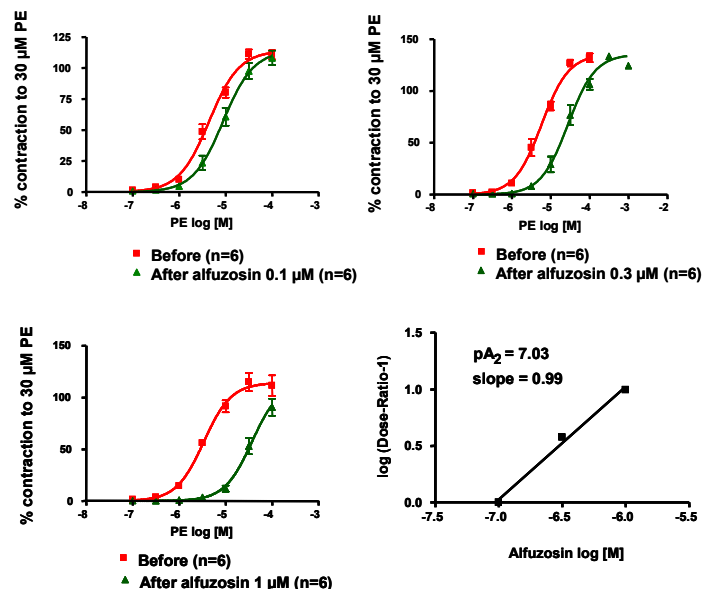
Following norepinephrine washout, cumulative concentrations of test substance are applied to obtain a concentration-response curve (CRC).

SCIENTIFIC PUBLICATIONS

- Quinton L et al, *BJP* 2009, in press
- Palea S et al, *J Urol* **179** (4,sup): 1324, 2008
- Palea S. et al, *J Cataract Refract Surg* **34** : 489-96, 2008



Human prostatic adenoma: antagonism of norepinephrine-induced contraction by alfuzosin, an α_1 -adrenoceptor antagonist.



Effects of alfuzosin on contractions induced by phenylephrine in rabbit isolated prostate.