



# Simultaneous recording of intraurethral and intravesical pressures

## A MODEL FOR STRESS OR MIXED URINARY INCONTINENCE

### Model

Simultaneous recording of intravesical and intraurethral pressures in anesthetized animals.

### Interest

- This model is suitable for evaluating the effects of compounds on urethral and intravesical pressures and to assess urethra and bladder coordination.
- Compounds having an effect in this model include  $\alpha$ -adrenoceptor agonists, monoamine re-uptake inhibitors and PDE inhibitors.

### Species

- Rat
- Guinea-pig

### Model Description

- In anesthetized animals, intravesical and urethral pressures are simultaneously recorded after bladder and urethral catheters implantations.
- Test compounds are administered via various routes (i.v., p.o., i.g., s.c. or i.p.) and parameters are measured for up to two hours post-administration.

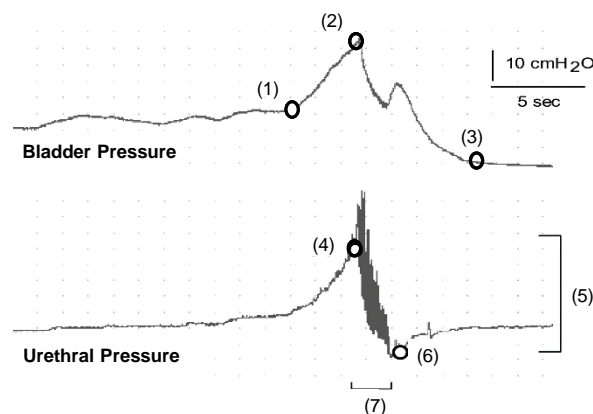
### Parameters evaluated

- Maximum urethral pressure
- Urethral basal pressure
- Urethral relaxation during micturition
- Micturition pressure
- Micturition volume
- Basal intravesical pressure and threshold pressure for micturition

### Scientific publications

- Lluel P *et al.*, Am. J. Physiol. 284: R1287-95, 2003
- Kakizaki H and De Groat WC, J. Urol. 158: 1562-7, 1997
- Jung SY *et al.*, J. Urol. 162: 204-12, 1999
- Wibberley A *et al.*, Br. J. Pharmacol. 136: 399-414, 2002

### Simultaneous measurement of urethral and bladder pressure in anesthetized male rat.



Circles illustrate points at which different cystomanometric parameters are calculated: threshold pressure [1], micturition pressure [2], basal pressure [3], maximal urethral pressure [4], amplitude of urethral relaxation [5], basal urethral pressure [6], and duration of urethral relaxation [7].