



PROSTATIC ENLARGEMENT AND INFLAMMATION

A MODEL FOR BENIGN PROSTATIC HYPERPLASIA (BPH) AND PROSTATITIS

MODEL

Prostate hyperplasia is induced by hyperprolactinemia.

Prostatic enlargement is produced exclusively in the lateral lobe of the rat prostate. This lobe is considered to be homologous to the transitional zone where human benign prostatic hyperplasia (BPH) occurs.

Inflammation of intraprostatic glands is also observed in analogy with humans.

SPECIES

Rat

INTEREST

- This model is suitable for testing compounds for the treatment of BPH.
- The 5 α -reductase inhibitor finasteride and the extract from *Serenoa Repens*, Permixon® are active in this model and can be used as reference substances.

DESCRIPTION MODEL

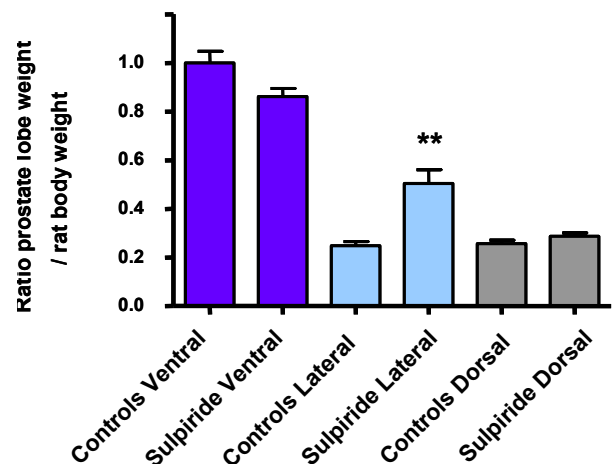
- Hyperprolactinemia is induced by a 30 day administration of sulpiride at 40 mg/kg i.p.
- Test compounds can be administered daily by gavage or subcutaneously through osmotic pumps simultaneously with sulpiride treatment.

PARAMETERS EVALUATED

- Body weight throughout the experiment
- Weight of lateral (LP), dorsal and ventral prostate lobes
- Ratio of LP weight / body weight
- Histomorphometric analysis
- Apoptosis (TUNEL)
- Proliferation (PCNA)
- Myeloperoxidase activity

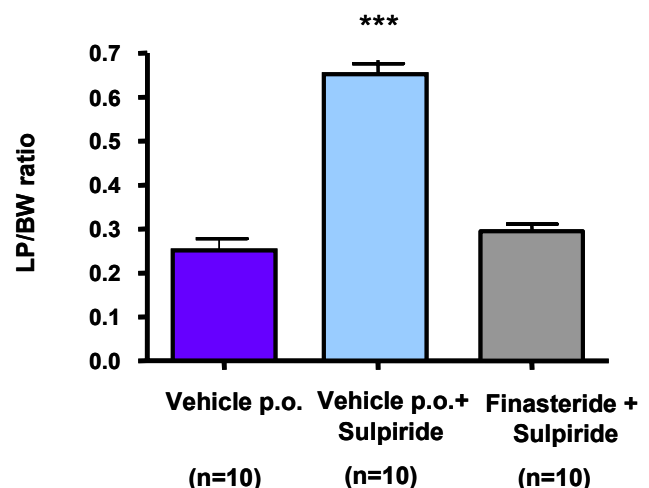
SCIENTIFIC PUBLICATIONS

- Price D, *Natl Inst Cancer Monograf* **12**: 351-69, 1963
- Van Coppenolle F et al, *Prostate* **43**: 49-58, 2000



** P < 0.001 by Mann-Whitney test

Effect of sulpiride on ventral, lateral and dorsal sections of rat prostate.



*** P < 0.001 vs vehicle by Student t-test

Effect of finasteride on the increase of lateral lobe weight induced by sulpiride treatment in the rat.