CATSPER is a family of sperm-specific calcium channels activated by P in human spermatozoa, and indicated as putative P sperm receptors (Strunker et al, 2011; Lishko et al, 2011). KO mice for CATSPER channels are infertile due to severe defects in sperm motility. The aim of this study is to investigate the occurrence of CATSPER-1 in human sperm and whether these channel is involved in human sperm motility and P-stimulated acrosome reaction (AR).

**Fluorescence Microscopy**

By immunofluorescence we observed that channels are mainly located in the principal piece of the tail.

**Western Blot**

Western blot analysis demonstrated the presence of 2 major bands corresponding to CATSPER 1 and CATSPER 3-4.

**ROLE OF CATSPER CHANNELS IN HUMAN SPERM MOTILITY**

To investigate the role of CATSPER channels in human sperm motility, we evaluated the effects of the specific inhibitor NNCS5-0396 (10 µM) and the non specific inhibitor mibebradil (30 µM) on sperm morphology.

**C.A.S.A.**

**Flow Cytometry**

By flow cytometry higher levels of CATSPER were found for sperm populations than for unselected (p<0.003).

**ROLE OF CATSPER CHANNELS IN P-STIMULATED AR**

We evaluated the effect of mibebradil (M) and NNCS5-0396 (N) on P (10 µM)-stimulated AR in sperm morphology.

**REFERENCES**