

## **Effects of Celecoxib as Cox Inhibitor on Semen Characteristics and Development of IVM/ IVF Embryos in Pig**

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To investigate the effect of celecoxib as cox inhibitor in *in vitro* porcine embryos and boar semen. The analysis of semen quality were evaluated the motility, viability, membrane integrity and abnormality of the boar semen treated with celecoxib (1~100uM). The semen of each treated group was incubated for 3, 6 and 9h at 37°C in CO<sub>2</sub> incubator, respectively. Porcine embryos derived from *in vitro* maturation / *in vitro* fertilization were cultured in 5% CO<sub>2</sub> and 5% O<sub>2</sub> in PZM-3 medium at 37°C. When PZM-3 medium was supplemented celecoxib (0, 1, 10 and 100 uM) at 48 hrs for *in vitro* culture.

The sperm characteristics (motility, viability and membrane integrity) were not differ 1 and 10 uM celecoxib groups when compared to control group, but 100 uM celecoxib group was significantly decreased compared to any other groups. Also, the proportion of embryo developing beyond morula stage in PZM-3 medium treated with 100 uM celecoxib group was significantly decreased compared to control group.

These results indicate that celecoxib has a toxic effects as cox inhibitor when *in vitro* storage semen and IVM/ IVF embryos in pig.

*Key word) Celecoxib, Cox inhibitor, Sperm characteristics, Embryo, Pig*