as bronchial lavages for reliable tuberculosis diagnostic require safe immobilization and anesthesia protocols in rhinos. In the past we mainly used etorphine in combination with detomedine and butorphanol (Walzer at al. 2002). Due to negative side effect known for etorphine (e.g. V/Q mismatch with the result of hypoxemia, we especially noticed in Sumatran rhinos) and because of safety and legal aspects (e.g. prohibition to import opioids into Asian countries) we developed a safe and effective etorphine free anesthesia protocol for different rhino species and optimized dosages regarding species-specific potency (e.g. Indian rhino > White rhino > Black rhino) and regarding procedure-specific level of anesthesia needed (e.g. transrectal ultrasound < artificial insemination < OPU). The author will describe the specific anesthesia protocol (I. premedication/standing sedation: injection via dart or by hand i.m. of combination of detomidine, butorphanol, midazolam and ketamine; II. drop dose/bolus: ketamine i.v.; III. maintenance: quad-drip i.v., CRI) and will demonstrate its use by means of elected procedures.

First results of oocyte maturation and In-Vitro-Fertilisation (IVF) in Sumatran and northern white rhinoceroses

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Over the last two years a total of seven ovum-pick-up (OPU) procedures were performed in two Sumatran rhinoceroses (SR*, Dicerorhinus sumatrensis*) housed at the field research station in Tabin, Sabah, Malaysia. Parallel, eight OPUs were performed in six southern white rhinoceroses (SWR, *Ceratotherium simum simum*) housed in different European zoos. In SR a total of 12 oocytes were harvested and three developed into metaphase 2 stage during incubation in a modified horse media. None of these three oocytes developed into an embryo after In-Vitro-Fertilisation by intracytoplasmatic sperm injection (ICSI). In SWR a total of 17 oocytes were harvested, three entered the metaphase 2 stage and ICSI was performed. Two of the 17 harvest SWR oocytes developed under similar In-Vitro conditions used in SR into an early embryo. Both stopped at 5-cell-stage. Based on these first results there is a clear indication that both maturation and fertilization protocols need to be improved for SR and SWR. New In-Vitro approaches will be discussed.