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POSTER PRESENTATION

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# Impact of short term HAART initiated during the acute or chronic stage on SIV infection of the male genital tract

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## Background

We previously evidenced the infection of human and macaque semen-producing organs by HIV-1 and SIV (Le Tortorec et al, Plos One, 2008; Le Tortorec et al, *Retrovirology*, 2008; Roulet et al, *Am J Pathol*, 2006). The male genital tract (MGT) is suspected to constitute a viral reservoir since persistent HIV shedding is found in the semen of a subset of HIV infected individuals under effective HAART (undetectable viremia). Using a macaque model, we investigated the impact of short term HAART initiated during the acute or chronic stages, on SIV infection of the MGT.

## Methods

Adult male *Cynomolgus* macaques were treated with AZT/3TC/IDV for 2-4 weeks at 4 h and 21 weeks post-intravenous inoculation (p.i.) of SIV<sub>MAC251</sub>. The presence of SIV in the testis, epididymis, prostate and seminal vesicles was analyzed at the end of the treatment period by nested PCR for SIV gag DNA and *in situ* hybridization for SIV gag RNA.

## Results

HAART initiated 4 h post-infection prevents the peak of plasma viral load (PVL) and leads to a significant decrease of the virus dissemination in MGT tissues. In macaques treated during the chronic stage, the frequency of viral DNA detection in MGT tissues is on average similar to that of placebo animals, with the exception of 2 animals with an undetectable PVL, in whom a decrease of viral DNA detection is observed in all MGT organs, but to a

lesser extent in the testis. In all animals including those with undetectable viremia, SIV RNA+ cells are still detected in the MGT organs following HAART.

## Discussion

Short term HAART initiated post exposure dramatically reduces SIV dissemination in the MGT. Although efficient short term HAART initiated during the chronic stage decreases the level of infection of the MGT, SIV RNA+ cells can still be detected within the tissues. Whether prolonged HAART can eradicate SIV from the MGT will next be investigated.

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