

Poster presentation

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## P02-09. Dissecting the interference of endotoxins with HIV infection of primary CD4 T cell

A Krarup\*, P Rusert and A Trkola

Address: Institute of Medical Virology, University of Zurich, Zurich, Switzerland

\* Corresponding author

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### Background

Elevated plasma endotoxin levels are considered as indicator of microbial translocation from the gut, and as a potential cause of the systemic immune activation observed in chronic HIV infection. Lipopolysaccharide (LPS) effects on lymphocytes and macrophages have been described to involve amongst other effects, downregulation of CD4 and CCR5 and induction of CCL3/MIP-1 $\alpha$  and CCL4/MIP-1 $\beta$  secretion. This alteration in receptor expression could potentially reduce HIV entry and may thus pose a problem for assessing plasma antibody neutralization in patient samples.

### Methods

In the present study we evaluated the influence of LPS on primary CD4 T cells cultivated under various in vitro conditions. CD8-depleted PBMC and unseparated PBMC were subjected to LPS from four different bacterial strains (*E. coli* 0127:B8, *E. coli* 0127:B8, *P. aeruginosa* and *S. enterica* serotype *enteritidis*). CD4 and coreceptor levels were measured at various time points after treatment and the infectability of the different cells compared using envelope pseudotyped reporter virus.

### Results

We observed no inhibitory influence of LPS on the infectivity of PBMC by HIV env pseudotyped and MuLV env pseudotyped virus over the entire range of LPS probed (1–1000 pg/ml LPS). Equally, we observed no shifts in the inhibitory capacity of neutralizing antibodies regardless whether cells were pretreated with LPS, or upon simulta-

neous addition of LPS. Equally unaffected by LPS were TZM-bl cells.

### Conclusion

Our data indicate that HIV pseudotype infection and neutralization assays on PBMC and TZM-bl cells are not affected by trace sources of LPS. Plasma endotoxin at levels reported in HIV infection will thus not interfere with detection of neutralizing antibody activity in patient sera.