

## Maja Sommerfelt, Bionor Pharma - Vacc-4x and Vacc-C5: Two peptide-based therapeutic HIV vaccine candidates

Grand Ballroom V16:00 - 16:20

Immune-based interventions for HIV-1 infection need to achieve both the induction of effective anti-viral responses as well as a reduction in HIV-associated hyperactivation of the immune system.

Vacc-4x is a peptide-based therapeutic vaccine designed to induce cytotoxic T-cell-based killing of HIV-infected cells. Vacc-4x has recently completed a large phase II study in Europe and the USA enrolling 135 subjects ([www.clinicaltrials.gov](http://www.clinicaltrials.gov) identifier NCT00659789). Vacc-4x Subjects that achieved a 6 month ART-free period showed a statistically significant reduction in viral load set point (64%) compared to placebo subjects that were similarly ART-free for 6 months ( $p=0.04$ ). Immunological data suggest that in contrast to placebo, the quality of immune responses in subjects that received Vacc-4x influenced viral load in a manner that was independent of human leukocyte antigen (HLA) status.

Vacc-C5 is a peptide-based therapeutic vaccine candidate designed to induce non-neutralizing antibodies to the 5th constant domain (C5) on the HIV-1 envelope glycoprotein gp120. This product is currently being evaluated in a phase I clinical study ([www.clinicaltrials.gov](http://www.clinicaltrials.gov) identifier NCT01627678). Recent results from analysis of serum samples from a number of different cohorts of treatment naïve subjects in Norway and the United States support previous observations that the presence of anti-C5 antibodies is associated with low/moderate viral load in natural viral suppressor subjects whereas anti-C5 antibody levels are significantly reduced in subjects with elevated viral load that show disease progression.

Vacc-4x and Vacc-C5 are being considered for use in combination as a therapeutic vaccine and ultimately as a preventive vaccine.