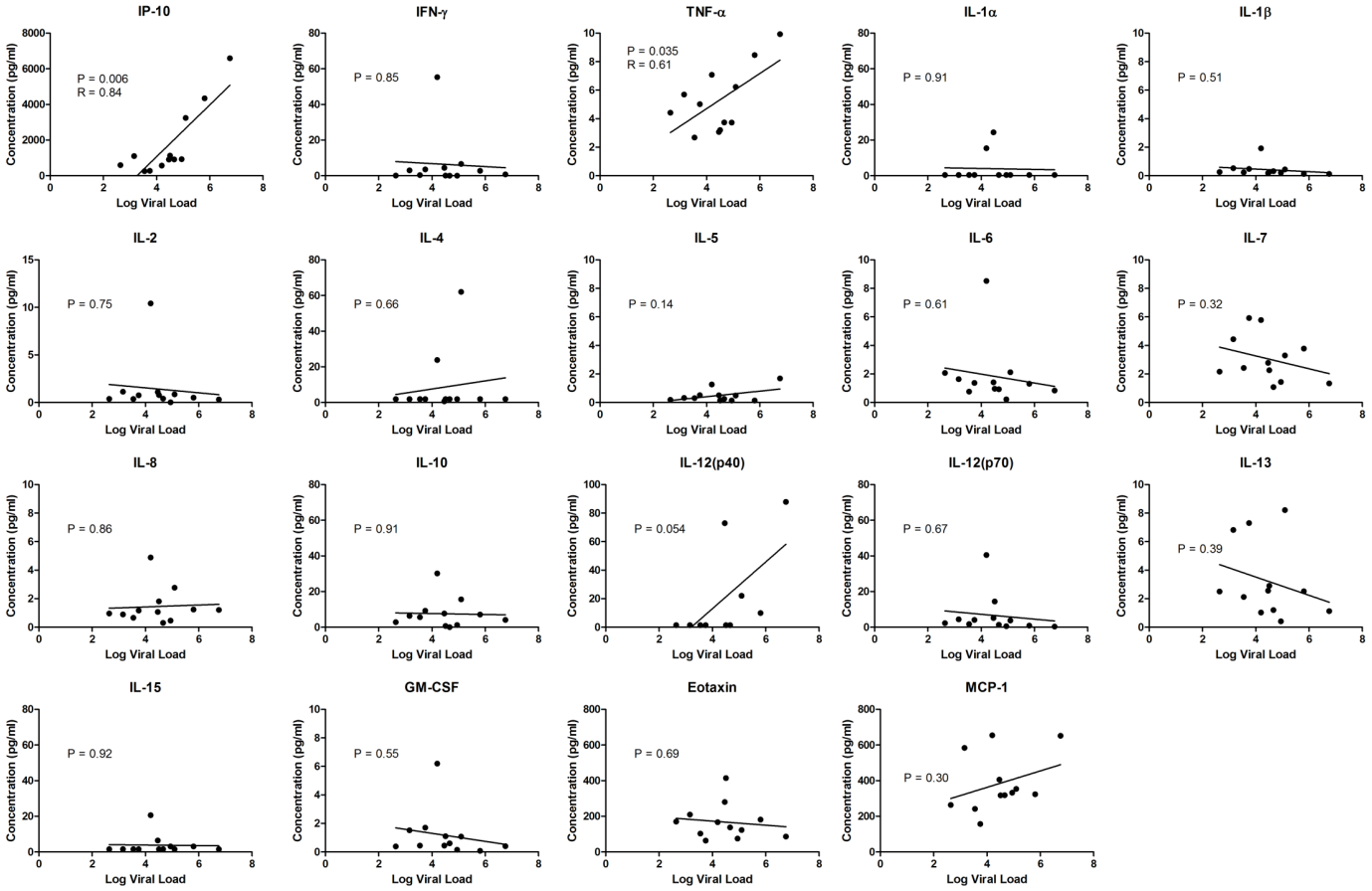
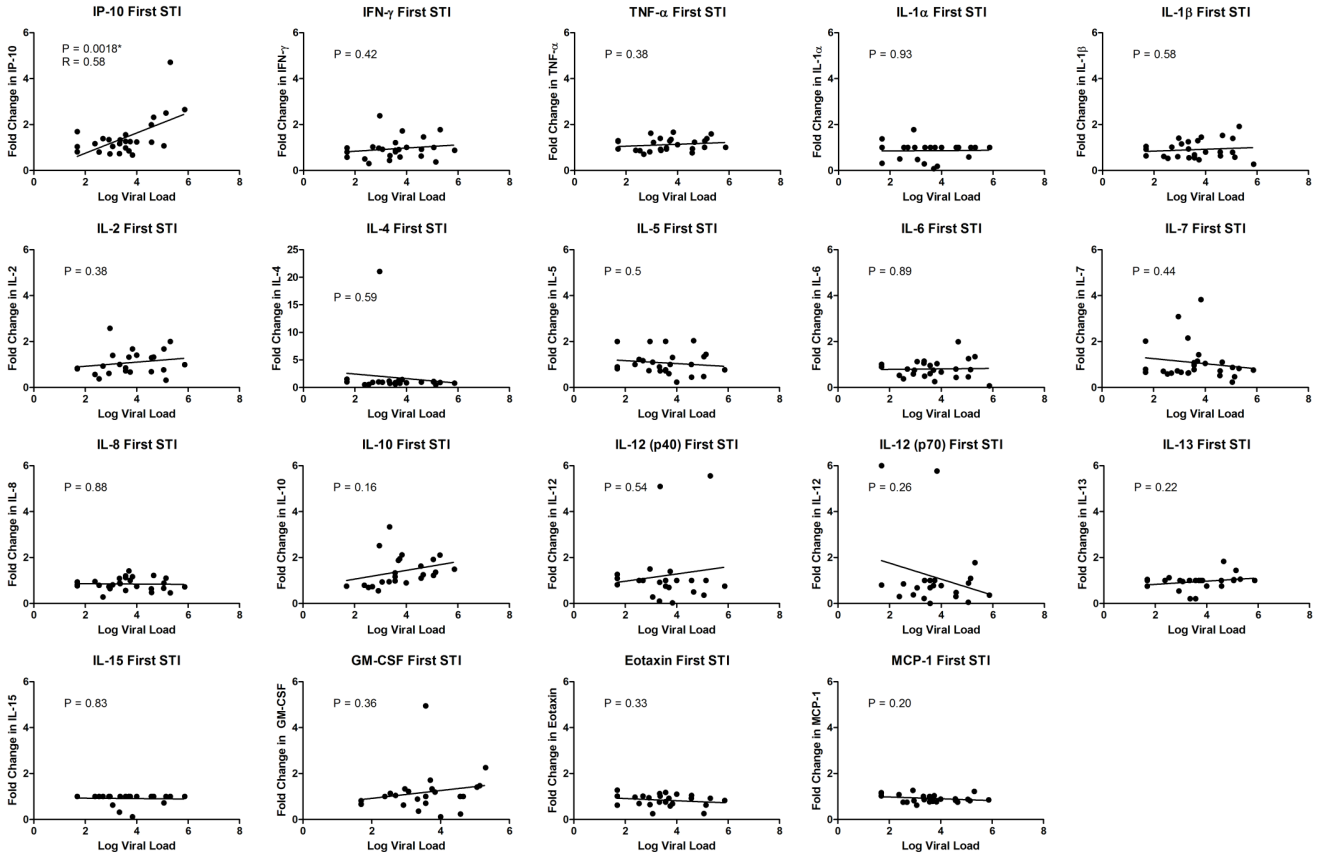
Supplemental Figure 1A

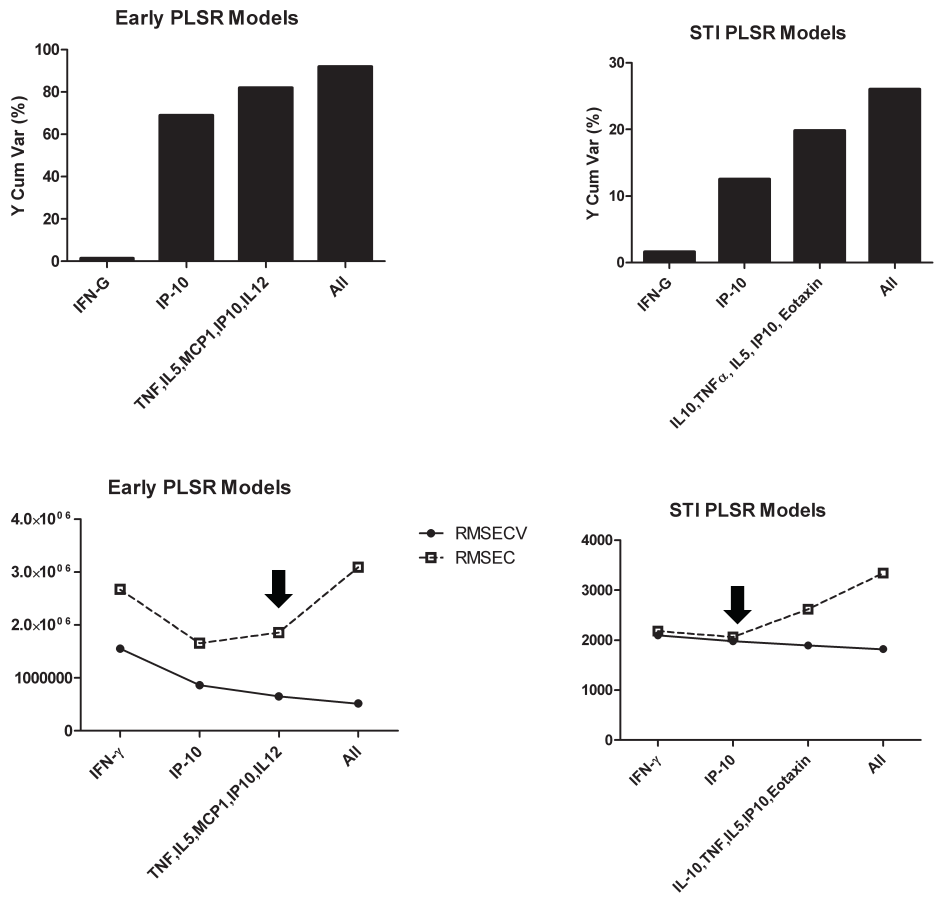


Supplemental Figure 1B



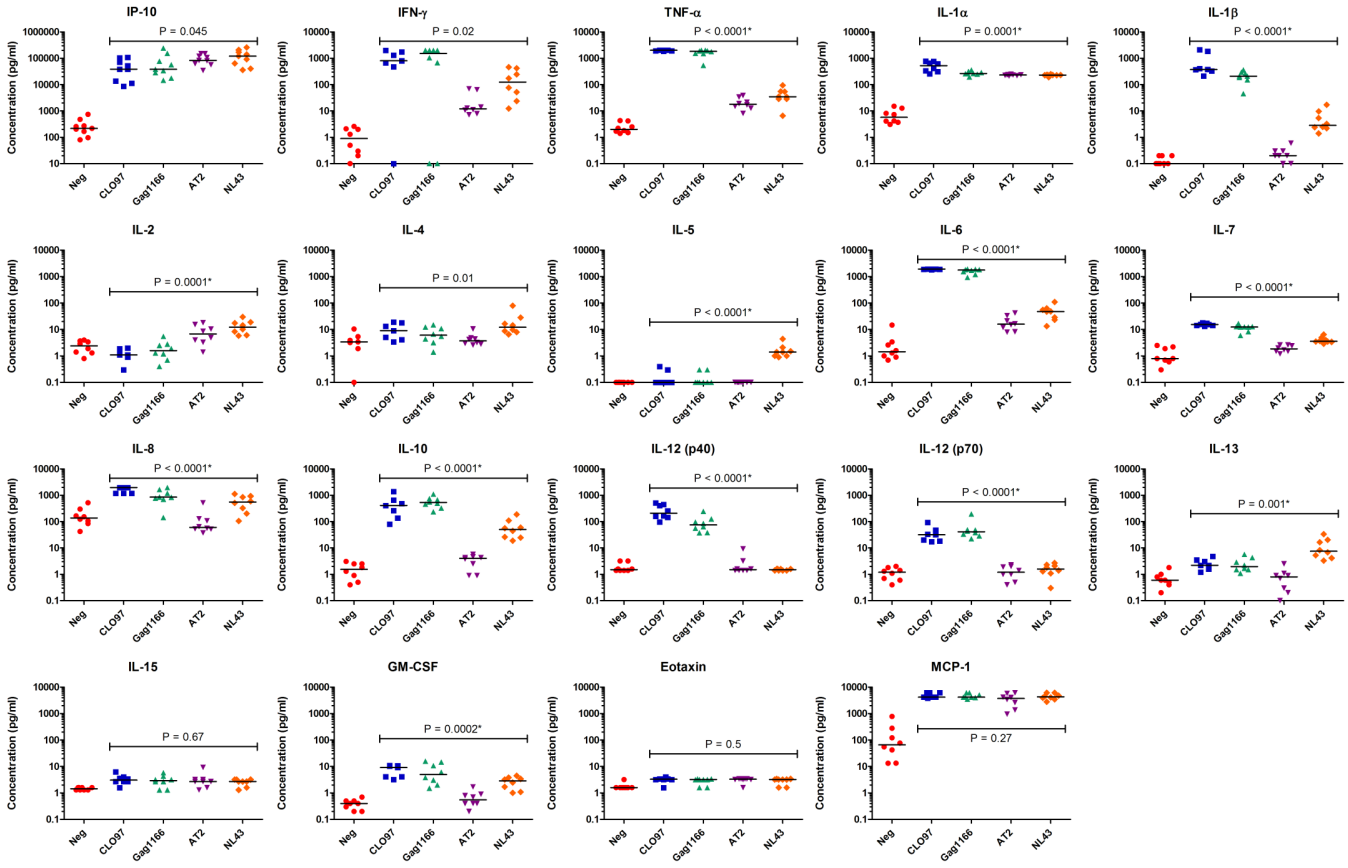
Supplemental Figure 1: Relationship between plasma cytokine and chemokine levels and viral load. A) Relationship between plasma cytokine and chemokine levels and viral load in early HIV-1 infection. The relationship between cytokine or chemokine level and log viral load was determined by linear regression for each analyte. P values were considered significant if less than 0.0026 using a Bonferroni correction for multiple comparisons. B) Relationship between plasma cytokine and chemokine levels and viral load following the first structured treatment interruption (STI). The relationship between fold change in cytokine or chemokine level following the first treatment interruption and log viral load was determined by linear regression for each analyte.

Supplemental Figure 2



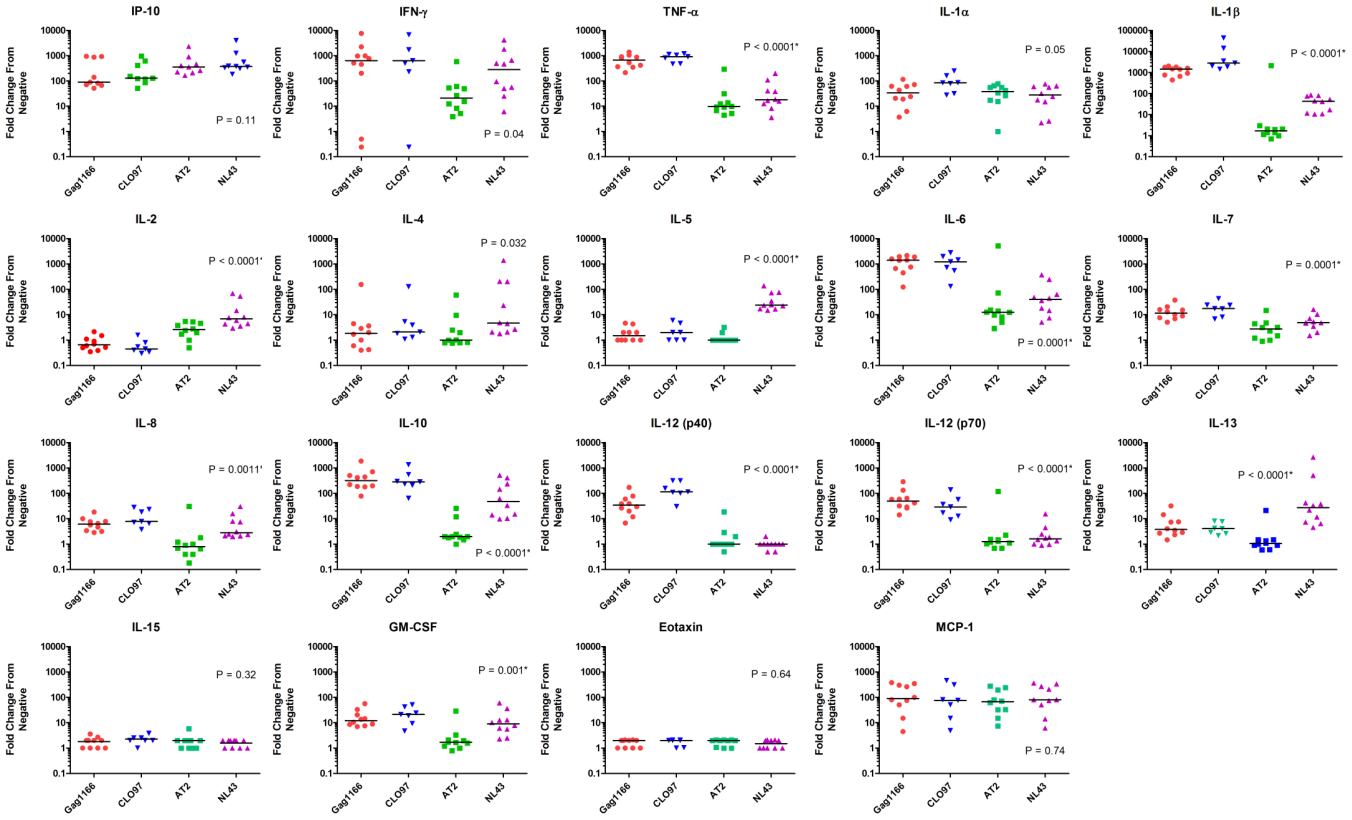
Supplemental Figure 2: PLSR model validation comparing individual cytokines with the full model. Using the early infection data (left panel) and the STI data (right panel) additional PLSR models were generated for individual cytokines (IFN-γ, IP-10), the cytokines with the highest VIP scores, or the full model. The best model is one that best fits the existing data (lowest RMSEC and high Y cum variance captured), but would also perform well on unknown data (lowest RMSECV). In the case of the early HIV data, a model with only VIP cytokines (TNFα, IP-10, IL-5, MCP-1, IL-12) has the lowest combined RMSEC and RMSECV. In the STI data a model with only IP-10 has the best combined RMSEC and RMSECV (indicated by black arrows). Neither model would be sufficient to predict viral load precisely given plasma cytokine measurements (especially in the case of the STI data), but still give new insight into multivariate relationships between cytokines and viral load.

Supplemental Figure 3



Supplemental Figure 3: Cell culture supernatant cytokine and chemokine concentrations in response to TLR 7/8 ligands and HIV-1. PBMCs from HIV-1-negative people were incubated with TLR 7/8 ligands or HIV-1 (AT-2 HIV-1 or HIV-1_{NL43}). The TLR ligands were CL097 and an HIV-1-encoded single stranded RNA, $ssRNA_{Gag1166}$. The stated p values exclude the control samples and were calculated using Kruskal-Wallis test for non-parametric data. P values were considered significant (*) if less than 0.0026 using a Bonferroni correction for multiple comparisons.

Supplemental Figure 4



Supplemental Figure 4: Fold change in cell culture supernatant cytokine and chemokine levels compared to negative in response to TLR 7/8 ligands and HIV-1. The stated p values were calculated using Kruskal-Wallis test for non-parametric data. P values were considered significant (*) if less than 0.0026 using a Bonferroni correction for multiple comparisons.