**Research Title:** A Decrease in Albumin in Early SIV Infection Is Related to Viral Pathogenicity

A decrease in circulating albumin levels after sero conversion has been reported as a predictor of disease progression in HIV-infected adults. We hypothesized that a similar decrease would be seen in pig-tailed macaques in early SIV infection, and that the degree of this decrease would be related to the pathogenicity of the infecting viral strain. Ten juvenile pig-tailed macaques were previously inoculated with virus derived from molecular clones representing different stages of infection: early (SIVMneCL8, n=2), intermediate (SIVMne35wkSU, n=2), late blood (SIVMne170, n=3), or late lymph node (SIVMne027, n=3). Albumin was measured in stored samples. Changes from baseline were evaluated by paired sample t tests and by linear regression with generalized estimating equations (GEE). Albumin levels decreased in the week after SIV inoculation (p<0.02), increased above baseline at week 5, then fell, returning below baseline by week 16 (p<0.03). In GEE modeling, albumin decreased significantly in both early and chronic infection (weeks 0–3, p<0.001; weeks 5–16, p<0.004) and this change differed significantly between infections caused by late versus early or intermediate virus variants (weeks 0–3, p<0.002; weeks 5–16, p<0.001). A decrease in albumin levels occurs in both early and chronic SIV infection, and is more marked in macaques infected with more pathogenic virus variants. These results suggest that both early and late events in SIV pathogenesis are influenced by properties of the infecting viral strain.

**Reference**

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