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Antibody Correlates of Vaccine Induced Protection Against Ebola Virus Infection in Nonhuman Primates

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Poster Presentation P27

**ANTIBODY CORRELATES OF VACCINE INDUCED PROTECTION AGAINST
EBOLA VIRUS INFECTION IN NONHUMAN PRIMATES**

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The Ebola virus is a single-stranded RNA virus that causes Ebola hemorrhagic fever. A vaccine candidate for the Ebola virus was developed in the lab of Dr. Nancy J. Sullivan at the National Institutes of Health using the wild-type Ebola surface glycoprotein (GP). However, due to concerns with in vitro cytotoxicity, a point mutant (PM) version of the GP vaccine was created. However, the PM GP vaccine lost a correlate of survival in the process; the IgG concentration in the blood serum of immunized non-human primates was no longer correlated with survival. We hypothesized that antibody avidity, a qualitative property, correlates with survival when ELISA IgG titers do not discern meaningful differences. We tested this hypothesis by measuring the avidity in sera from vaccinated macaques with a modified ELISA that compares antibody binding in the presence of urea. The avidity values measured did not provide a significant correlate of survival.