Case Study #2
Genetic Immunization in Chickens

**Goal:** Generate antibodies to a transmembrane protein target

Problem: Require antibodies to full length protein in native confirmation. Recombinant protein not available.

Materials Avail: DNA expression vector, Antigen expressing Virus Like Proteins (VLP), Null VLP

Strategy: Chickens were immunized using 3 different protocols:
1) DNA Prime (Intradermal-tattoo) with 2x VLP boosts (IM)
2) 4x DNA (Intradermal-tattoo)
3) 3x DNA with final VLP boost (IM)

Chicken sera was screen via ELISA against antigen expressing VLP and null VLP. Data is represented as the ratio of signal from the antigen-VLP over the null-VLP
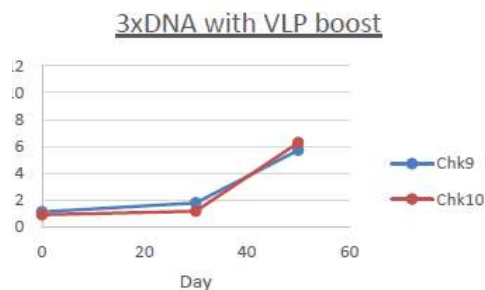
DNA Prime with VLP boosts
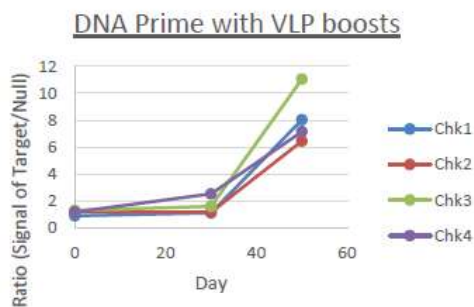
DNA Only
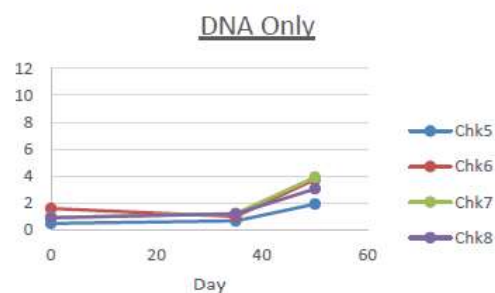
3xDNA with VLP boost

Results:
All conditions tested resulted in higher antibody titers against the antigen-VLP as compared to the null-VLP.

Protocols including VLP boosts resulted in higher ratios and increased antigen-specific antibody titers.