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Objective 2. Investigate the multifactorial etiology involving poultry respiratory diseases.

- Timeline
 - Funding awarded: April 1, 2015
 - IBC approval August 19, 2015
 - AUP approved September 3, 2015
 - 1st Bird study planned to start November or December 2015



Development and longevity of protective immunity elicited by the combinations of live attenuated NDV, IBV, ILTV vaccines in pullets and the effect of these vaccines in pullets co-infected with other respiratory pathogens

Mark W. Jackwood, Mary Pantin-Jackwood, Naola Ferguson-Noel, Maricarmen Garcia

- Conduct the development and longevity of immunity experiment using a typical pullet vaccination program for respiratory diseases
- Examine the effect of modified live respiratory vaccines given simultaneously or sequentially on development of immunity in pullets
- Study the effect of co-infection with pathogenic respiratory viruses and avian mycoplasma on development of local immunity and the longevity of protection.
- These data will provide important information on the interactions between different vaccines and their effect on development of immunity and protection in pullets. This information can be used to design vaccine programs that give sound protection against respiratory disease in long-lived birds and provide practical information on the outcome of vaccination in the presence of upper-respiratory disease pathogens.



Evaluate the effects of air quality on the onset (infection), transmission and severity of respiratory disease caused by IBV as a model. Mark W. Jackwood and Brian J. Jordan

- Evaluate the effects of air quality on ciliostasis and the onset of immunity to IBV.
- Examine the effects of air quality on protection from challenge and transmission of challenge viruses to susceptible hosts.
- Examine the effect of air quality on the severity and longevity of disease.
- The data obtained from this study will provide important information on the effect of poultry house air quality on vaccine efficacy for upper-respiratory disease pathogens. The information obtained will be used to maintain air quality that optimizes respiratory disease control measures.

