

# Avian Influenza Virus in chickens



- Highly pathogenic avian Influenza (HPAI) is a notifiable disease (BSL-3)
- Birds are the natural host of infection, but humans can get infected due to zoonotic potential
- Chicken models Avian Influenza
  - Vaccination / Challenge
  - Transmission
  - Pathogenesis / host responses
- Models in other birds (e.g. ducks)

# Study design:

## Avian Influenza Virus in chickens



- Broilers and layers of different ages
- Several groups, large numbers of birds
- Intranasal / intratracheal challenge
- Different vaccination routes
- Several HPAI or LPAI (field) isolates available
  - H<sub>7</sub>N<sub>1</sub>, H<sub>5</sub>N<sub>1</sub>, H<sub>1</sub>N<sub>1</sub>, H<sub>7</sub>N<sub>7</sub> etc.
  - Genetically modified viruses (reverse genetics)
- Clinical observations
  - Body weight

# Parameters:

## Avian Influenza Virus in chickens

- Virology
  - Virus quantification
  - Virus neutralisation test
- Immunology
  - Serology
  - Innate immunity
  - Cell mediated immunity
- Pathology
  - Gross pathology
  - Immuno-histochemistry
- Analysis of host responses

