



INTRODUCING VIRAL INFECTION MODELS

Triskelion tests and analyses chemical, pharmaceutical and biotechnology products, guaranteeing the safety and quality of the products we use every day. Triskelion ensures that we don't have to worry and that we can live safe and better lives.

PHARMA

ACUTE AND CHRONIC VIRAL INFECTIONS POSE AN ENORMOUS BURDEN ON BOTH HEALTH SYSTEMS AND THE ECONOMY. THE ANTIGENIC DRIFT OF VIRUSES, RESULTING IN EVASION OF THE IMMUNE SYSTEM, MAKES IT CHALLENGING TO DESIGN NEW ANTIVIRALS AND VACCINES EQUIPPED TO PROVIDE (BROAD) PROTECTION FROM DISEASE. TOGETHER WITH EMERGING AND RE-EMERGING VIRUSES THAT POSE A CONSTANT THREAT OF EPIDEMIC OUTBREAKS, CONTINUOUS DEVELOPMENT OF NEW PROPHYLACTIC AND THERAPEUTIC TREATMENTS IS ESSENTIAL.

Triskelion is equipped with biosafety level (BSL) 2 and 3 facilities, allowing research with a wide range of viruses, including influenza virus and hepatitis B. Viral infections and vaccine safety represent a prominent research field within Triskelion and we offer tailor-made viral infection models, including supportive in vitro analysis that specifically addresses your needs.

Hepatitis B model

Chronic viral infections continue to pose a great burden on society. Triskelion has experience with an adenoviral vector-based hepatitis B model, allowing evaluation of treatment with antivirals and immune modulators.

This model offers:

- A therapeutic window in HBV viremia
- Phenotypic analysis of blood cells
- Detection of antigen-specific cells
- Viral load in blood and liver
- Liver histopathology
- Immunohistochemistry

Influenza virus model

Triskelion aims to be your one-stop-source for pre-clinical testing of vaccines and antivirals against influenza virus. Our validated models offer the chance to evaluate the immunogenicity and efficacy of virtually any type of compound. We have ample experience with influenza A and B challenge models, including seasonal H1N1, H3N2 and B influenza virus strains and avian influenza virus strains (H5N1, H7N7 and H7N9). In addition, we can also offer ferret models for influenza and we can offer tailor made viral infection models.

Options include, but are not limited to:

- PK/PD assessment
- Toxicity
- Immunogenicity
- Efficacy



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VALIDATED INFLUENZA MOUSE CHALLENGE MODELS

AVAILABLE AT TRISKELION:

- A/PUERTO RICO/8/34 (H1N1)
- A/HONG KONG/1/68 (H3N2)

- A/HONG KONG/156/97 (H5N1)
- A/NETHERLANDS/219/03 (H7N7)
- A/ANHUI/1/2013 (H7N9)

NEW MODELS AT TRISKELION:

- INFLUENZA B STRAINS OF VICTORIA AND YAMAGATA LINEAGE
- RECENT SEASONAL INFLUENZA STRAINS

OTHER MODELS MAY BE AVAILABLE UPON REQUEST

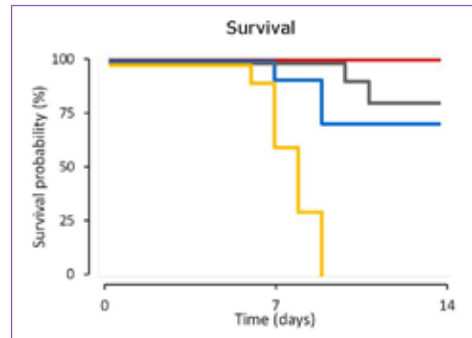


Figure 1: Survival (%) following A/PR/8/34 (H1N1) challenge. Animals were treated with vehicle (yellow), or increasing doses of oseltamivir (blue-low, gray-middle, red-high).

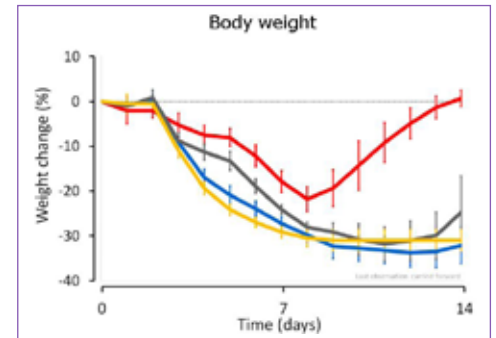


Figure 2: Decrease in body weight (%) following A/PR/8/34 (H1N1) challenge. Animals were treated with vehicle (yellow), or increasing doses of oseltamivir (blue-low, gray-middle, red-high).

Triskelion is experienced in setting up and performing influenza challenge experiments for the evaluation of a wide range of antivirals and vaccines.

Furthermore, we are experienced in producing influenza viruses in SPF eggs, which are all QC-checked for:

- Sterility
- Endotoxin
- Mycoplasma
- HA and NA sequences

Titers are determined using a 50% tissue culture infectious dose (TCID₅₀).

Standard readouts in our animal models include:

- Clinical signs
- Body weight
- Survival
- TCID₅₀ confirmation assay for challenge dose

Optional readouts include:

- Lung function
- Lung viral load
- Lung pathology
- Immunohistochemistry, including Influenza nucleoprotein (NP) staining

Several immunological readouts include:

- Multiplex bead array
- Flow cytometry
- ELISpot