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**MHV-1 in-vivo viral load reduction via antibody-conjugated photodynamic inactivation** (Invited Paper)

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Hide Abstract –

Antibody-drug conjugated (ADC) photosensitizers may effectively reduce viral titer in MHV-1 infected, susceptible A/J mice. In the intranasally infected MHV-1 murine model, animal symptoms and viral protein structures are similar in type to SARS-associated coronaviruses and provides an early testing model for treatment. Drug nebulization affords direct administration to large viral loads in respiratory organs, leading to faster localization and selective antibody binding with viral proteins. Near-infrared (NIR) irradiation permits external photoactivation for minimally invasive treatment of the respiratory system, leading to superior subject outcomes in terms of symptoms and ex-vivo determination of viral titer and host tissue histology.