Abstract ID : **95**

Generation of a human and mouse ex vivo lung culture model for translational studies on respiratory viruses

Content

Ex vivo lung culture models provide an excellent tool to investigate basic and translational research questions. Here, we have established a human lung culture model using human lung tissue from patients undergoing lung surgery and an analogous mouse *ex vivo* lung culture model to study important aspects of viral replication, pathogenesis and the cellular antiviral immune response towards influenza A virus infection. Our experimental data demonstrate that patient-derived lung tissue supports viral replication. RT-PCR analysis revealed up regulation of IFN-ß as well as antiviral ISGs upon infection. In addition, we can show that human lung tissue is susceptible to the actions of the cell culture approved inhibitor of viral replication bafilomycin. Transferring this model to mouse lung tissue will reduce animal experiments and allow us to perform translational studies in genetically modified mouse lung tissue in the future.

Choose primary session

Pathogenesis

Choose secondary Session

Innate Immunity

Contribution Type : Paper presentation