

## Australian Respiratory Council Research Support Grants 2024/2025 Funding

**Project Title:** NoV Flu-RSV: nasal vaccination for Influenza and RSV

**Researchers:** Dr Anneliese Ashhurst, The University of Sydney, Professor Warwick Britton, Centenary Institute and Professor Scott Byrne, The University of Sydney.

Influenza A virus (IAV) and Respiratory Syncytial Virus (RSV) are common respiratory infections that can cause severe disease, particularly in young children, those over the age of 60 and in Australian First Nations peoples. Most current vaccines for respiratory infections, including those for IAV and RSV, are delivered by injection. While these are an important tool to help reduce the risk of severe disease, they poorly protect the respiratory mucosa where infection first occurs and, as a result, breakthrough infections can follow. Inhaled or nasal vaccination activates superior immune responses in the upper airways, providing a better barrier against infection. However, there is a need for improved vaccine technologies suitable for user-friendly nasal delivery. Our team are developing a next-generation nasal vaccine strategy, which we have shown in models can induce complete protection from SARS-CoV-2 infection. With support from the ARC, we will test whether this platform can be adapted to also develop novel protective vaccine candidates against IAV and RSV.



Chief Investigator Dr Anneliese Ashhurst

Co-investigators: Professor Warwick Britton and Professor Scott Byrne



Supporting researchers on the project team:



Dr Erica Stewart and Skye Stockdale (PhD Scholar)