

# Development of Host-directed Therapies against Bacterial and Viral Respiratory Infection

## Project Description

Project duration:	BSc Honours
Description:	<p><b>EXPLOITING THE HOST RESPONSE TO RESPIRATORY INFECTIONS FOR NOVEL THERAPIES</b></p> <p>Our laboratory studies the host response to viral and bacterial respiratory infections with particular focus on innate immunity in the lung. We discovered that lung infections lead to the production of oxidised cholesterols, which facilitate the migration of macrophages into the lung which drives inflammation.</p> <p>We further found an oxysterol receptor antagonist significantly reduced viral loads and inflammation in animals infected with SARS-CoV-2 and resulted in less severe disease.</p> <p>This project will now investigate the molecular mechanisms underlying these observations.</p> <p>Note: The honours student will NOT work with live SARS-CoV-2 during this project and the project will be entirely PC2 laboratory based.</p>
Expected outcomes and deliverables:	As a student in our laboratory, you will gain valuable training in tissue culture techniques, immunological and molecular biological assays, and animal work.
Suitable for:	<p>We are welcoming students from diverse backgrounds and with interests in biomedical science, microbiology, virology, immunology, or related fields.</p> <p>Our projects are suitable for individuals who are high achievers and who work well within a team.</p>
Primary Supervisor:	Associate Professor Katharina Ronacher
Further info:	<p>For more information:</p> <p>Email me at: <a href="mailto:Katharina.ronacher@mater.uq.edu.au">Katharina.ronacher@mater.uq.edu.au</a></p> <p>Check out my Twitter profile: @RonacherK</p> <p>Or view my LinkedIn profile: <a href="https://au.linkedin.com/in/katharina-ronacher-6979951a">https://au.linkedin.com/in/katharina-ronacher-6979951a</a></p> <p>A list of our publications can be found here: <a href="https://www.ncbi.nlm.nih.gov/myncbi/1FAIBg6mkbVQH/bibliography/public/">https://www.ncbi.nlm.nih.gov/myncbi/1FAIBg6mkbVQH/bibliography/public/</a></p>

