Canterbury Medical Research Foundation

Final report for Project Grant 08

Grant recipient

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Grant details

GRANT TYPE	Project Grant	FUNDING ROUND	2018 Major Project Grant
GRANT REFERENCE	08	GRANT AMOUNT	$100,000

Final report

1. Report for the Scientific Assessing Committee

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CMRF Research Report_RN-compressed.pdf
299.2 KiB

2. Brief summary

Despite advances in prevention and treatment, bacterial infections remain a global public health challenge largely due to the emergence of antibiotic resistance. Thus, there is a critical need for the identification, validation and molecular understanding of new targets for antimicrobial design. To combat the development of antibiotic resistance, a recognised strategy for antimicrobial design is to target virulence factors that are essential for infection. Pathogenic bacteria rely upon scavenging nutrients from their host. This requires that the nutrients be transported across the bacterial cell membrane, a semi-permeable barrier that separates the bacterial cell from its environment. Transport is a tightly controlled process, mediated by specialised transporter proteins embedded within the membrane. We aim to unravel how a transporter protein embedded in the membrane of *Haemophilus influenzae* imports a simple sugar into the cell. *H. influenzae* is an antimicrobial resistant pathogenic bacterium responsible for a range of illnesses in Canterbury and New Zealand. An inability to import this sugar decreases *H. influenzae* virulence, but the molecular details of how this transporter works are not known. We have made significant advancements towards understanding the structure and function of this transporter at a molecular level. Such information is crucial for the future development of novel antimicrobials that target this virulence factor.

3. Photographs

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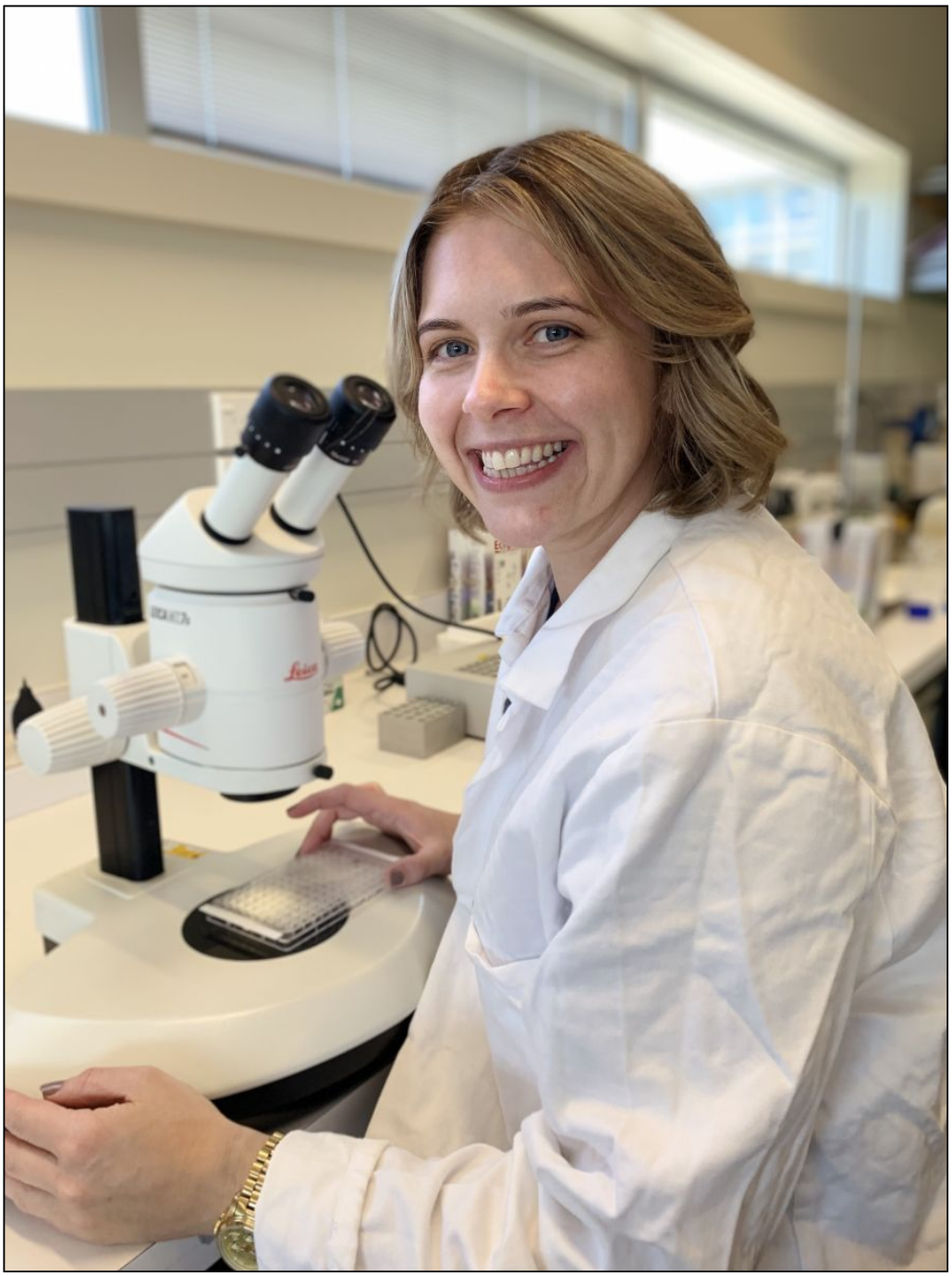
image1.jpg
1.7 MiB



5. Feedback

Publication

Date

03/02/2020