**University of Leicester**

**MRC AIM Studentship Project 2025-6 entry.**

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| **Additional Supervisor** |  |

**Section 2 – *Project Information***

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| **Project Title** | The Multifunctionality of Lipoproteins in the Multidrug-resistant Pathogen *Staphylococcus aureus* |
| **Project Summary** | |
| Are you passionate about advancing our understanding of bacterial pathogens? This project investigates the roles of bacterial lipoproteins in Staphylococcus aureus, a human pathogen linked to various infections and rising antibiotic resistance. By elucidating the interaction partners of these lipoproteins, this research will reveal mechanisms of bacterial adaptation and contribute to the development of innovative therapeutic strategies.  As part of a dynamic collaboration between the University of Leicester and University of Birmingham, you will have the opportunity to gain expertise in bacterial genetics, protein co-immunoprecipitation and transcriptomics to analyse gene expression and identify protein interactions. The insights gained will be tested in *in vitro* and *ex vivo* virulence models. These experimental approaches will be complemented by bioinformatic analysis, crucial for interpreting transcriptomic data and mapping protein interaction networks, providing deeper insights into the pathways involved in lipoprotein function.  You will have the opportunity to conduct research at both the University of Leicester and the University of Birmingham. Join us in tackling the challenge of antibiotic resistance while advancing our understanding of bacterial biology. This project offers a unique opportunity to contribute to impactful research with significant implications for public health. | |
| **References** | |
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