

Simulation of anti-microbial peptide:membrane interactions

Anti-microbial peptides are synthesised by a wide range of organisms to defend against bacterial and viral infections. To function, they must recognise and interact with the cell membrane in a specific manner. These peptides are an important source of new anti-microbial agents to tackle the rising levels of antibiotic resistance, but much more needs to be known about their mode of action and specificity, as current models of their action are very controversial. This project aims to further our understanding of how the interplay between lipid composition and membrane curvature affect the interaction of anti-microbial peptides with the cell membrane.

This PhD scholarship represents a unique opportunity to carry out a PhD in two exciting and different countries – New Zealand and Singapore – as part of the [A*STAR Research Attachment Programme](#) (ARAP). You will spend a minimum of 1 year working in the [Bond group](#) at the Bioinformatics Institute at A*STAR Singapore, and the remainder of the time working in the [Allison group](#) at Massey University in Auckland, New Zealand.

The scholarship is for 3 years. The successful candidate will have a strong background in chemistry and/or biochemistry, an interest or ideally experience in biomolecular simulation and/or computational chemistry, and good programming skills. Candidates must have (or will soon be awarded) an Honours (with a grade of at least 2:1) or Masters degree in chemistry, biochemistry or a related subject. Non-native English speakers must also fulfil the [academic language requirements](#) for postgraduate study at Massey University. Good organisational and communication skills and being willing to work as part of a team are essential.

For more information or an informal discussion about the post, contact Dr Jane Allison, email: j.allison@massey.ac.nz, or Dr Peter Bond, email: peterjb@bii.a-star.edu.sg.

To apply for this role, please send a cover letter that includes a statement about why you are a good fit to this position, a CV, and contact details for at least two referees to j.allison@massey.ac.nz.

The closing date for applications is 5pm (NZ time), 30 November 2016. Interviews will be held shortly afterwards (by Skype or similar). The candidate needs to be able to begin in early 2017.