

Molecular Modelling of Virus-like Particle Synthesis in Biomimetic Compartments

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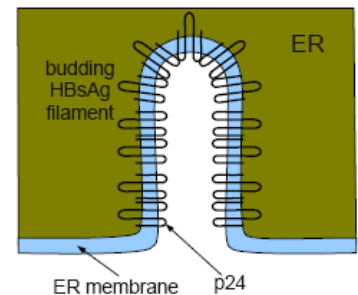
Nature of work: Development of understanding of *in vivo* production of virus-like particles

Area: Leading edge of pharmaceutical engineering.

Potential implications: Being able to make vaccines in days rather than months at a fraction of the current cost.

Funding: *Via* the various University scholarship schemes (see separate information for these).

Brief description: Many current methods for vaccine production are extremely slow (months per batch) and highly inefficient. This means they are not well suited to responding to potential pandemics and increases their cost, reducing their availability. In this project, we will seek to develop molecular-level understanding of the process used by natural cells to make virus-like particle (VLP) based vaccines with a view towards informing the development of synthetic *in vivo* methods for VLP production that are much more rapid and efficient (see previous project). This will involve undertaking course-grained molecular modelling of the processes that occur during VLP production.



There are many more projects in the areas of biotechnology. Feel free to contact me (mark.biggs@adelaide.edu.au; +61-8-8303-6317) or drop in to my office (N119) if you want to have further discussion or other possible PhD projects.