

Neutron reflectometry to probe biological membranes

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-12.15pm-

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- Abstract -

Cellular membranes, and their interactions with intra- and extra-cellular constituents such as proteins and peptides, are crucial features in many biological problems. However, they are complex systems that are not readily probed using conventional techniques. Using a biomimetic solid-supported membrane system, many of the features of natural membranes can be created in a controlled fashion in a system which is amenable to quantitative analysis, particularly using the strengths of neutron reflectometry.

I shall describe the development of a flexible and robust membrane system, and its characterisation using neutron reflectometry and complementary techniques to give structure/function relationships. This will be followed by a brief description of some of the problems we have addressed using this membrane system, including looking at membrane pore-forming proteins (e.g., α -hemolysin) and the Alzheimer's related β -amyloid peptides.

- Venues -

Rankine Brown 106, Victoria University of Wellington
Level 1, Psychology Building, University of Canterbury
Teaching Facilities, South West corner, Information Services Building, University of Otago
Rm 429, Human Sciences Building, 10 Symonds Street, University of Auckland



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