



SoMS, BABS and GSBE Cross-Faculty Seminar Series

Functional amyloid structures on both sides of the host:pathogen divide

Margie Sunde, University of Sydney

Abstract: The self-association of proteins into a non-native, fibrillar form known as amyloid is a feature of many significant human diseases and the amyloid structure has been considered a pathological protein fold. However, a number of functional amyloid fibrils have now been described, in which the biologically active form of the protein is retained or generated in the fibrillar form. I will present work describing some of the diverse roles played by amyloid fibrils in the interactions between fungi, viruses and bacteria and infected host organisms. My lab uses a wide range of biophysical and biochemical techniques to probe the structure and function of these functional fibrils. These studies highlight the need to understand both the functional and the pathological nature of the amyloid structure.



Bio: Margie Sunde is currently an Associate Professor in Pharmacology at the University of Sydney. After undergraduate studies in Cape Town and a PhD in Cambridge, she started a postdoc in Oxford, where she developed her interest in amyloid fibrils. This work contributed to the understanding that all amyloid fibrils share a common underlying beta sheet structure and that amyloid formation associated with disease involves protein misfolding. More recently, Margie's research focus has been on the structure and formation of functional amyloid structures in microorganisms, in particular amyloids with a biological role in infection or immune evasion.

Date & Time: Wednesday 16 August at 4.00 pm followed by Happy Hour.

Venue: Lowy Cancer Research Centre, Level 4 seminar space [Map](#)

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UNSW CRICOS Provider Code 00098G | ABN 57 195 873 179