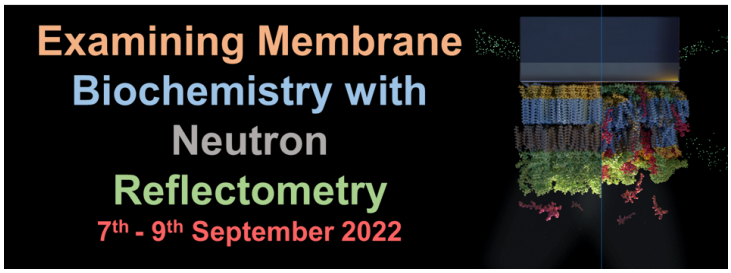


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# Small-angle scattering elucidates the incorporation of Outer membrane protein F into lipid nanodiscs

*Thursday, 8 September 2022 15:50 (20 minutes)*

One of the most abundant proteins in gram-negative bacterial membrane is outer membrane protein F (OmpF). In recent years the mechanisms of OmpF interaction with antimicrobial agents and other membrane components were actively investigated [1-4]. This research demonstrated that OmpF has a substantial potential in the number of biotechnology applications such as vaccines and biosensor development [5,6]. Another important implication of these studies on OmpF organization inside the outer bacterial membrane could be a development of drug delivery system. In present work we explored a possibility to incorporate OmpF into lipid nanodiscs and characterised these particles by small angle scattering methods (SAXS and SANS) amongst other complementary techniques such as electron-microscopy and analytical ultracentrifugation. The results clearly demonstrated significant enlargement of lipid nanodiscs in response to OmpF incorporation.

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