# Interaction of MsbA with core-LPS, photolipids and inhibitors

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MsbA is an essential ABC transporter that functions as a core LPS floppase in the inner membrane of Gram-negative bacteria. Here we present data on the effect of binding of substrates and inhibitors to the TMDs and of nucleotides to the NBDs on the two coupling helices CH1 and CH2. Their structural response was monitored by changes in chemical shift by solid-state NMR spectroscopy. The binding modes and translocation of core LPS can be studied with 13C-labelled substrate. Here we present initial data demonstrating the feasibility of this approach. In addition, we present data investigating the effect of photoswitchable lipids on membrane-bound MsbA.