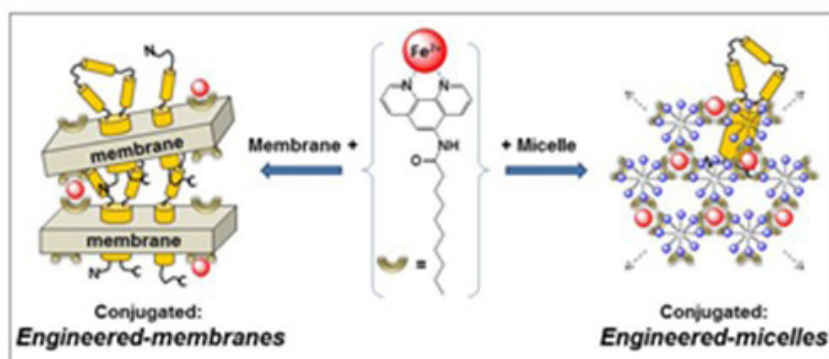


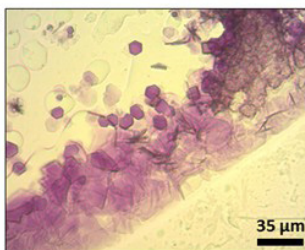
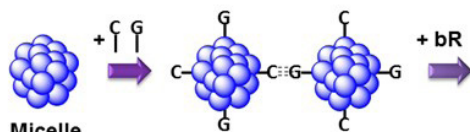
Membrane protein purification using engineered micelles



Purification of retinal proteins by specific conjugation of micelles or native membranes with hydrophobic [1,10-phenanthroline: Fe^{2+}] complexes



Micelles, conjugated by hydrophobic nucleoside base-pairs, induces crystallization of the membrane protein bR:



- Membrane proteins comprise one third of the transcription products of human genome
- Associated with diverse human diseases and key target for drug development
- X-ray crystal structures of membrane proteins are scarce due to paucity of good quality crystals
- Developed a new crystallisation medium that relies on conjugation of micelles with hydrophobic chelator-metal complexes or hydrophobic nucleosides
- Chelator-metal complexes or nucleoside base pairs formed at the interphase facilitate nucleation and crystallisation of membrane proteins
- Simple methodology that can precipitate membrane proteins in their native environment
- May be applicable to a diverse array of membrane proteins