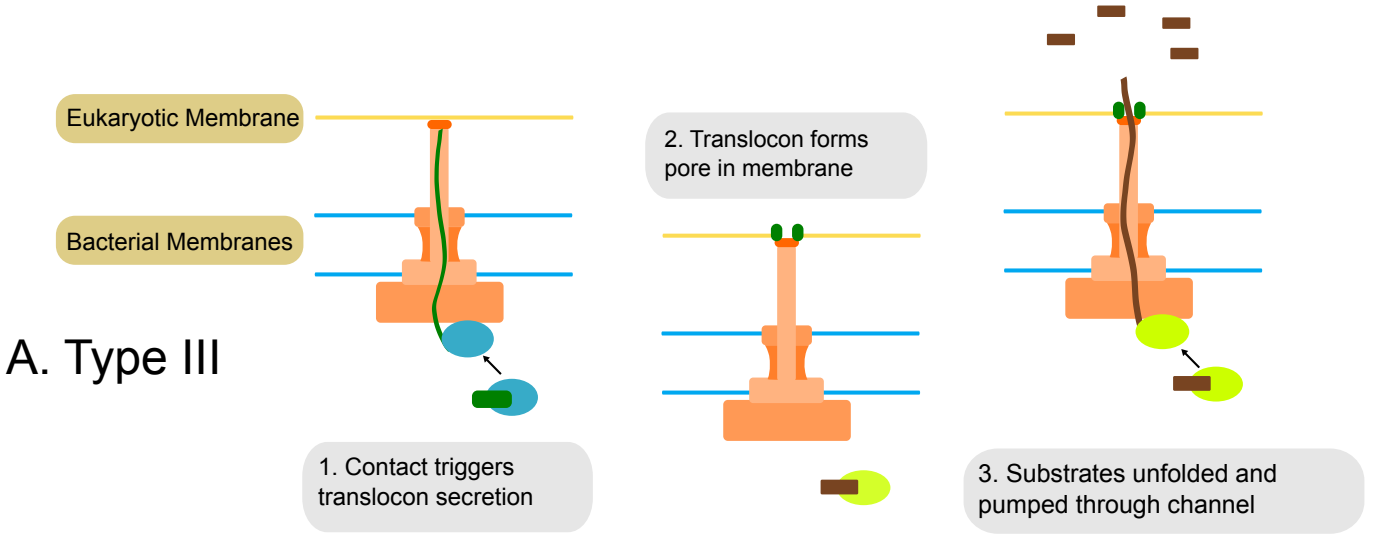
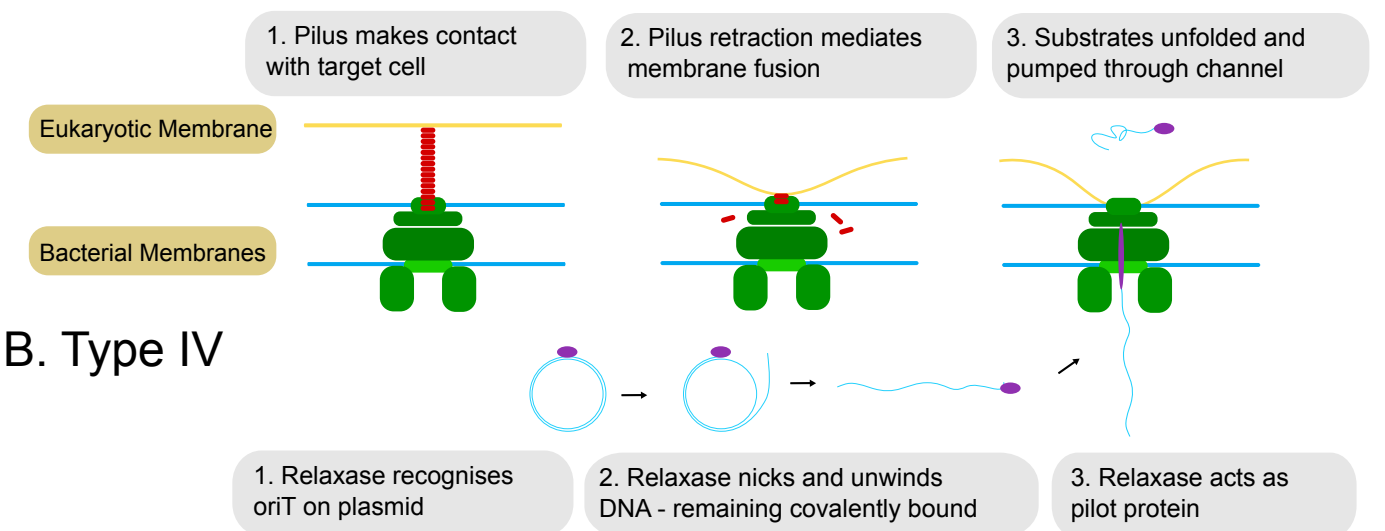
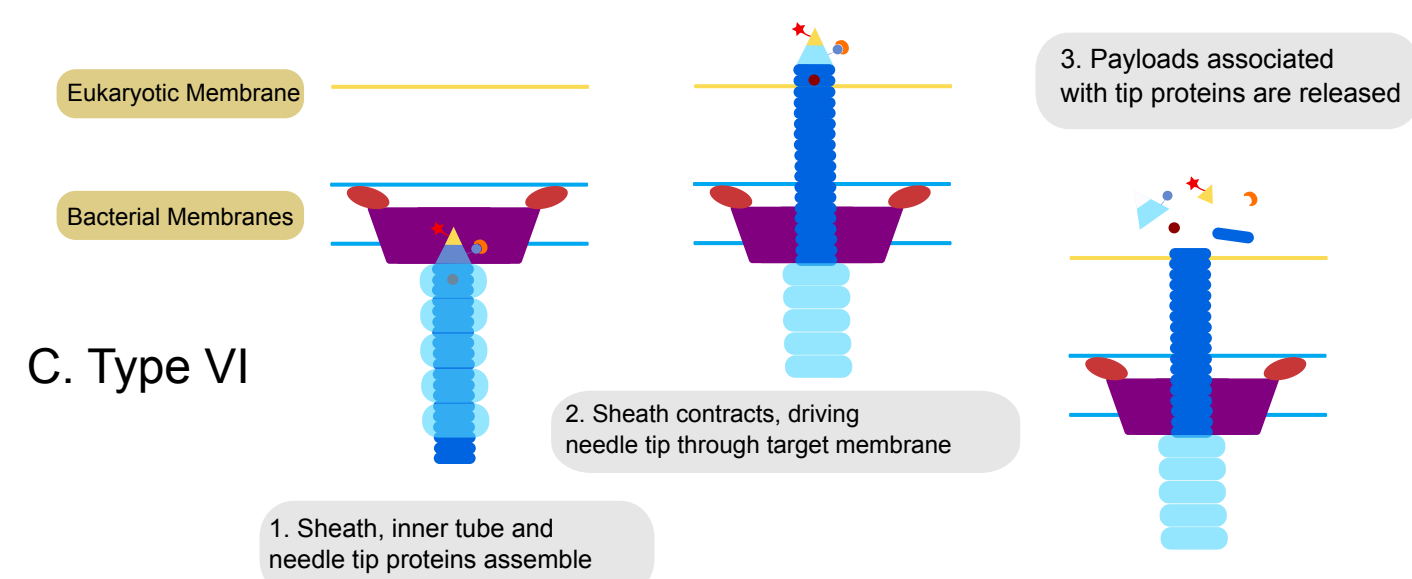

Eukaryotic Membrane
Bacterial Membranes
A. Type III
1. Contact triggers translocon secretion
2. Translocon forms pore in membrane
3. Substrates unfolded and pumped through channel


1. Pilus makes contact with target cell
2. Pilus retraction mediates membrane fusion
3. Substrates unfolded and pumped through channel
Eukaryotic Membrane
Bacterial Membranes
B. Type IV
1. Relaxase recognises oriT on plasmid
2. Relaxase nicks and unwinds DNA - remaining covalently bound
3. Relaxase acts as pilot protein


Eukaryotic Membrane
Bacterial Membranes
C. Type VI
1. Sheath, inner tube and needle tip proteins assemble
2. Sheath contracts, driving needle tip through target membrane
3. Payloads associated with tip proteins are released