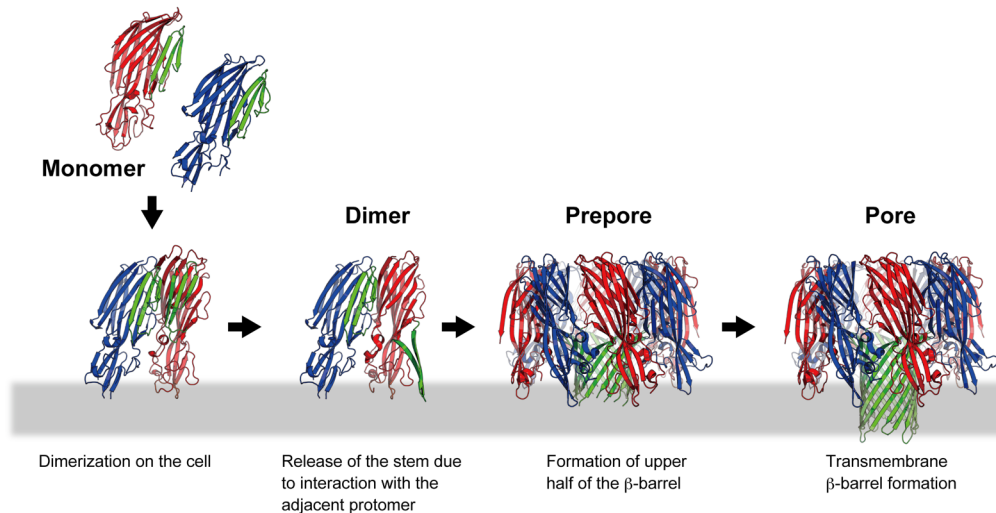


Molecular basis of staphylococcal pore-forming toxins

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Pathogenic bacteria express pore-forming toxins (PFTs) to attack host cells. PFTs are expressed as soluble monomeric proteins, which assemble to prepore oligomer on the target cells. After forming prepore, conformational change occurs, and then pore is formed. Although crystal structures of monomer and pore have been determined, the detailed mechanism was unclear because of the lack of high-resolution structure of prepore. In this study, we determined crystal structure of the prepore of staphylococcal PFTs, which showed an invisible transmembrane region with rigid other parts. Based on the structural information and biochemical data, we propose a two-step transmembrane pore formation mechanism.