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Second Year ARCS Scholar McGowan/ARCS Award

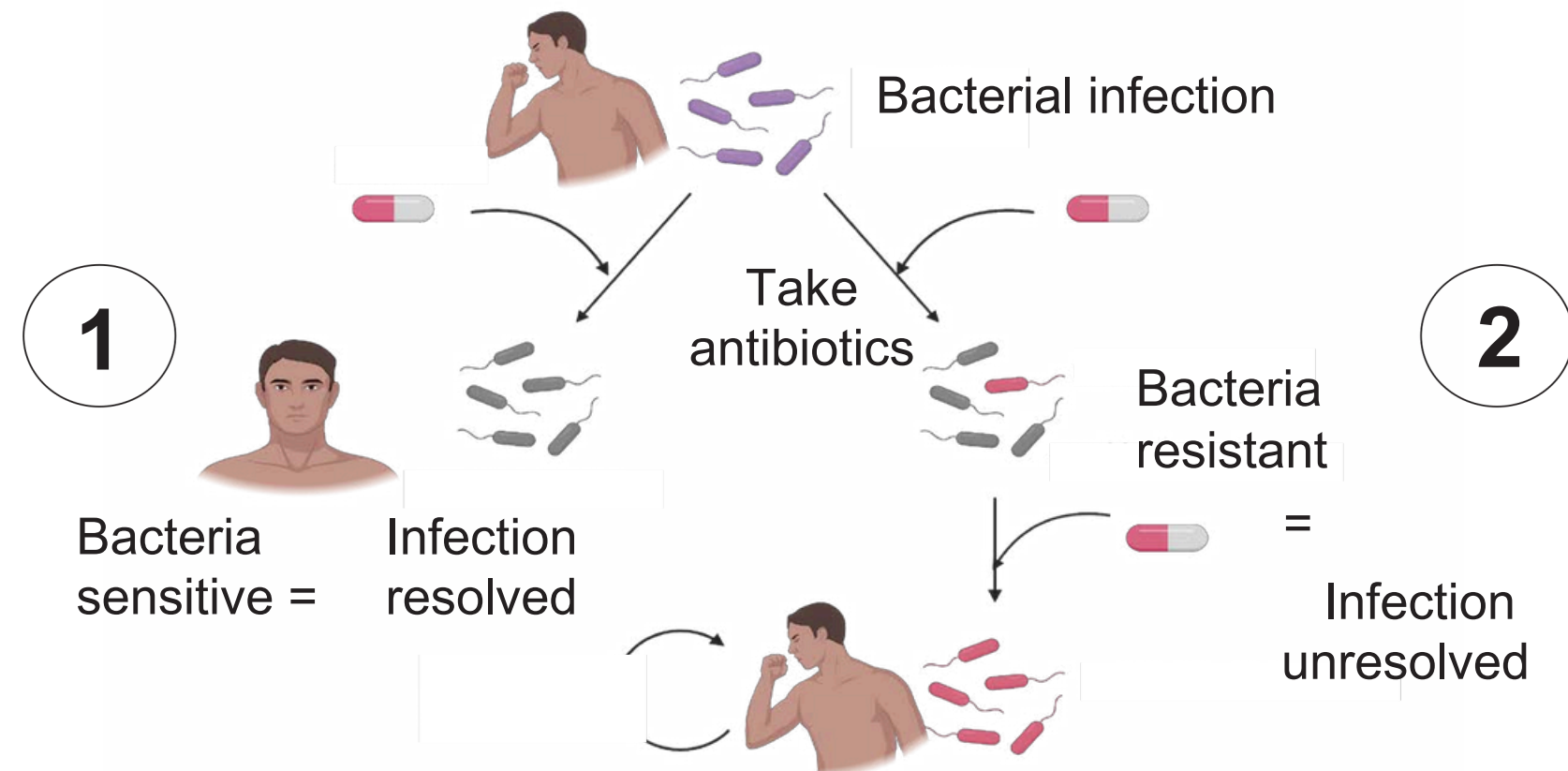


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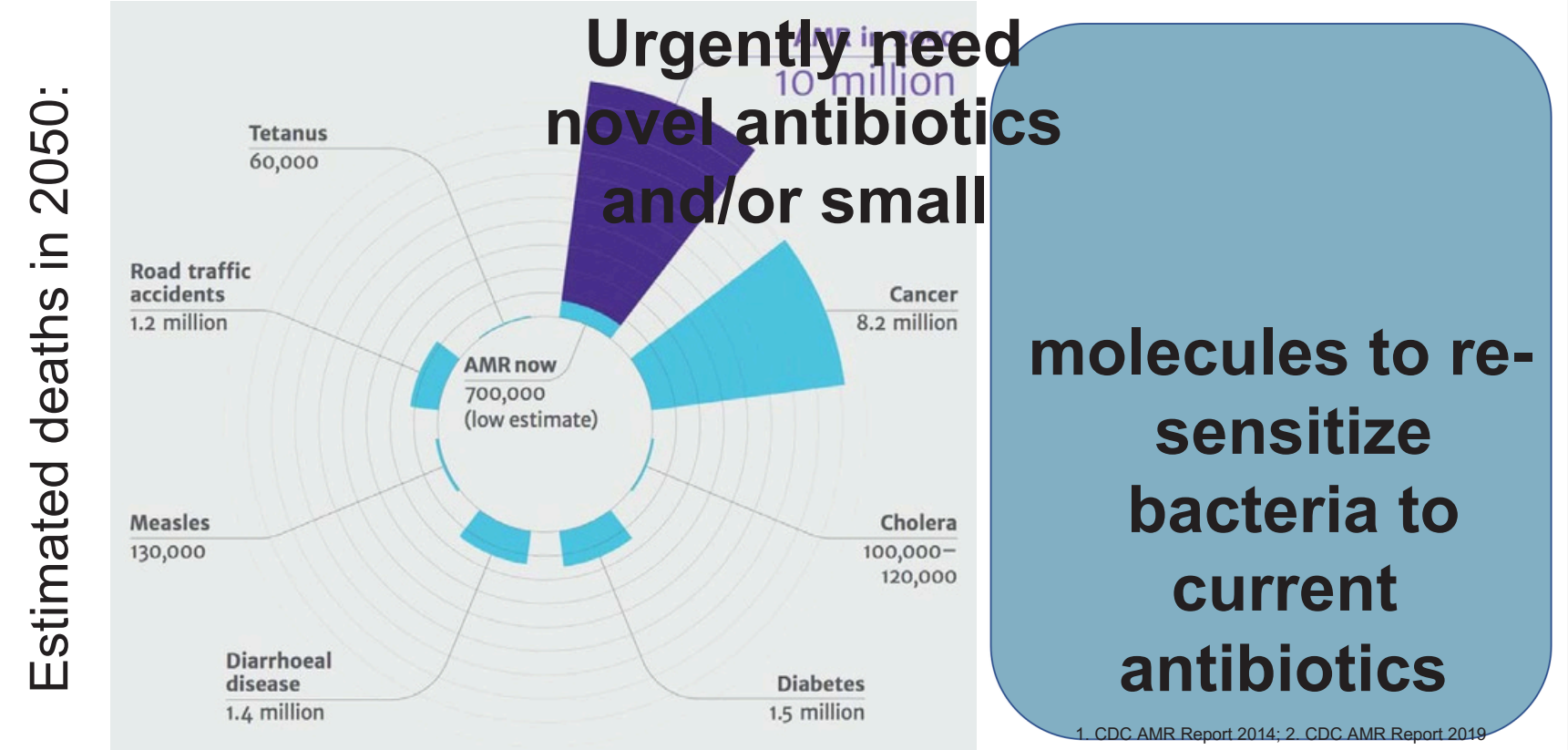
Antibiotic Recognition and Efflux by MexY in Bacterial Pathogen *Pseudomonas aeruginosa*

By using a multi-disciplinary approach (i.e., biochemistry, structural biology, and microbiology), we can tackle the threat of antibiotic resistance and identify targets for novel antibacterial therapeutics.

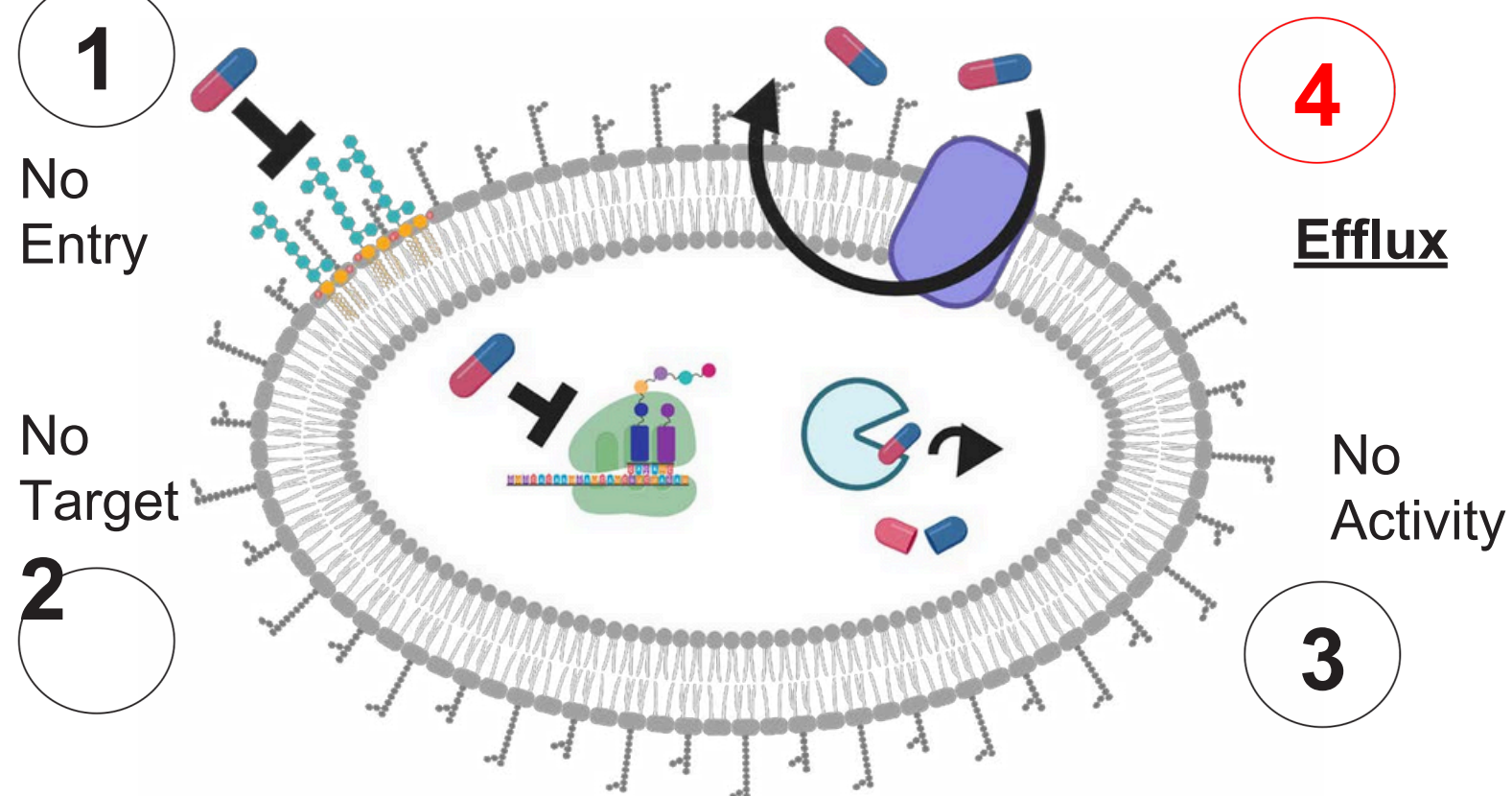
Antibiotic resistance : A global health crisis



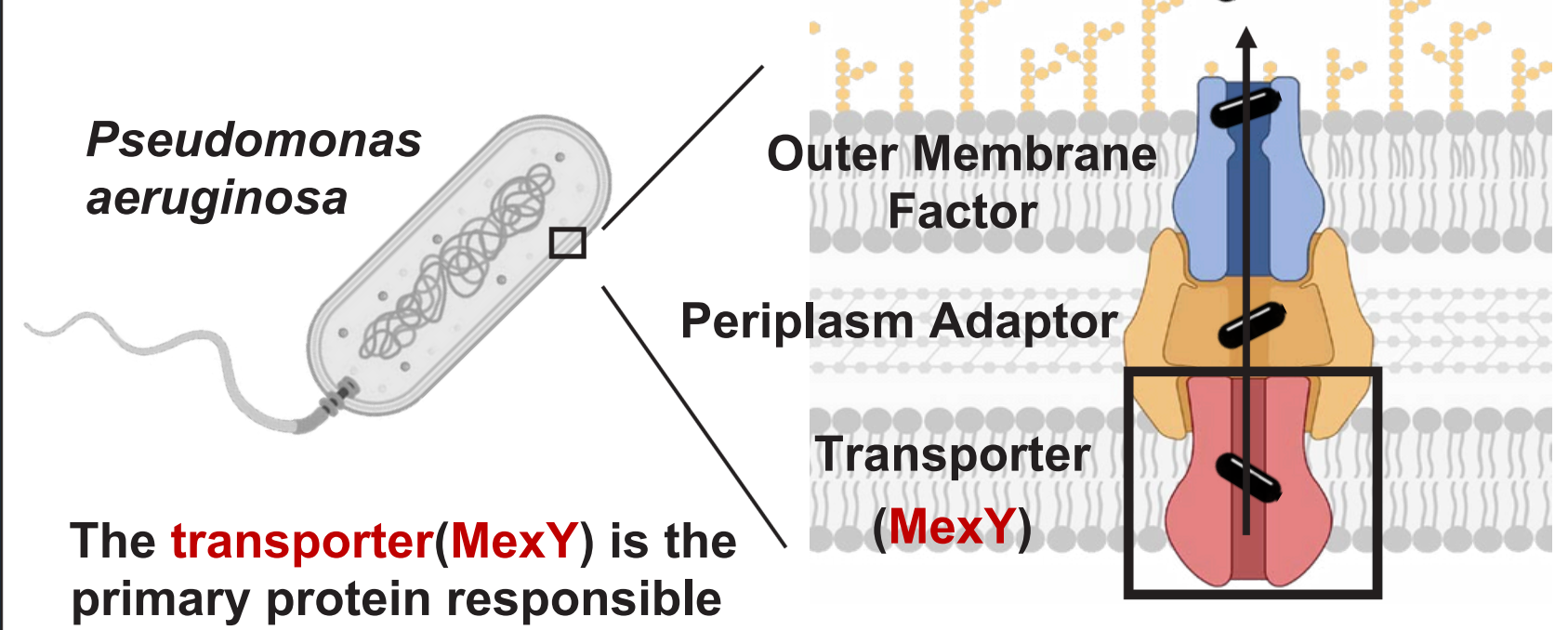
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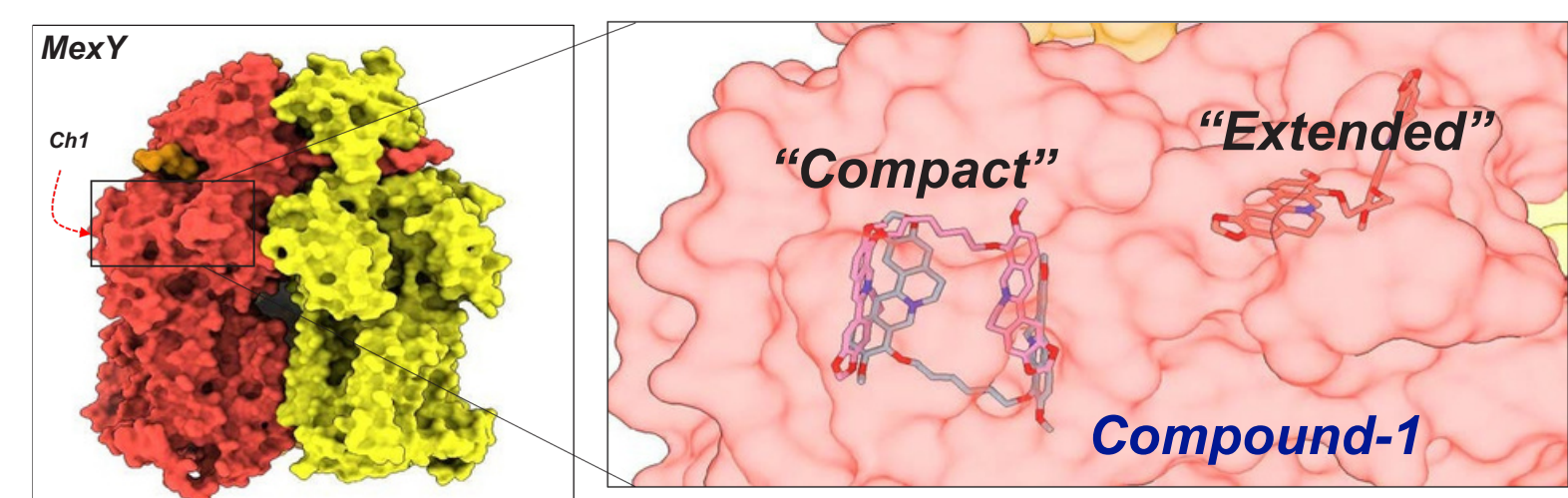
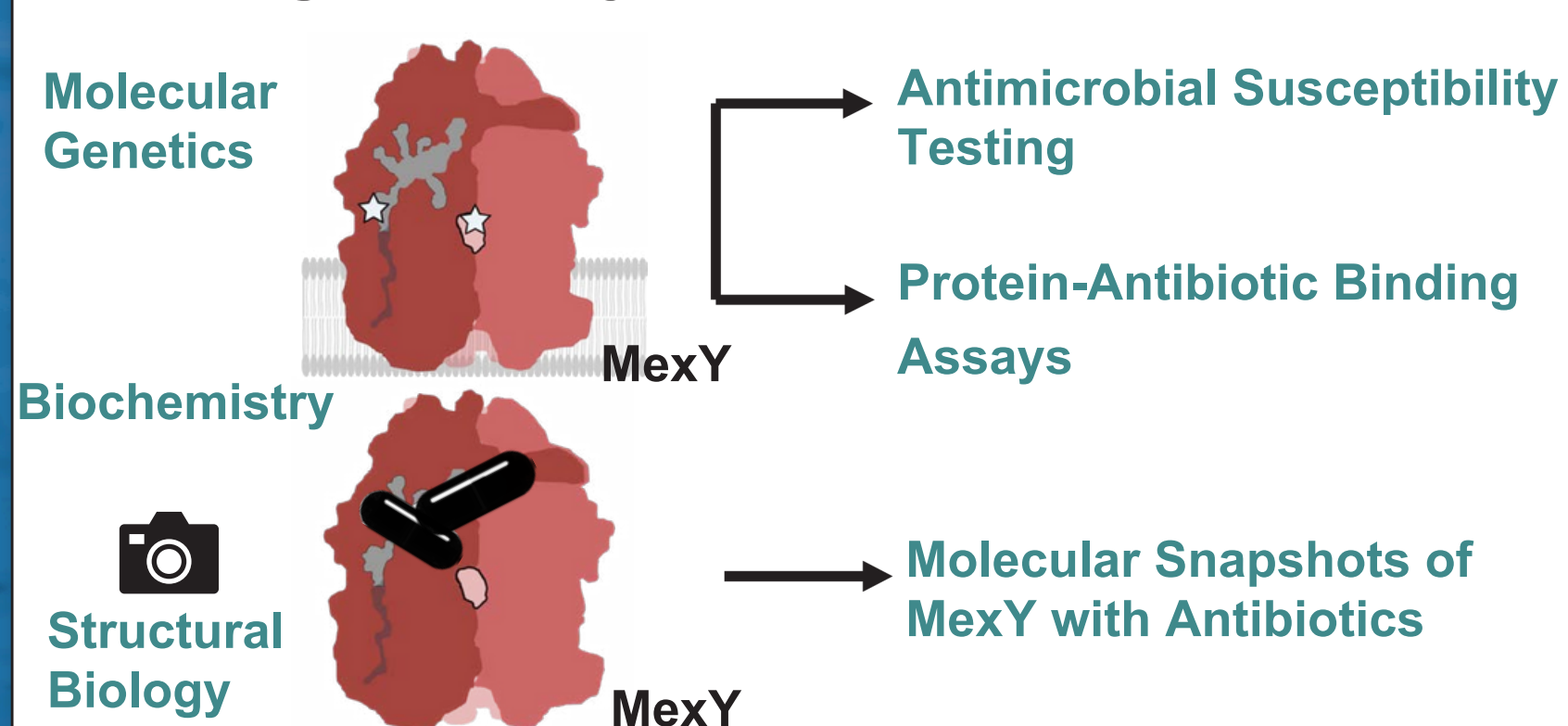
Mechanisms of Resistance



Bacterial Efflux Pumps Play Role in Resistance Development and Are Targets for Therapeutics



Approaches To Understanding Antibiotic Recognition By Efflux Transporter, MexY



- Understand mechanisms for pumps across multiple bacterial species
- Design of novel efflux pump inhibitors and/or
- Redesign of current therapeutics to evade efflux.