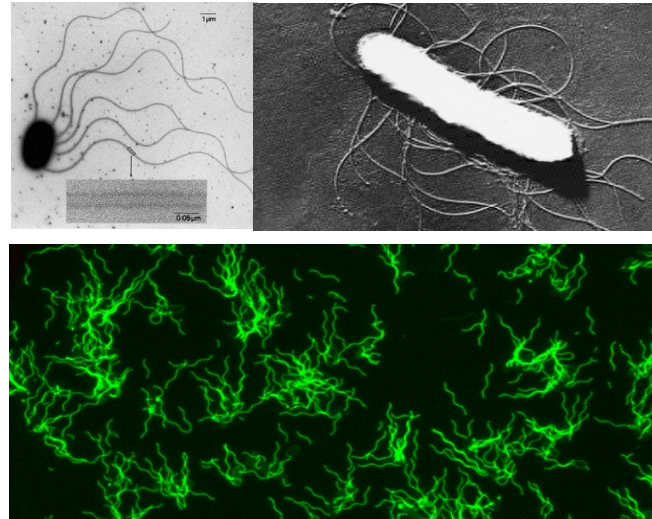
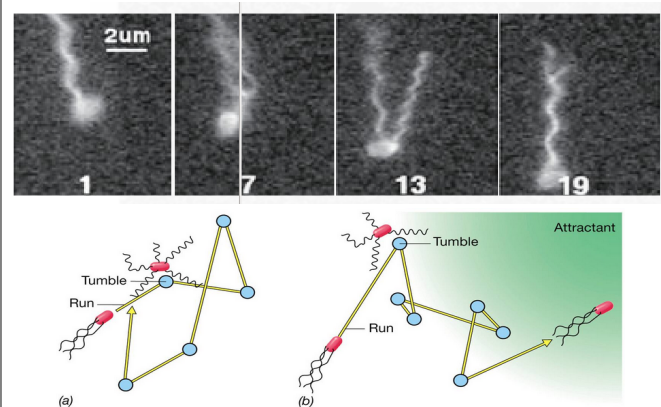


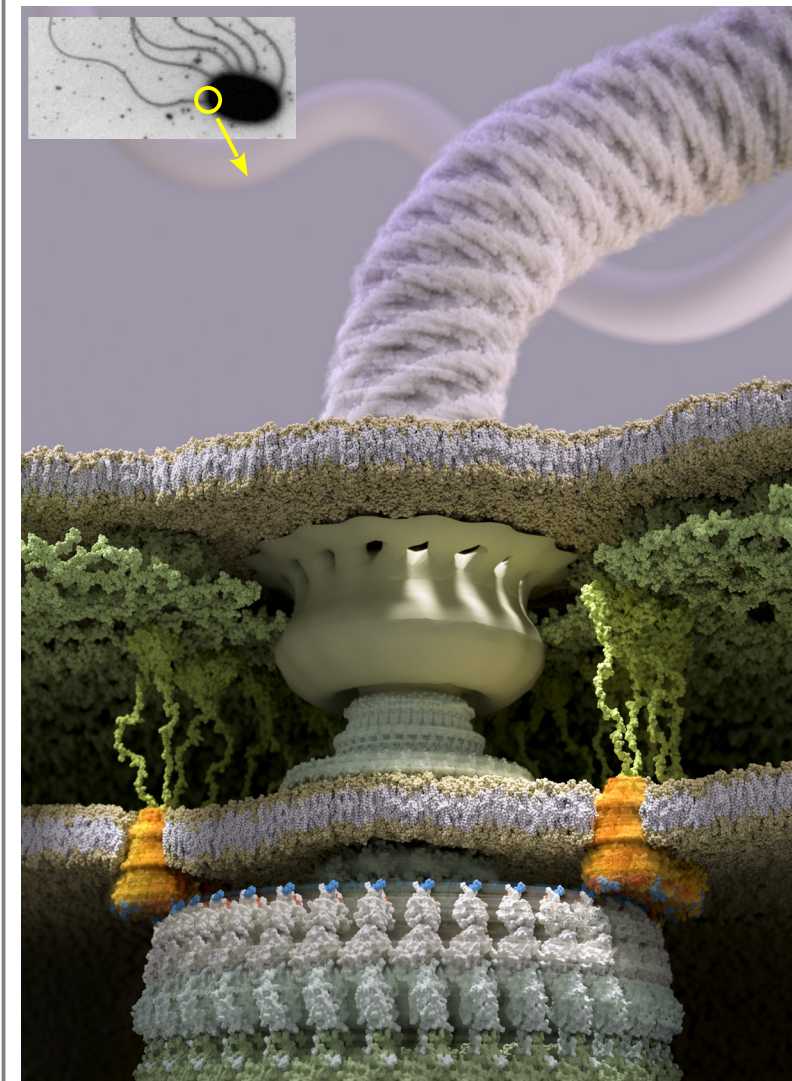
Flagella in *E.coli* bacteria



Motility & chemotaxis



Rotary Flagellar Motor



# Bacterial Flagellar Motor

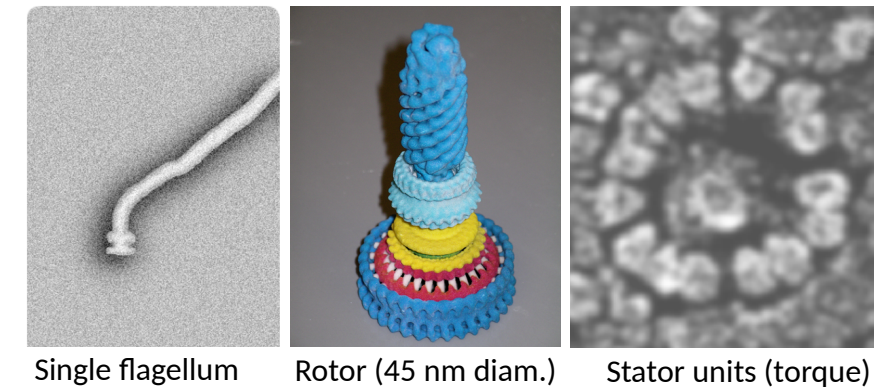
CBS – équipe Physics and mechanics of biological systems

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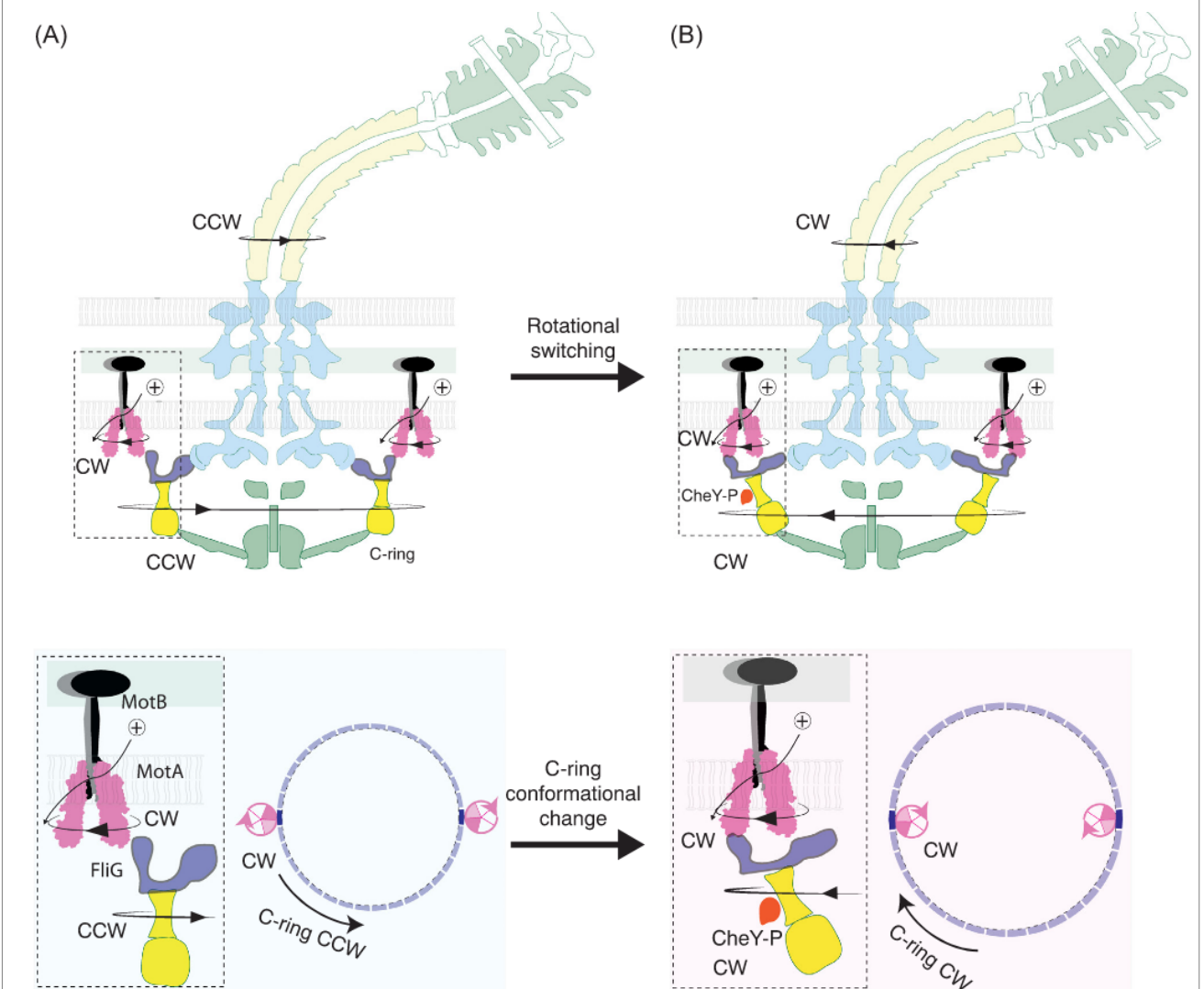
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Continuous rotation around one axis is not seen in animals or other macroscopic biological systems. The reason is that a tight contact is required between two components, which still have to remain separated to rotate one with respect to the other. However, at the nanometer scale, Nature has found solutions to this topological problem and “invented the wheel”. The bacterial flagellar motor is a nano-scale rotary molecular motor responsible for the continuous rotation of the flagellum, the long extra-cellular appendage that provides thrust to bacteria, allowing them to swim in liquids. The motor is powerful and efficient, reaching angular speeds of thousands of revolutions per second.

Structure : Rotor + Stator



Torque and switching of rotational direction



Our experiments

