

## Flagellar structure and function

The flagellum is a complex structure (Fig. B7) that involves around 40 gene products in its structure, synthesis and assembly [3.4]. It is a true rotary motor, powered by an electrochemical ion gradient across the cytoplasmic membrane. In *E. coli* and *S. typhimurium* the energy source is the proton gradient — the PRO-

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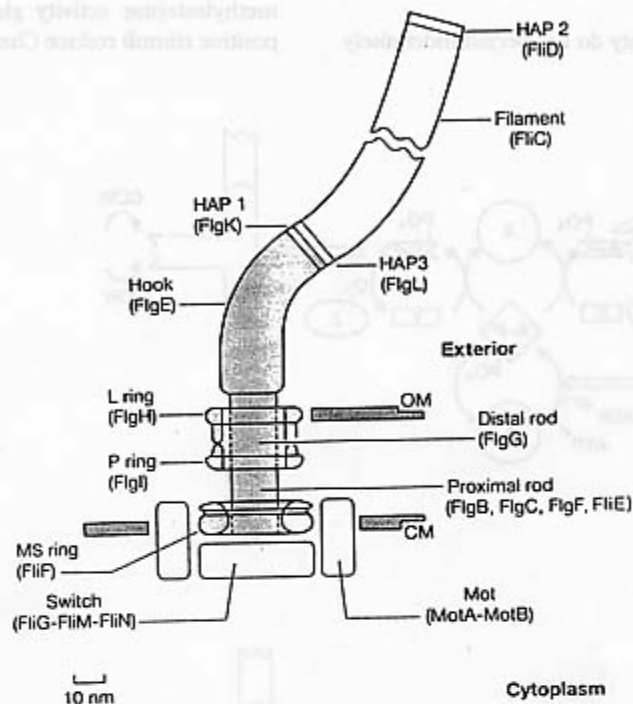


Fig. B7 Schematic illustration of the bacterial flagellum of *S. typhimurium*. Substructures and the proteins from which they are constructed are indicated. The locations shown for MotA, MotB and the three switch proteins are based on indirect evidence. CM, cytoplasmic membrane; OM, outer membrane; HAP, hook-associated protein. Adapted from [3].

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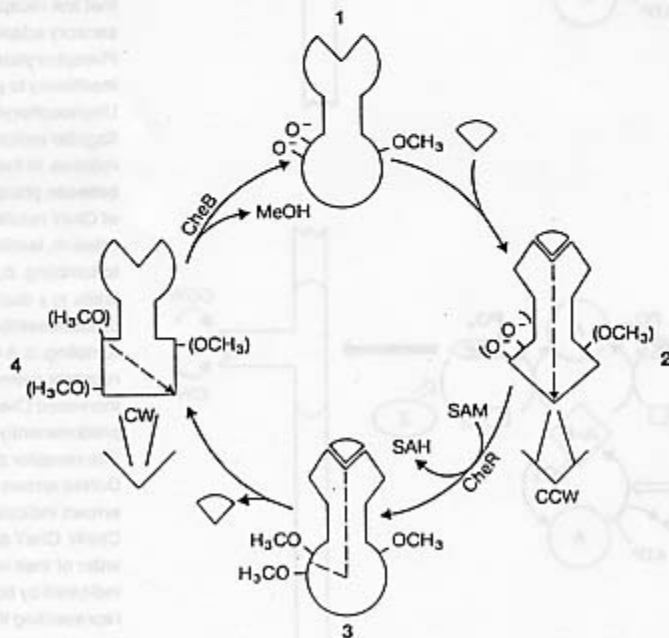


Fig. B4 Transducer states in the cycle of excitation and adaptation of the chemosensory receptors in *E. coli*. See text for explanation. SAM, S-adenosylmethionine; SAH, S-adenosylhomocysteine. CCW, counterclockwise signals; CW, clockwise signals. Adapted from [2].