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An ODE model for the aerotactic response of the Caulobacter Crescentus at the motile stage. Preliminary report.

Caulobacter Crescentus is a uniflagellated motile swarmer cell in the initial stage of its cell cycle. The direction of rotation (clockwise or counter-clockwise) of the flagellum motor determines the swimming behavior of the cell (forward or reverse running). We suggest a mathematical model for the signaling pathway of the motor switches, in response to a temporally varying concentration of oxygen. (Received July 20, 2018)