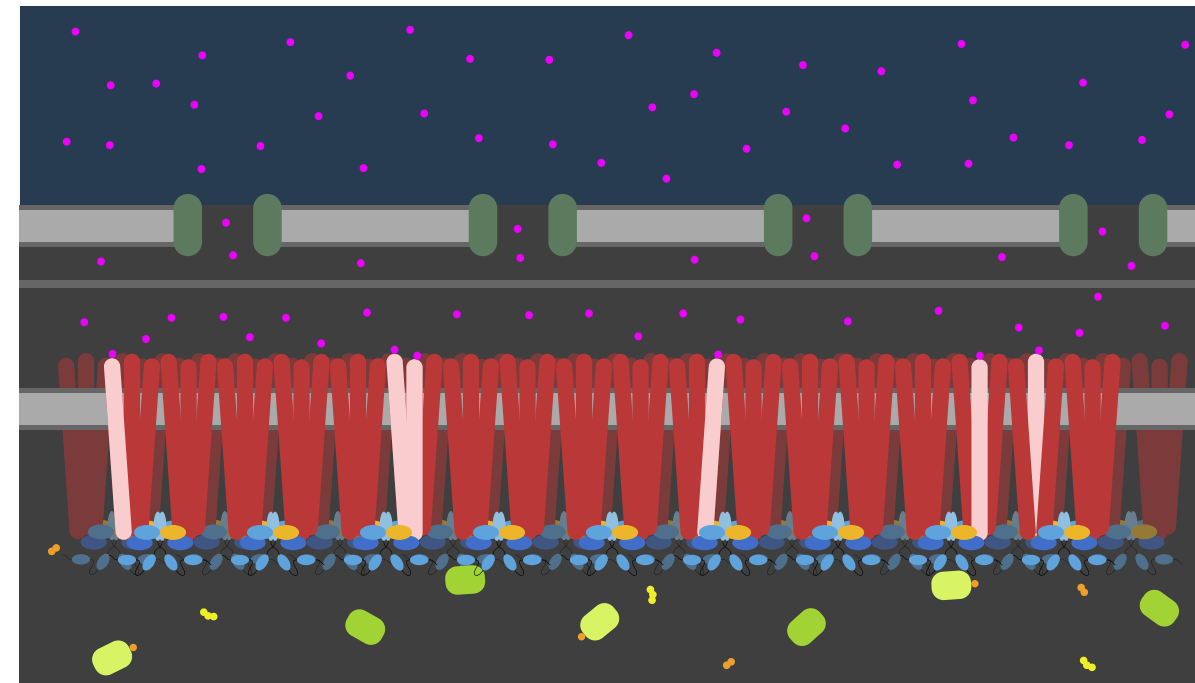
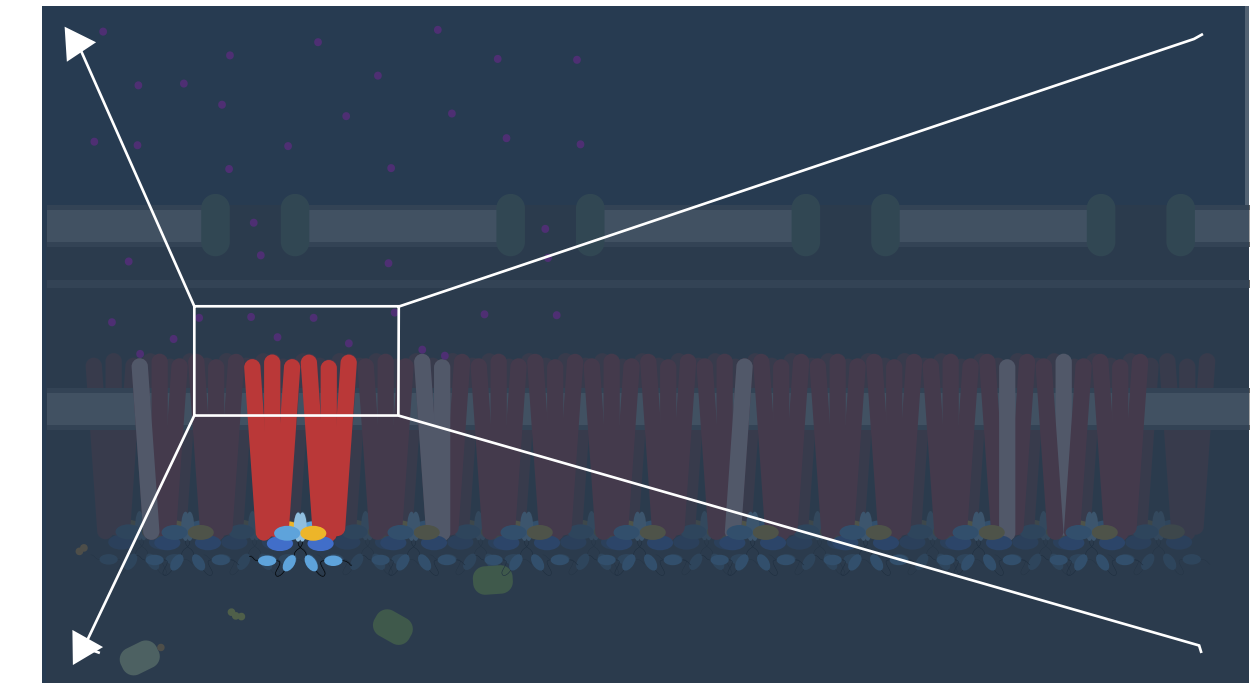


III. How chemosensory array steer the cell

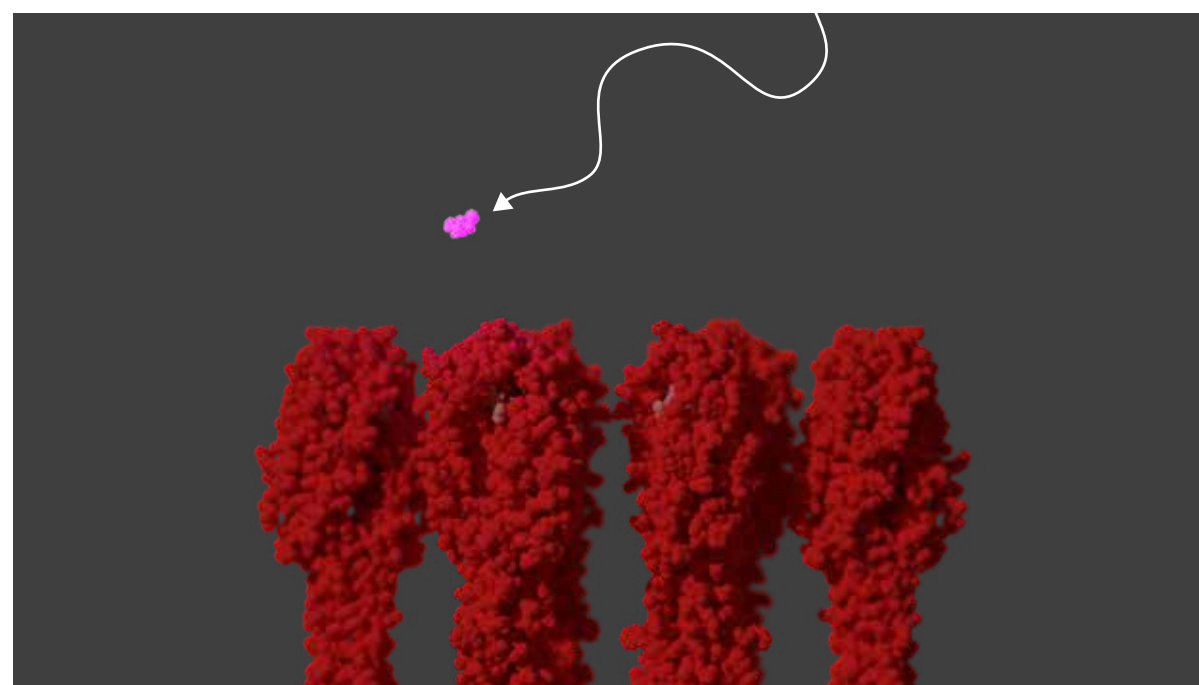
1.1
Label third chapter



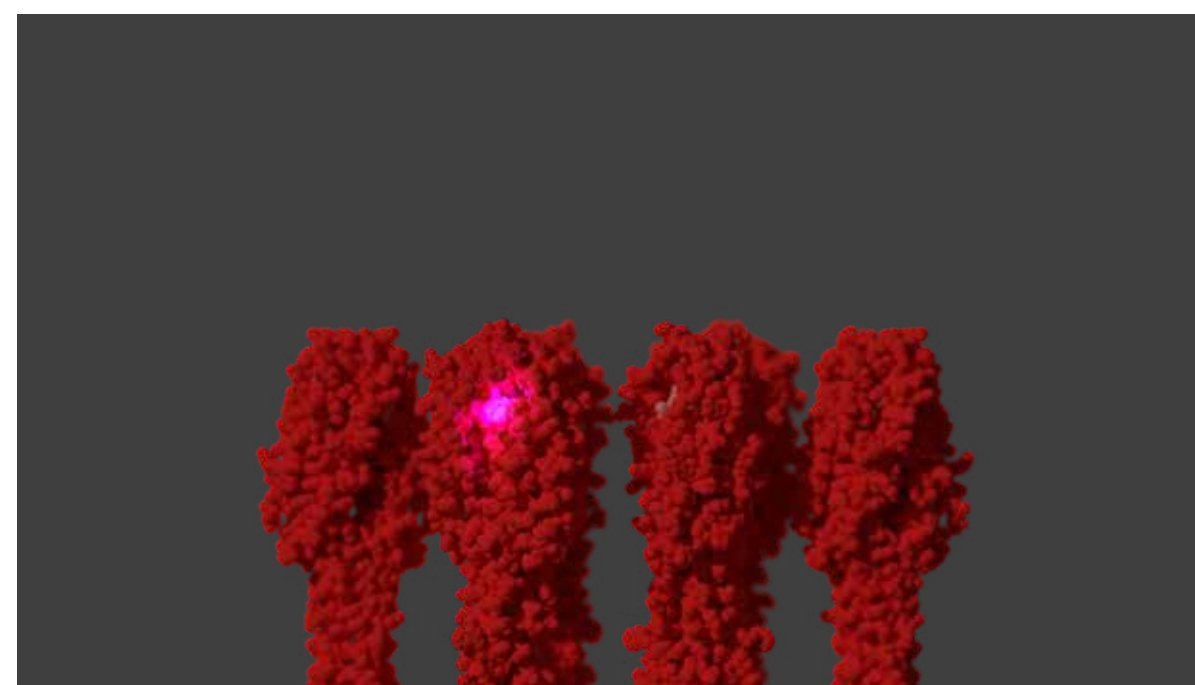
1.2
Animation: Repellents, MCPs, ATPs, and CheYs interact



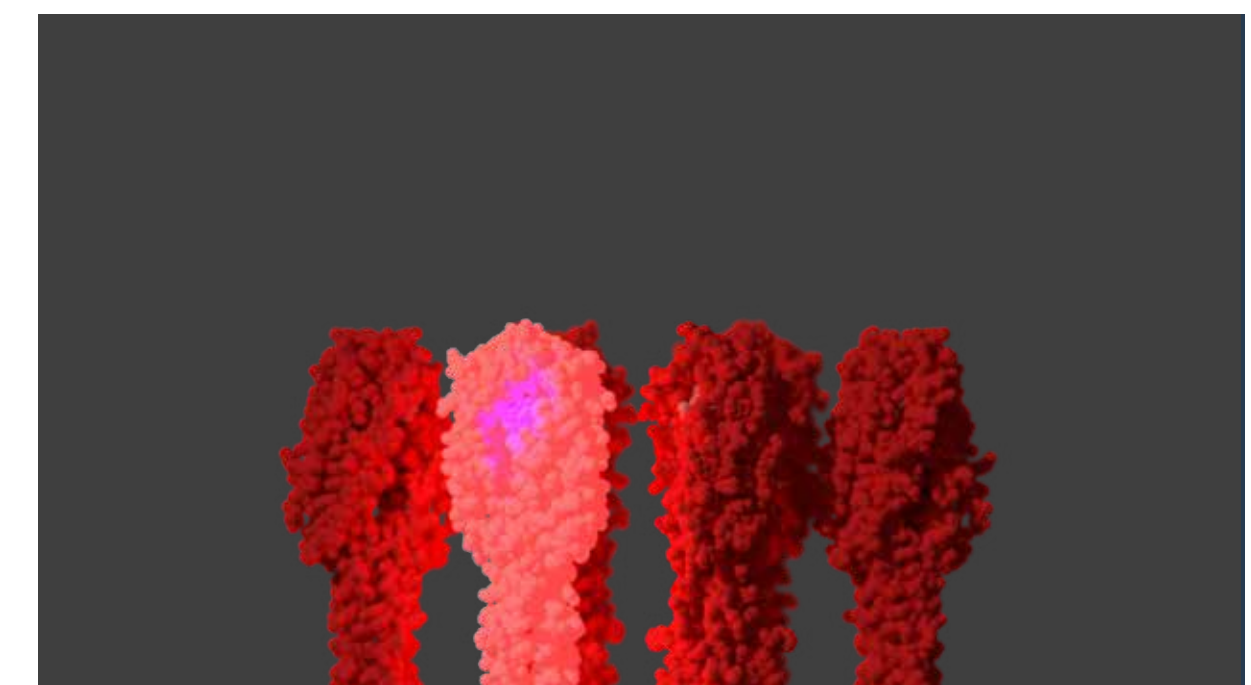
1.3
Animation: Pause movement, isolate one unit and zoom in on it



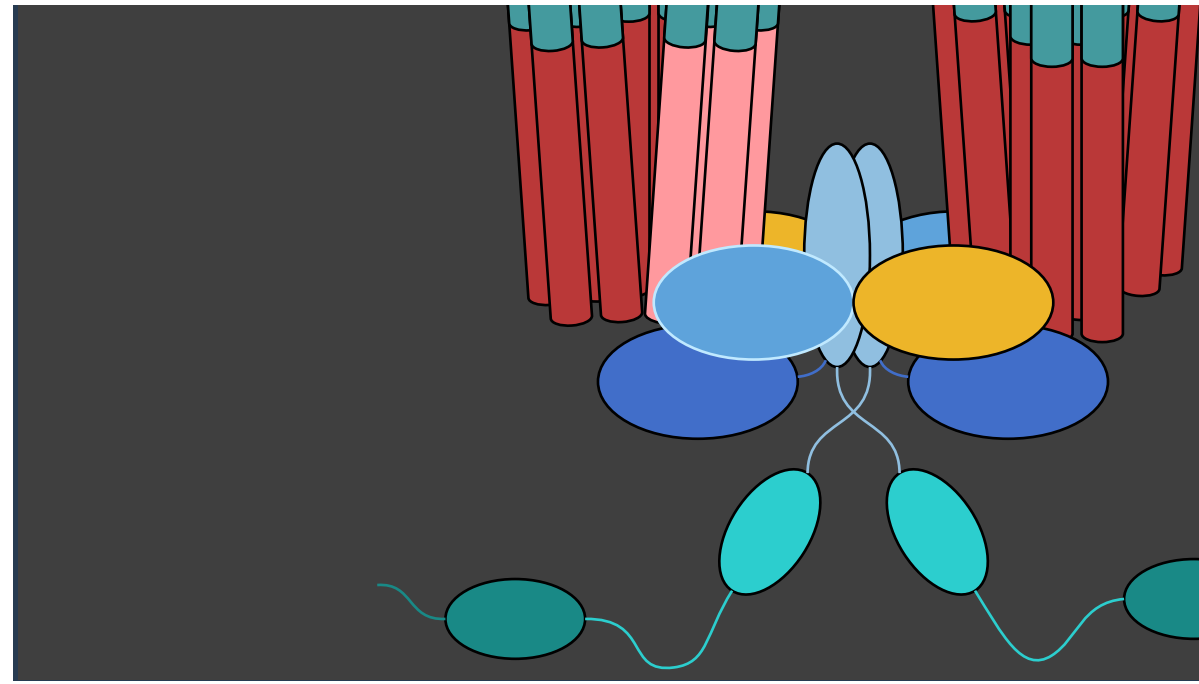
1.4
Animation: Tilt unit back to sideview and zoom in to periplasmic end as repellent diffuses in



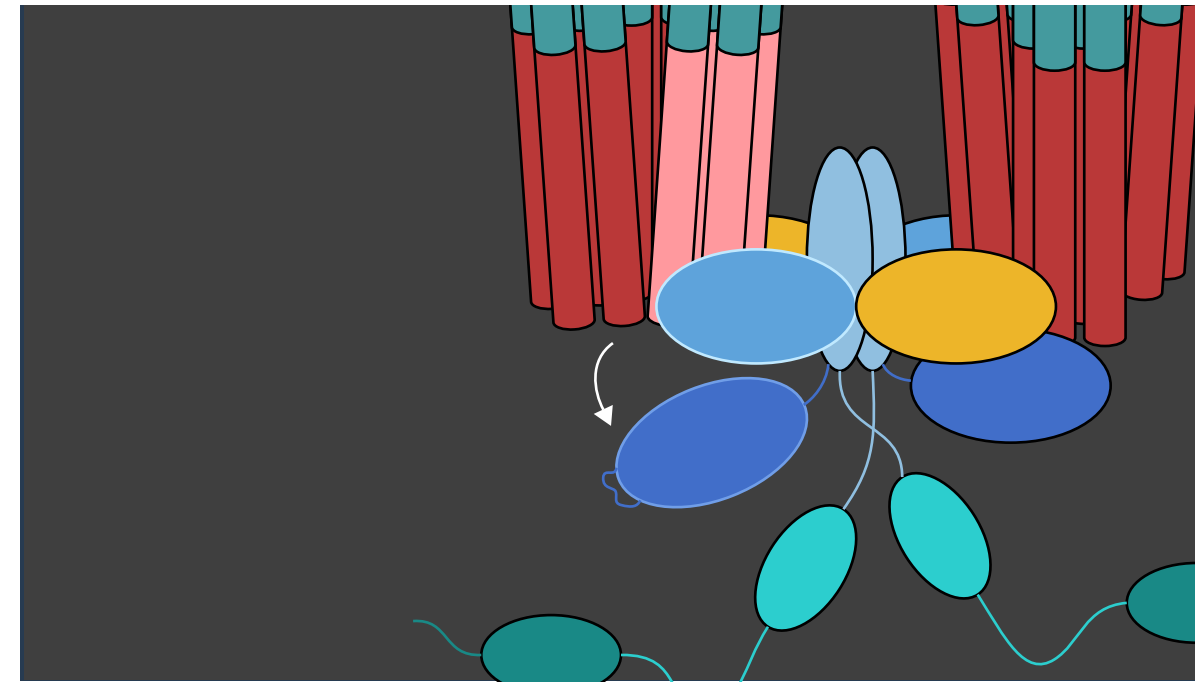
1.5
Animation: Repellent binds to MCP dimer



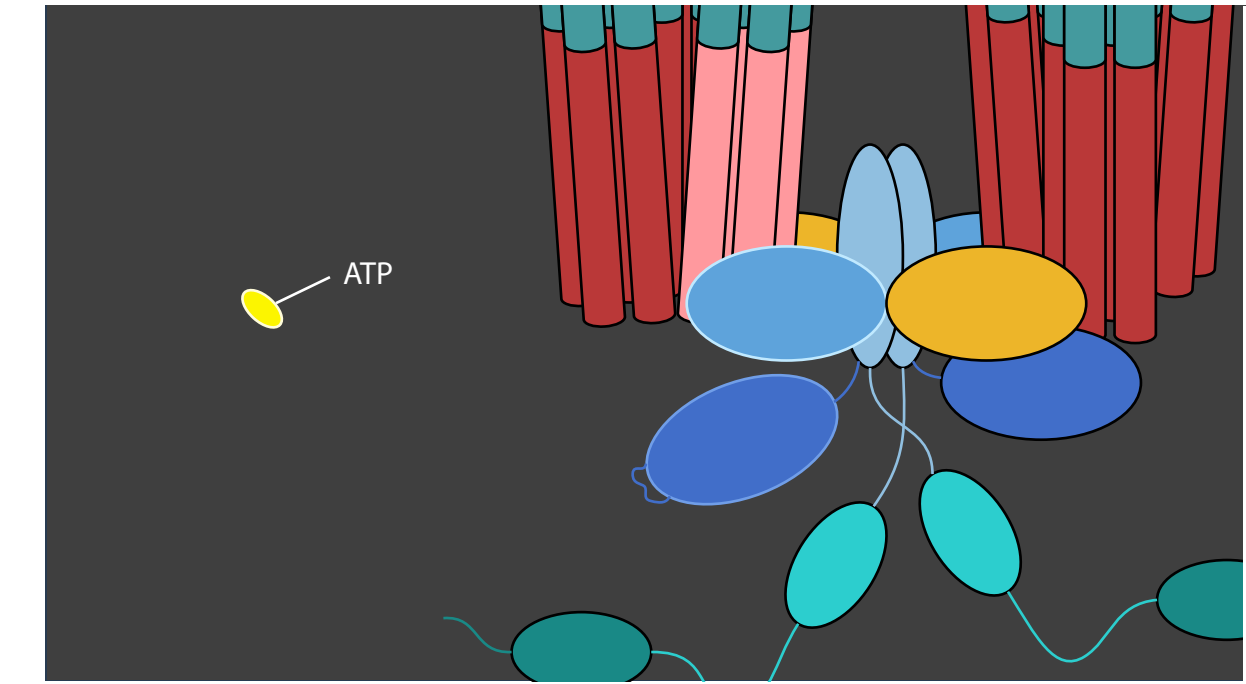
1.6
Animation: MCP dimer activates



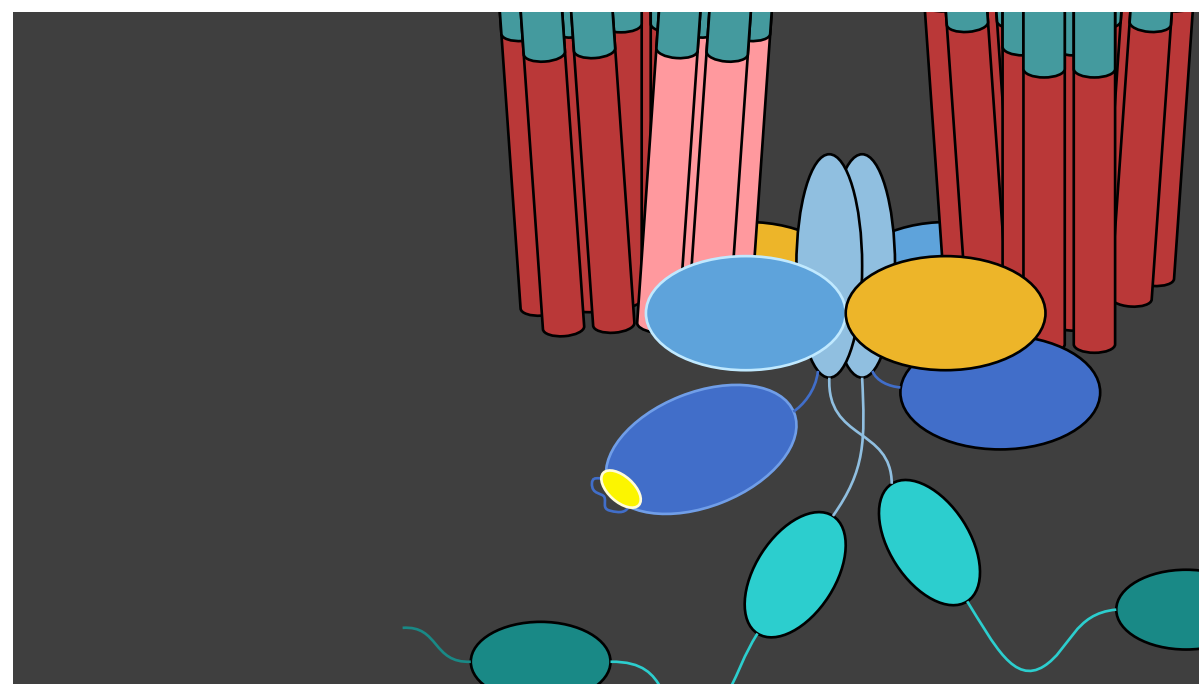
1.7
Animation: Pedestal down to cytoplasmic end of array unit



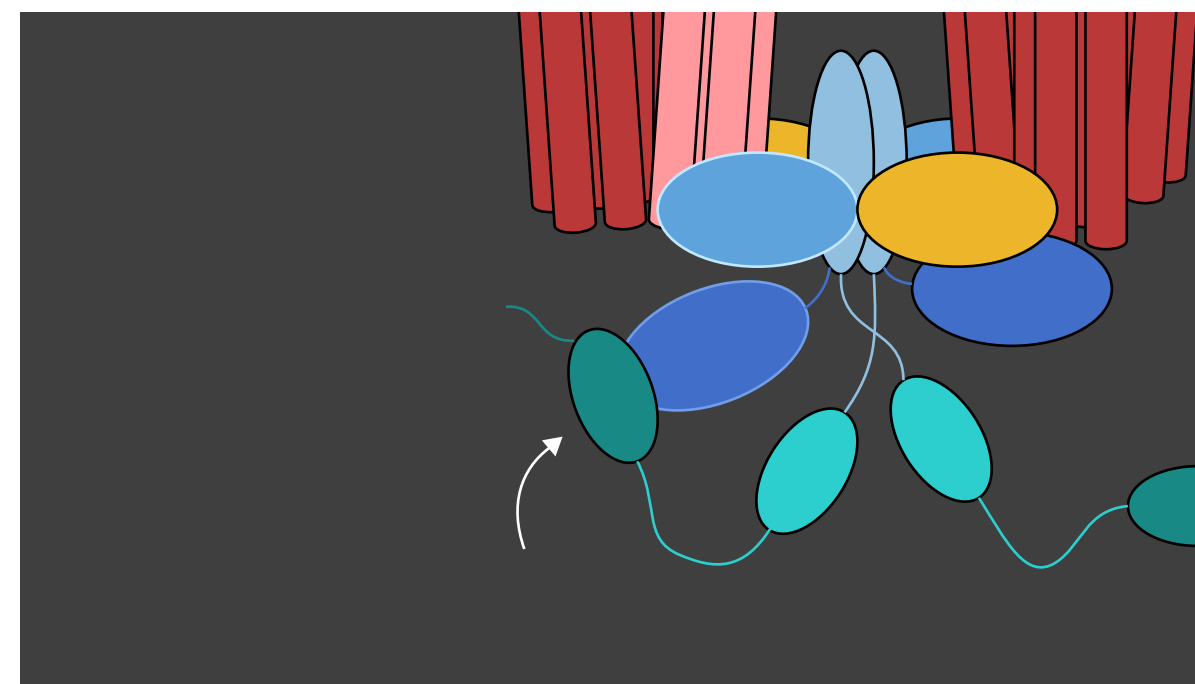
1.8
Animation: Activated dimer changes CheA's P4 domain into active orientation. ATP-lid opens



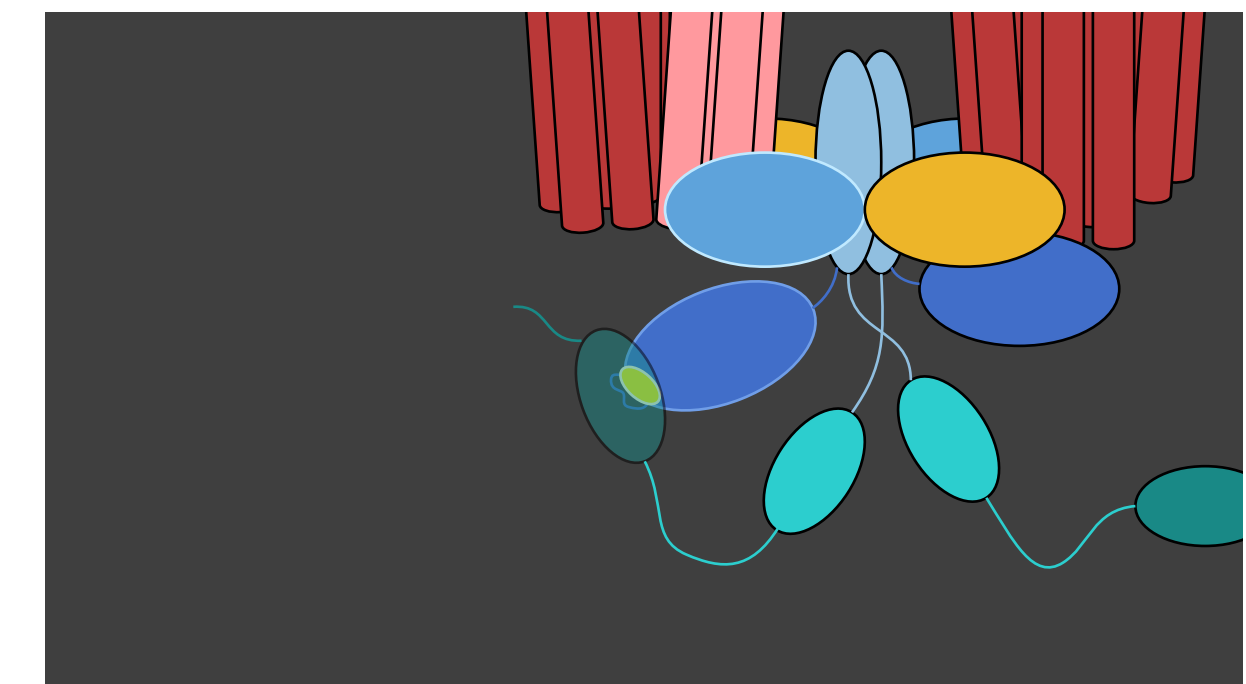
1.9
Animation: ATP diffuses through cytoplasm. Label ATP



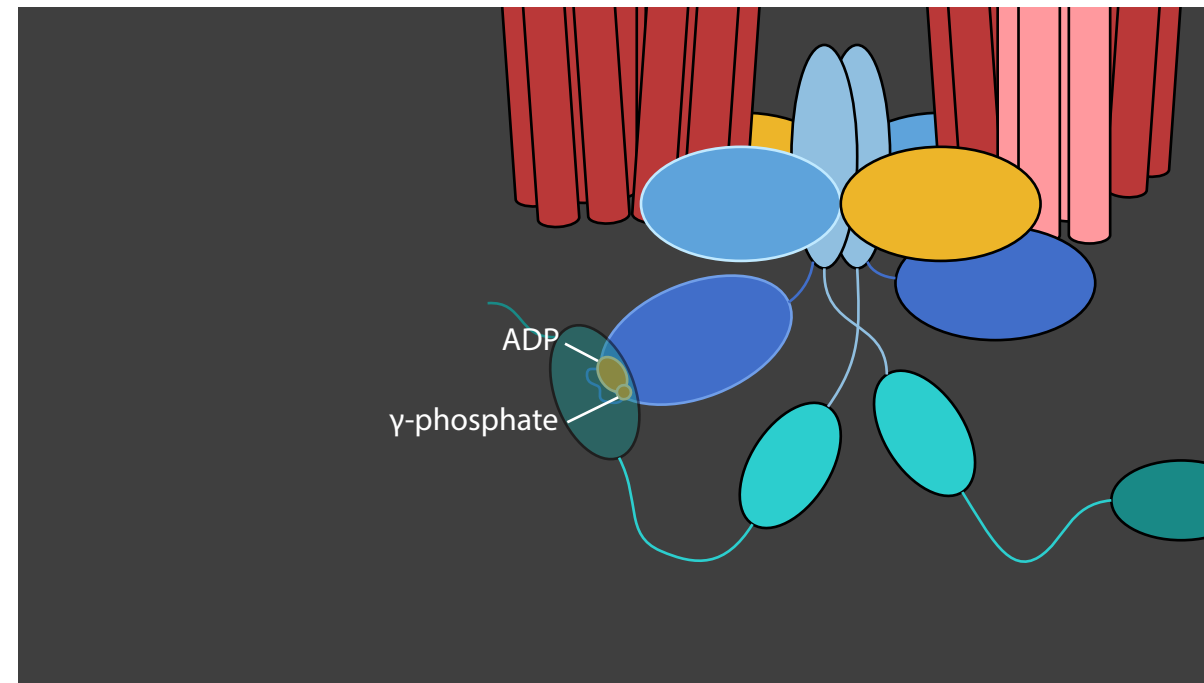
1.10
Animation: ATP binds to P4 pocket



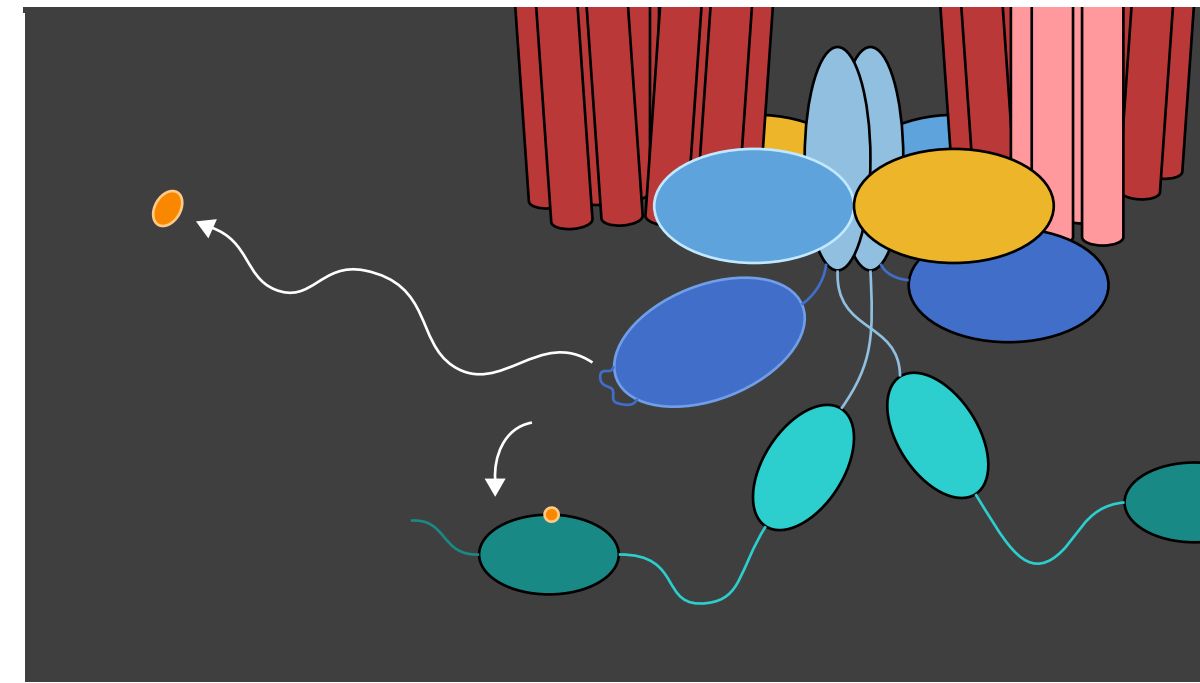
1.11
Animation: P1 docks at P4



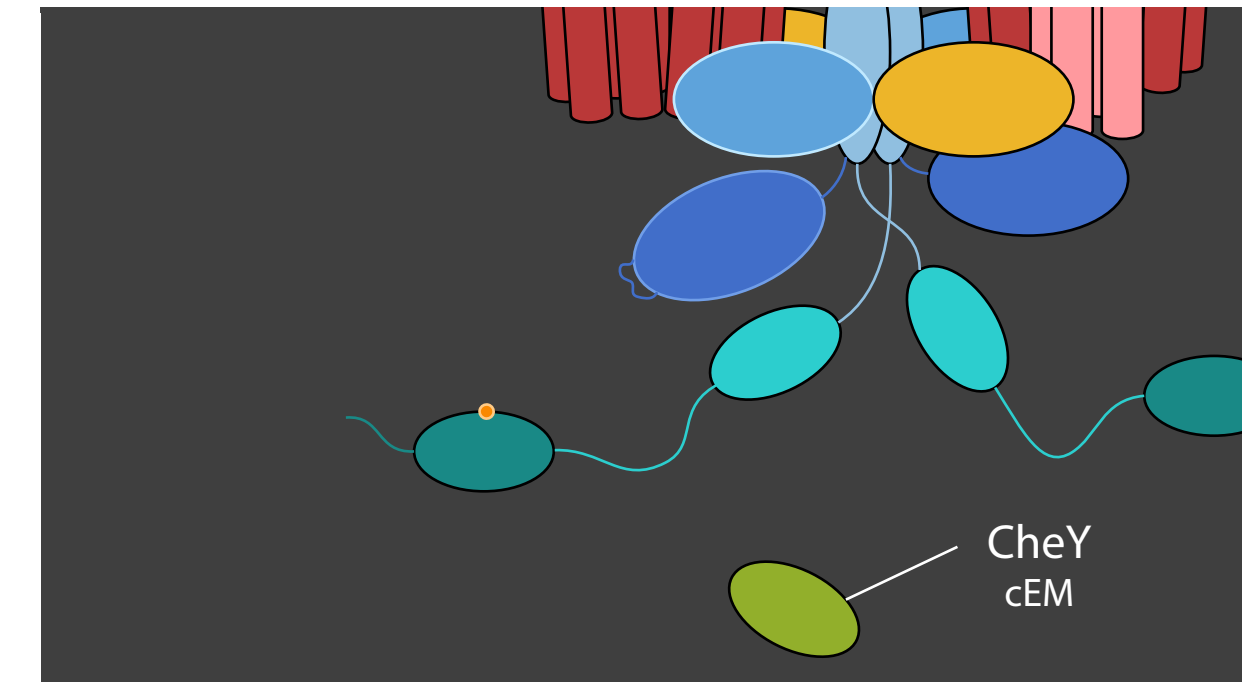
1.12
Animation: Lower opacity of P1 to see ATP



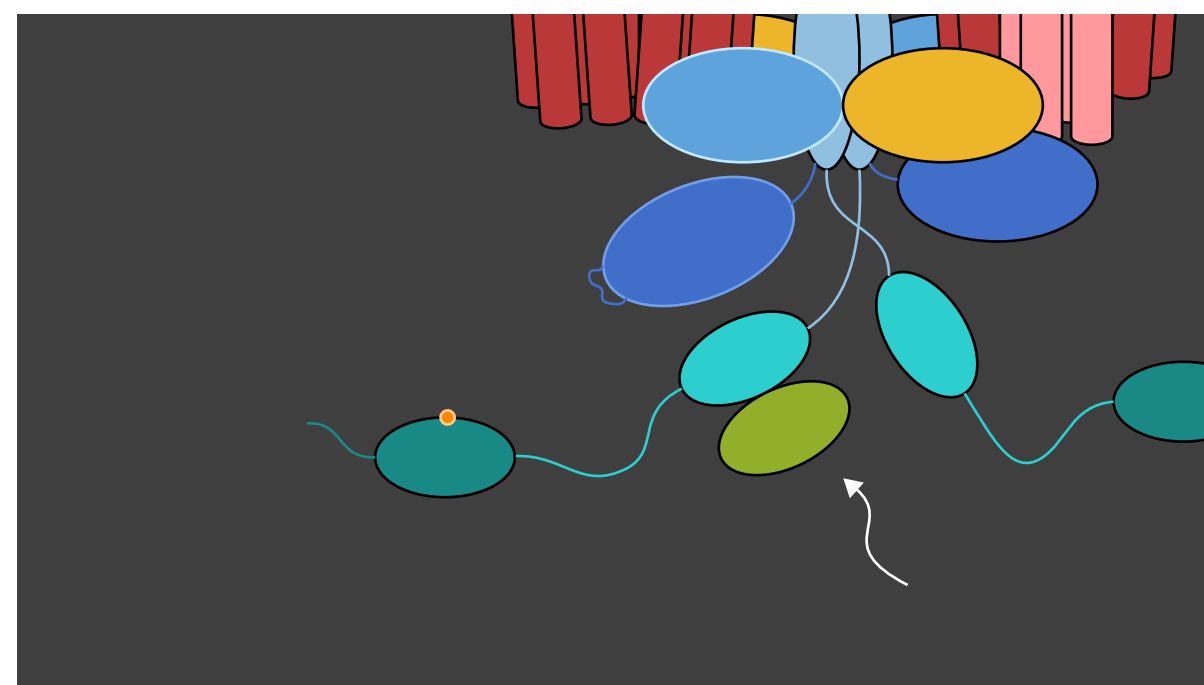
1.13
Animation: ATP turns into ADP + P.
P1 histidine takes γ -phosphate



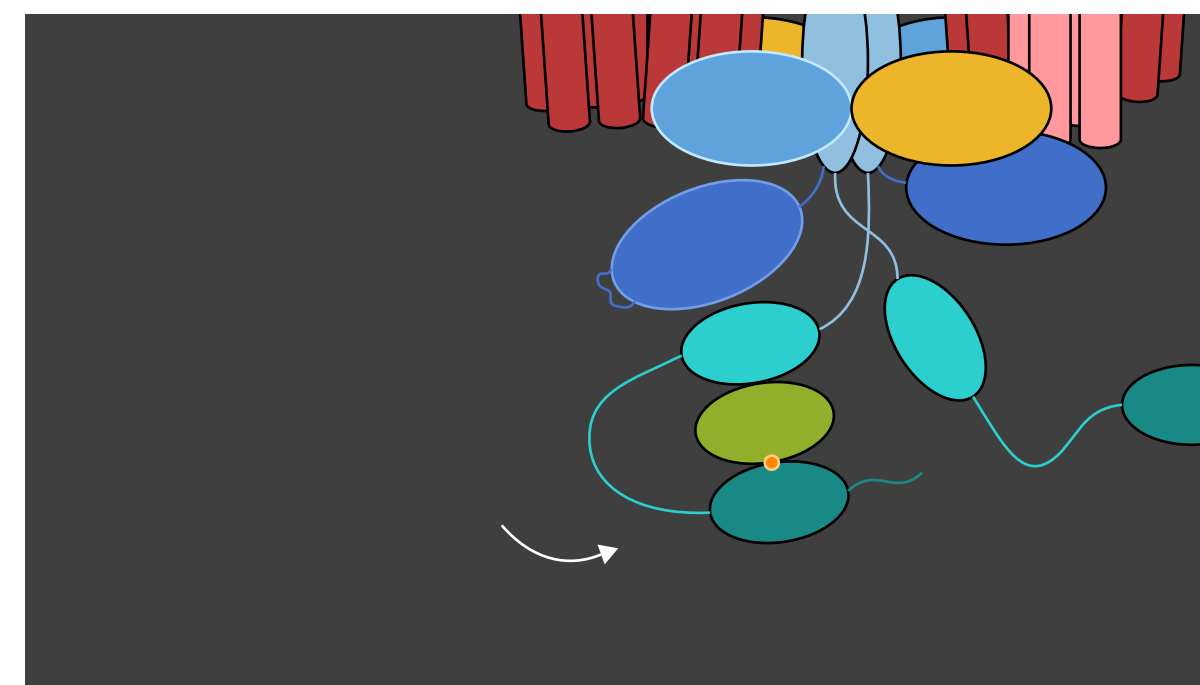
1.14
Animation: Zoom out to see ADP leaving
and P1-P undocking



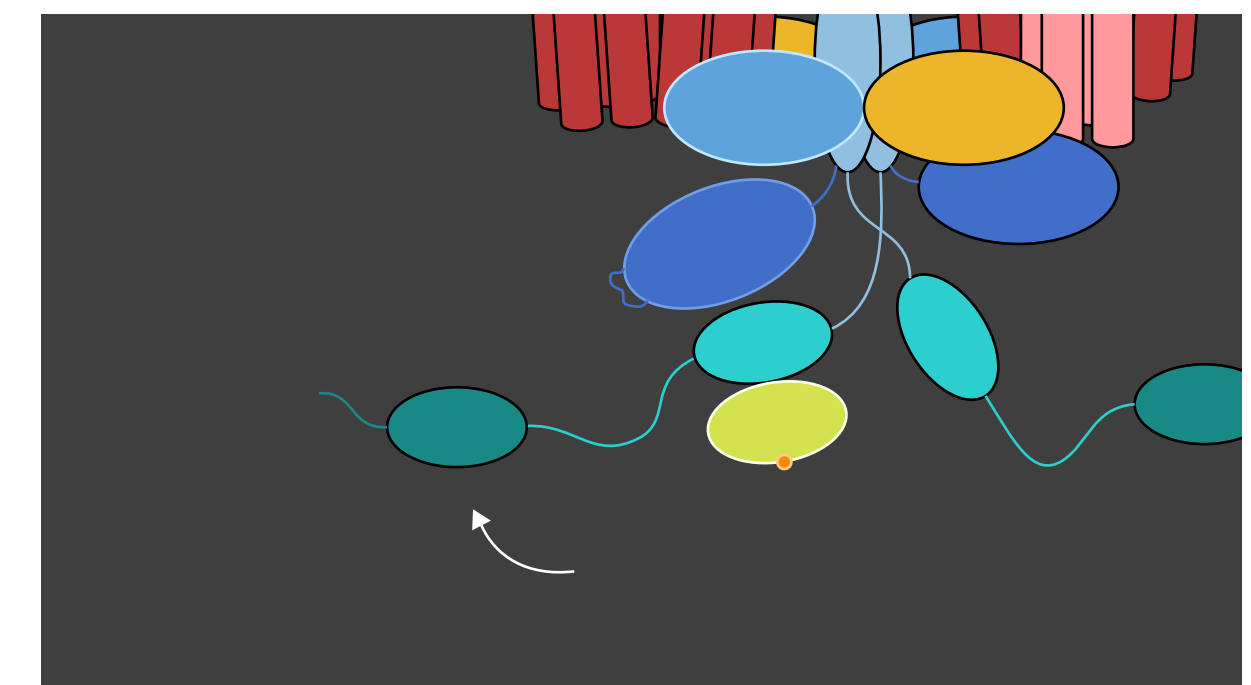
1.15
Animation: Pedestal down to see more of
the cytoplasm. CheY diffuses through
cytoplasm. Label CheY



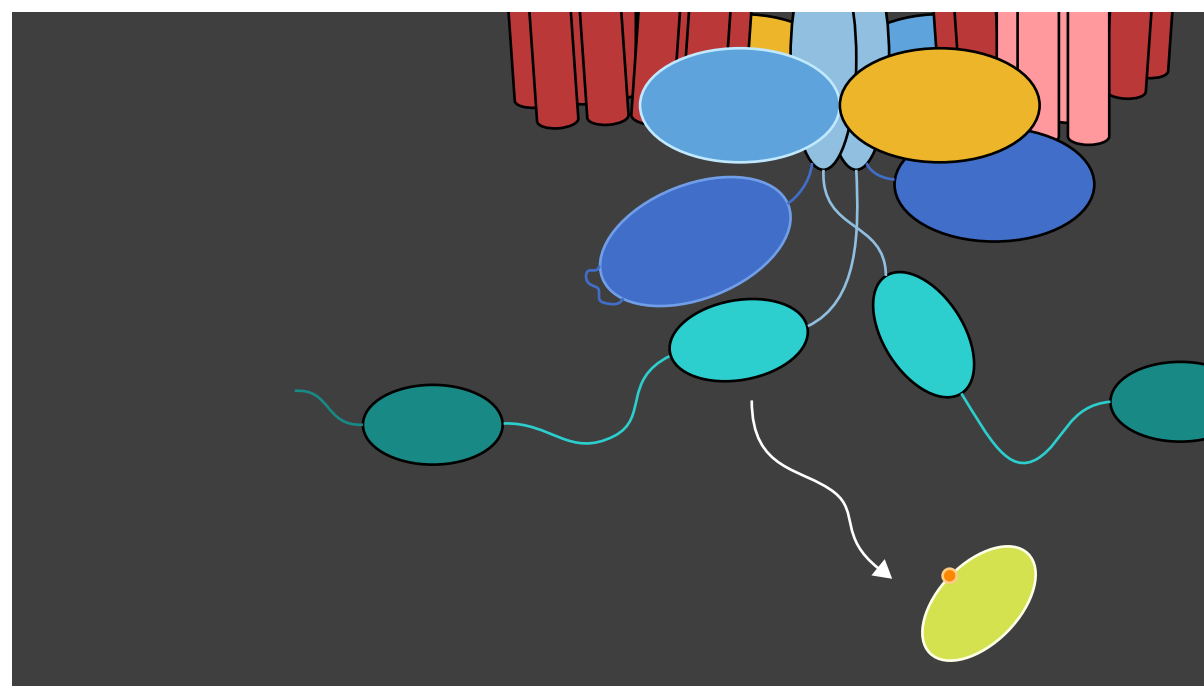
1.16
Animation: CheY binds to P2



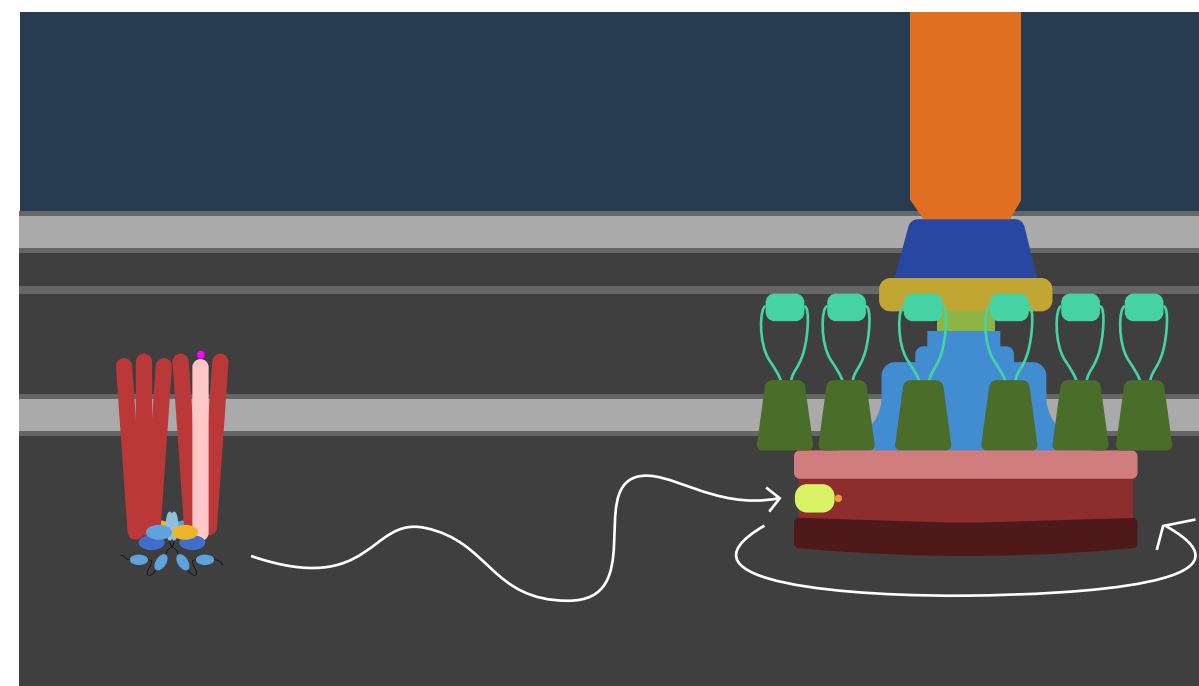
1.17
Animation: P1 binds to CheY



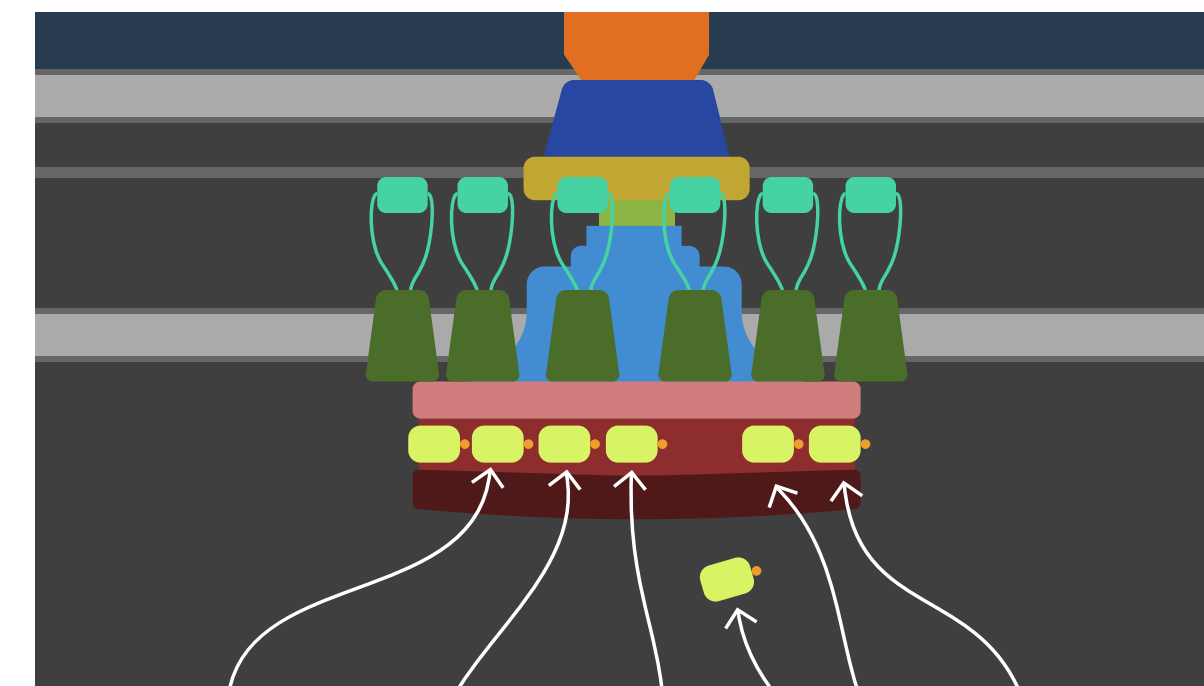
1.18
Animation: P1 transfers its phosphate to
CheY and unbinds



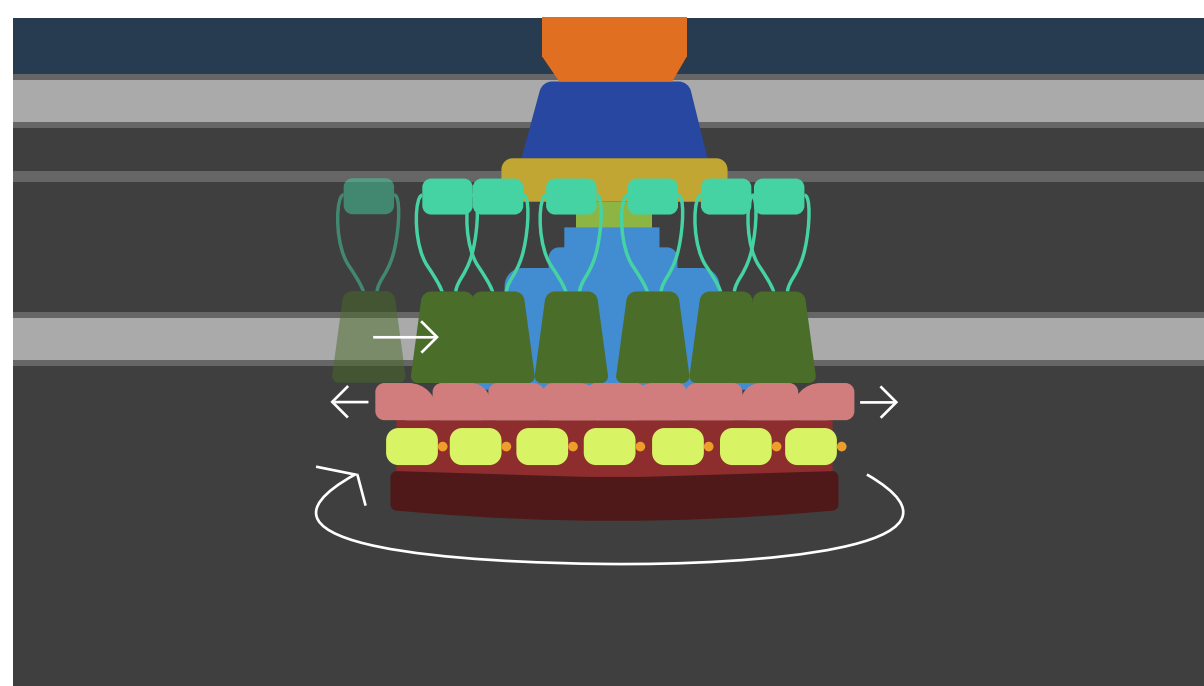
1.19
Animation: CheY-P unbinds from P2



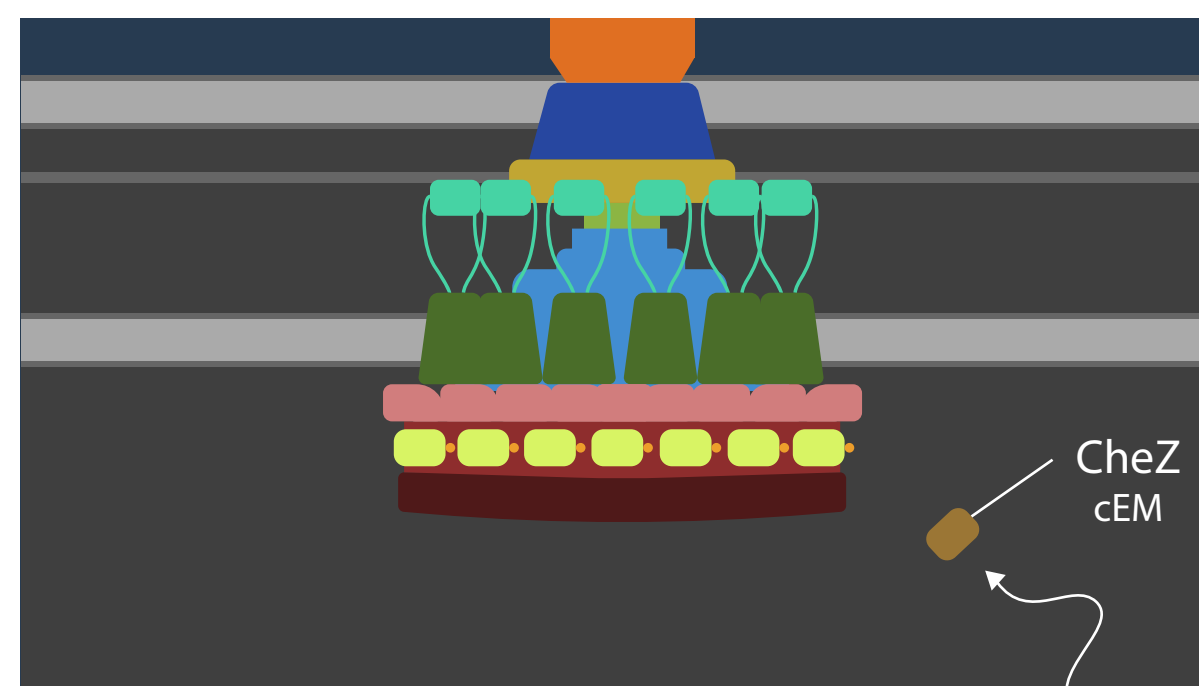
1.20
Animation: Zoom out to show CheY-P binding to FliM on the C-ring



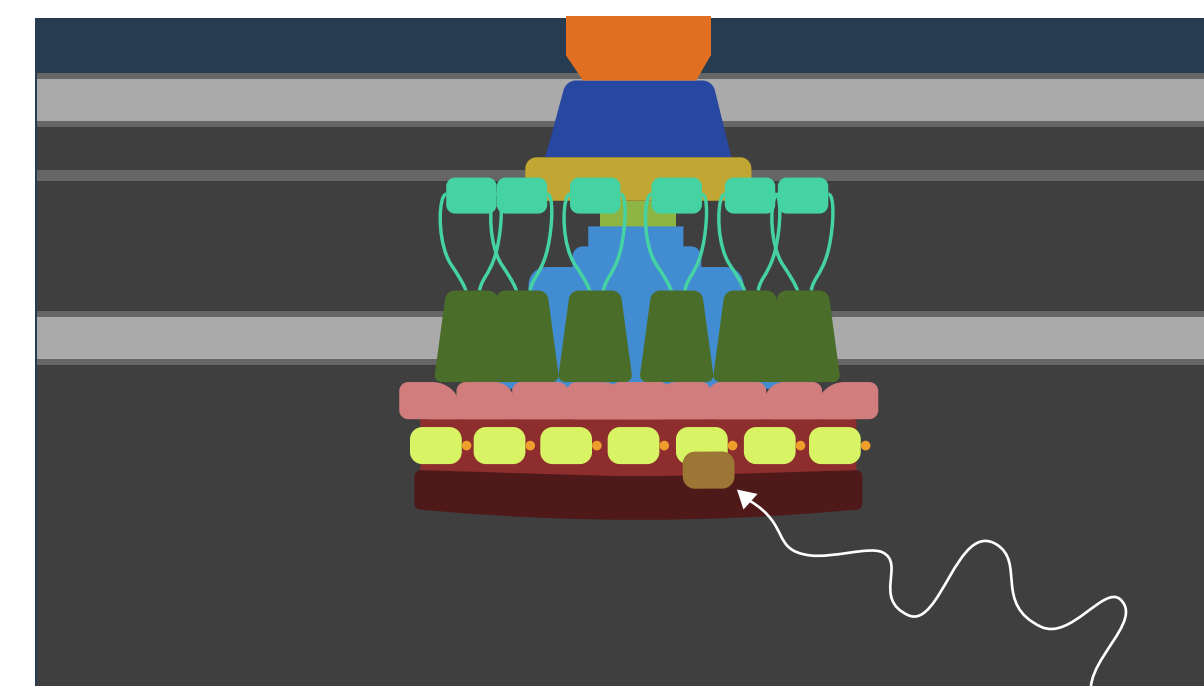
1.21
Animation: Zoom in on the motor. Multiple CheY-P molecules bind to FliM units on the C-ring



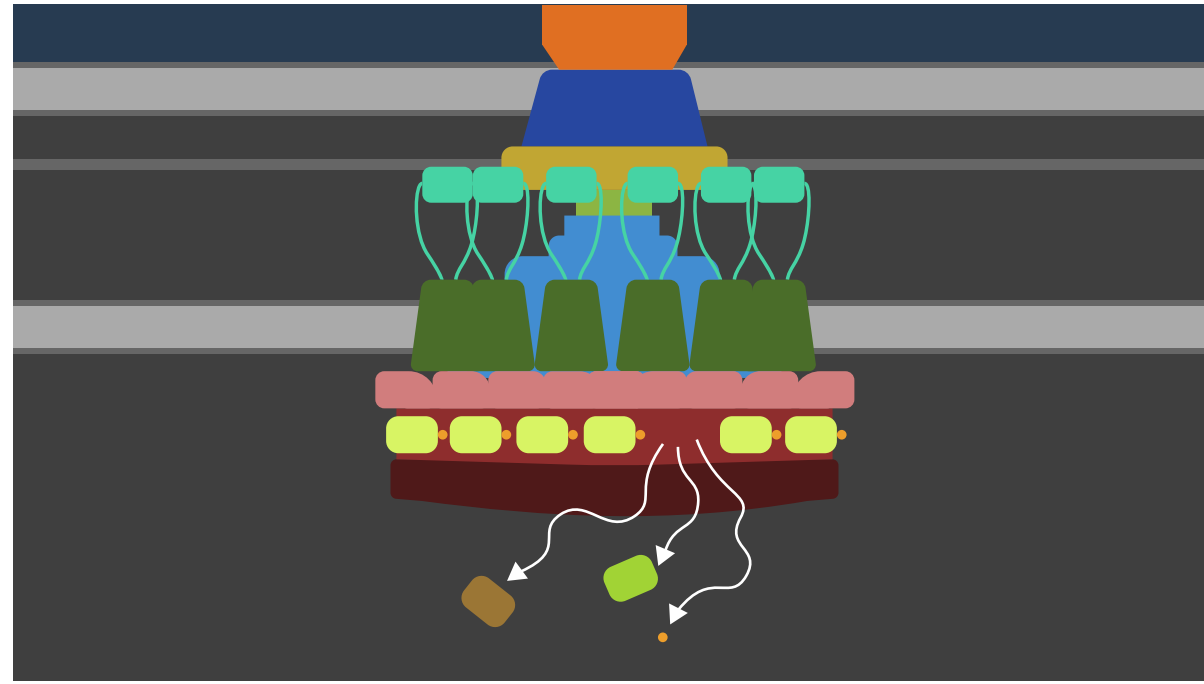
1.22
Animation: After 10 CheY bind, FliG changes conformation, stators change position and motor switches to CW rotation



1.23
Animation: CheZ diffuses through cytoplasm. Label CheZ

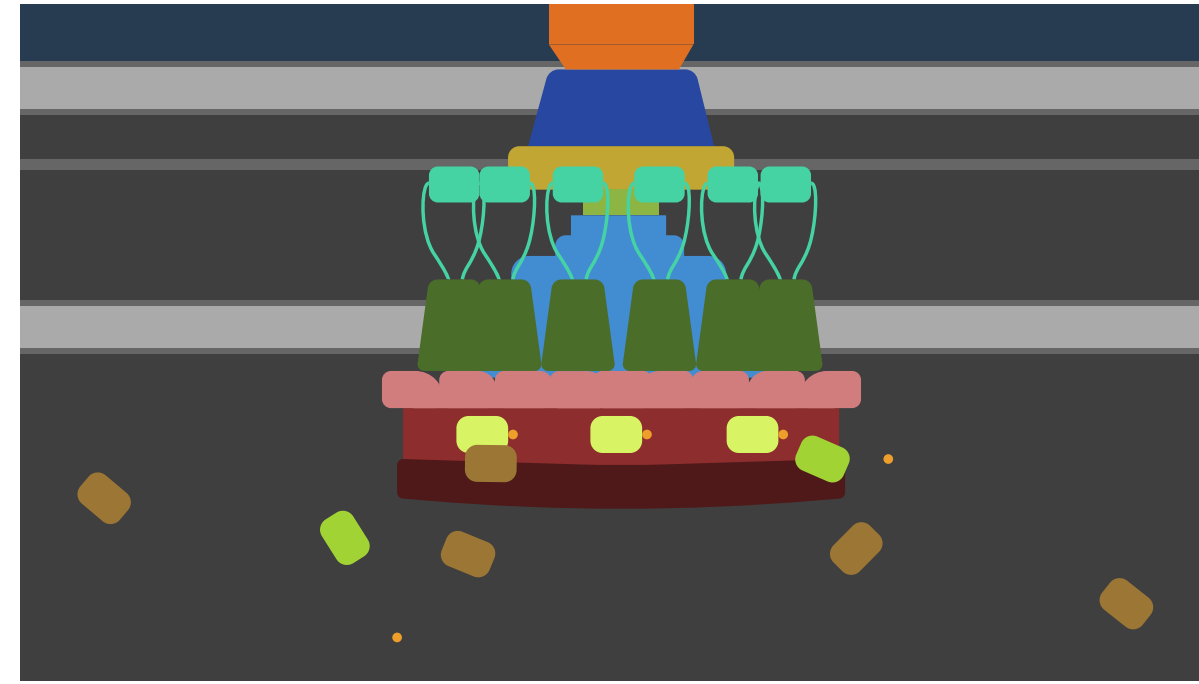


1.24
Animation: CheZ binds to CheY-P



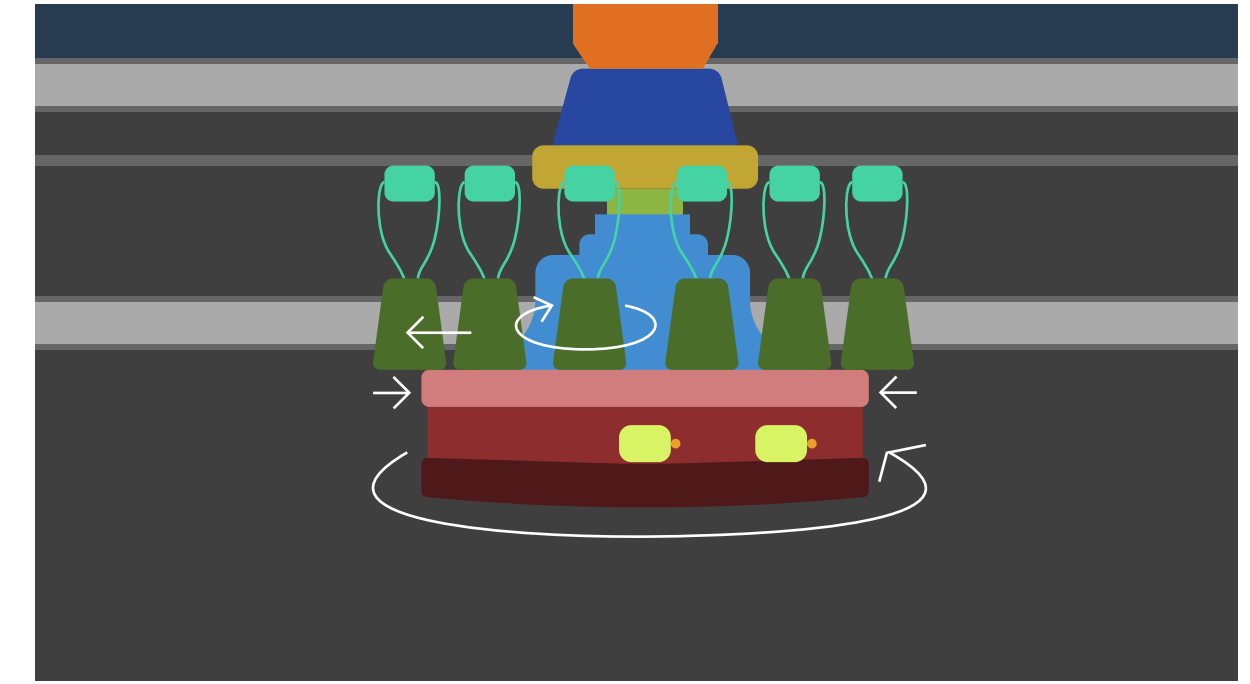
1.25

Animation: CheZ dephosphorylates CheY-P, which dissociates from FliM



1.26

Animation: Multiple CheZs continue dephosphorylating CheY-Ps



1.27

Animation: After most CheY-Ps unbind, FliG changes conformation, stators change position and motor switches to CCW rotation