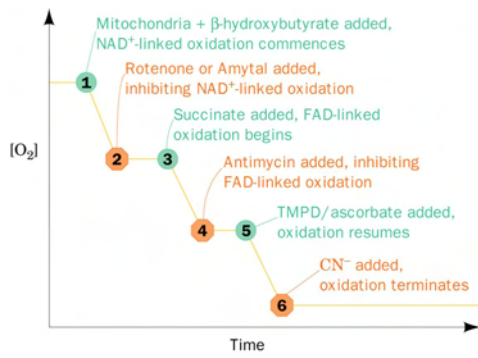
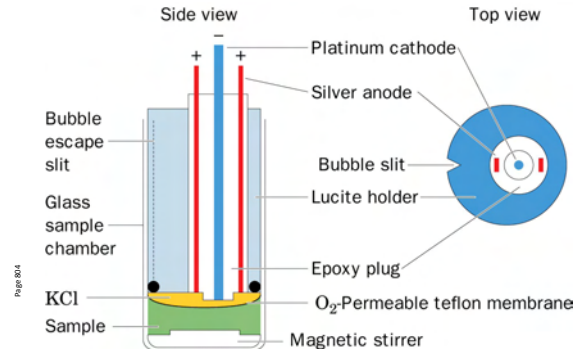


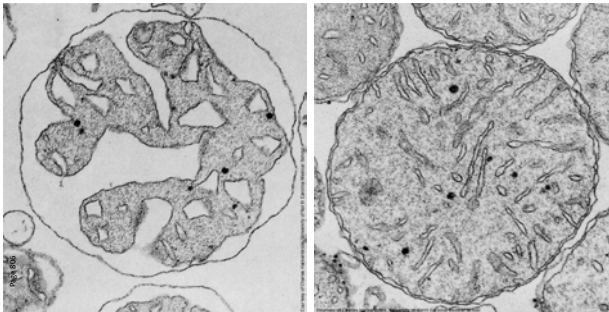
Effect of inhibitors on electron transport.



The oxygen electrode.



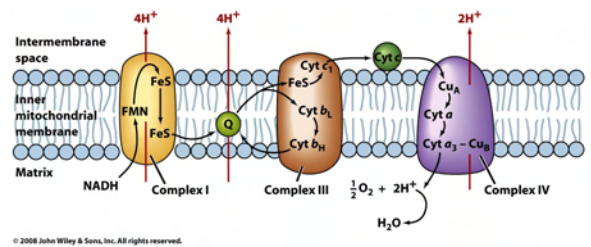
Electron micrographs of mouse liver mitochondria.



(a) In the actively respiring state.

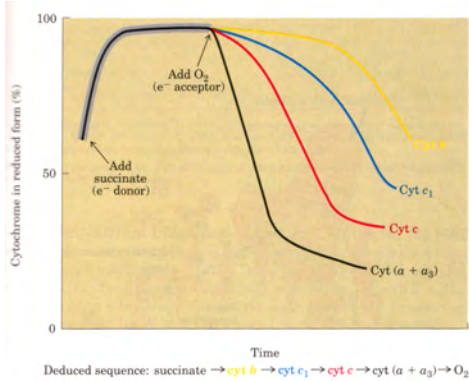
(b) In the resting state.

The mitochondrial electron-transport chain.

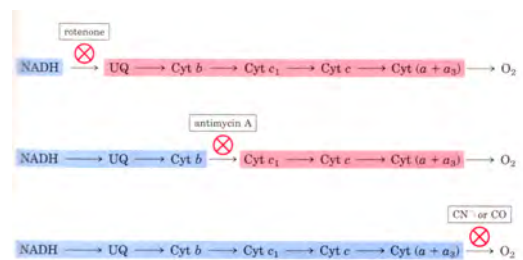


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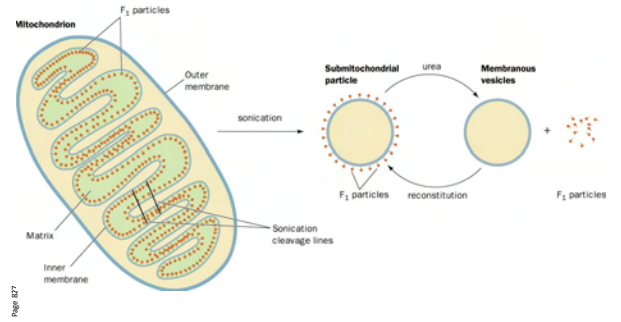
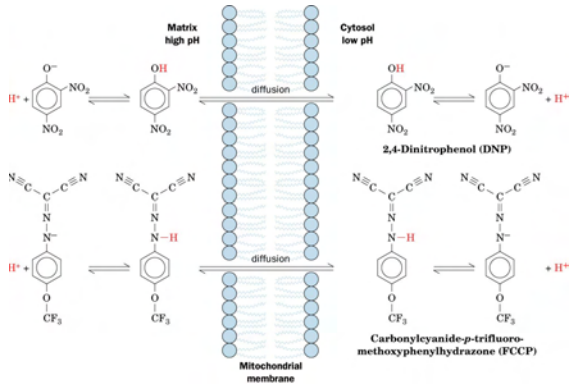
Cytochromeの電子の流れの順序



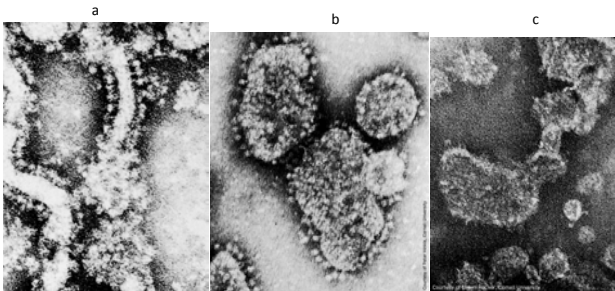
阻害剤と電子の流れ



Uncoupling of oxidative phosphorylation.

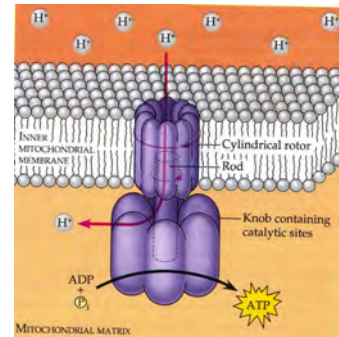


Interpretive drawings of the mitochondrial membrane at various stages of dissection.

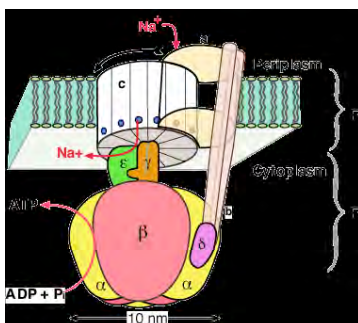


Electron micrographs of cristae from (a) intact mitochondria showing their F₁ "lollipops" projecting into the matrix, (b) submitochondrial particles, showing their outwardly projecting F₁ lollipops, and (c) submitochondrial particles after treatment with urea.

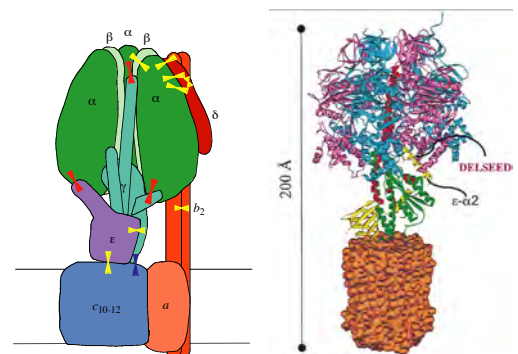
ATP synthase, a molecular machine

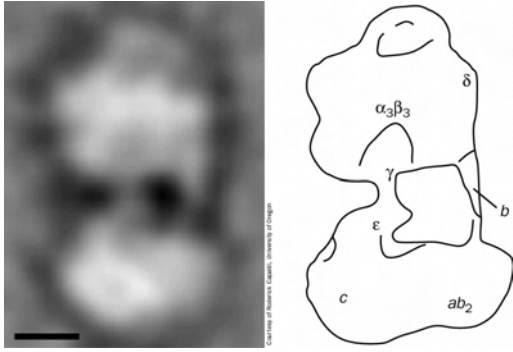


F型ATPaseモーターの構造

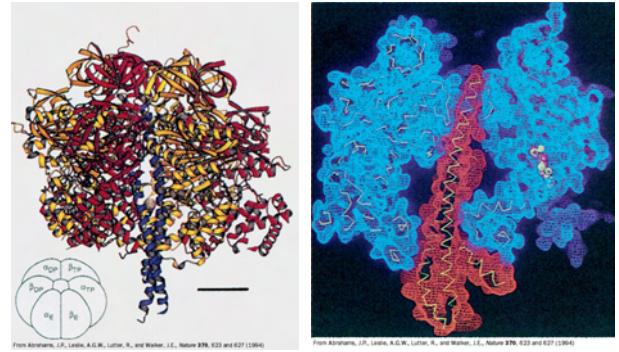


F型ATPase

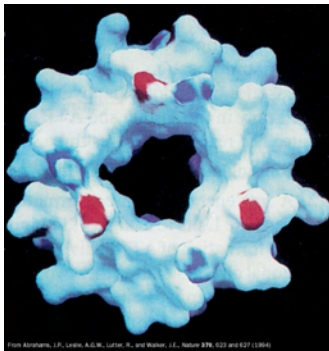




Electron microscopy-based image of *E. coli* F₁F₀-ATPase.

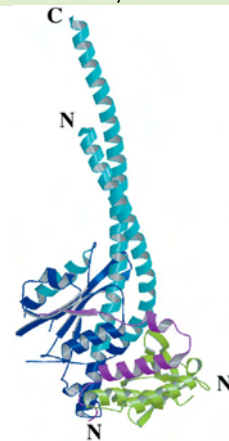


X-Ray structure of F₁-ATPase from bovine heart mitochondria.



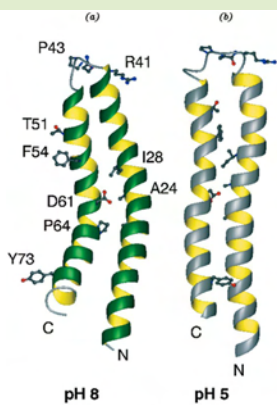
X-Ray structure of F₁-ATPase from bovine heart mitochondria. The surface of the inner portion of the $\alpha_3\beta_3$ assembly.

The γ , δ , and ϵ subunits in the X-ray structure of bovine F₁-ATPase.



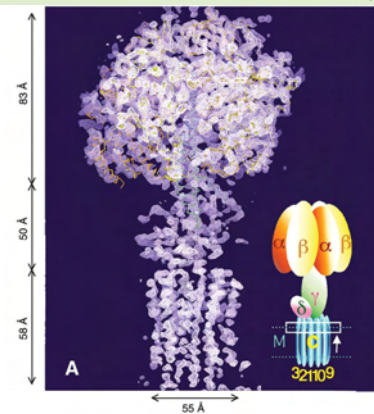
Courtesy of Andrew Leslie and John Walker, Medical Research Council, Cambridge, U.K.

NMR structures of the *c* subunit of *E. coli* F₁F₀-ATPase.

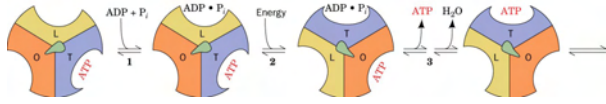


Courtesy of Mark Girvin, Albert Einstein College of Medicine

Electron density map of the yeast mitochondrial F₁-C₁₀ complex.

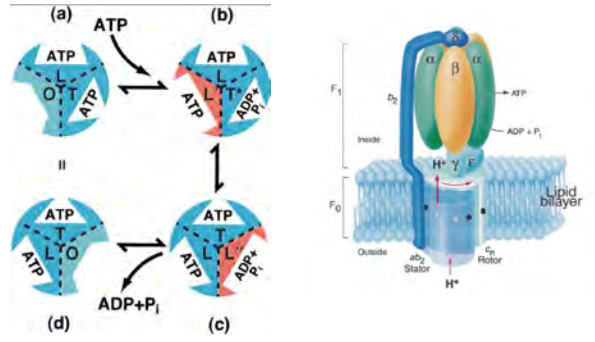


Courtesy of Andrew Leslie and John Walker, Medical Research Council, Cambridge, U.K.



Energy-dependent binding change mechanism for ATP synthesis by proton-translocating ATP synthase.

ATPaseの構造変化と触媒活性モデル



O(オープン)型: 触媒不活性で基質・生成物に親和性なし
 L(ルーズ)型: 弱い親和性をもつが、触媒活性なし
 T(タイト)型: 強い親和性をもち、触媒活性をもつ