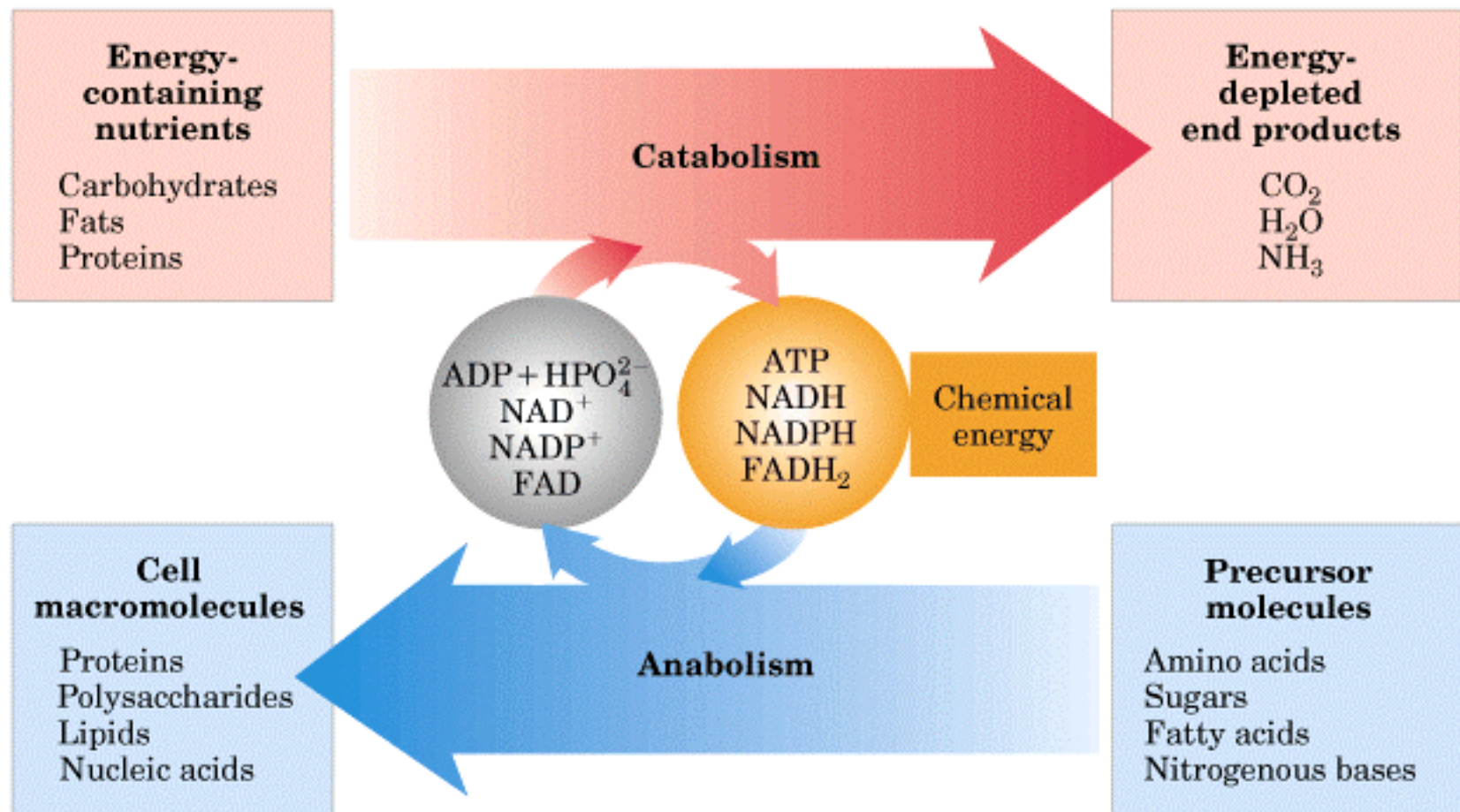
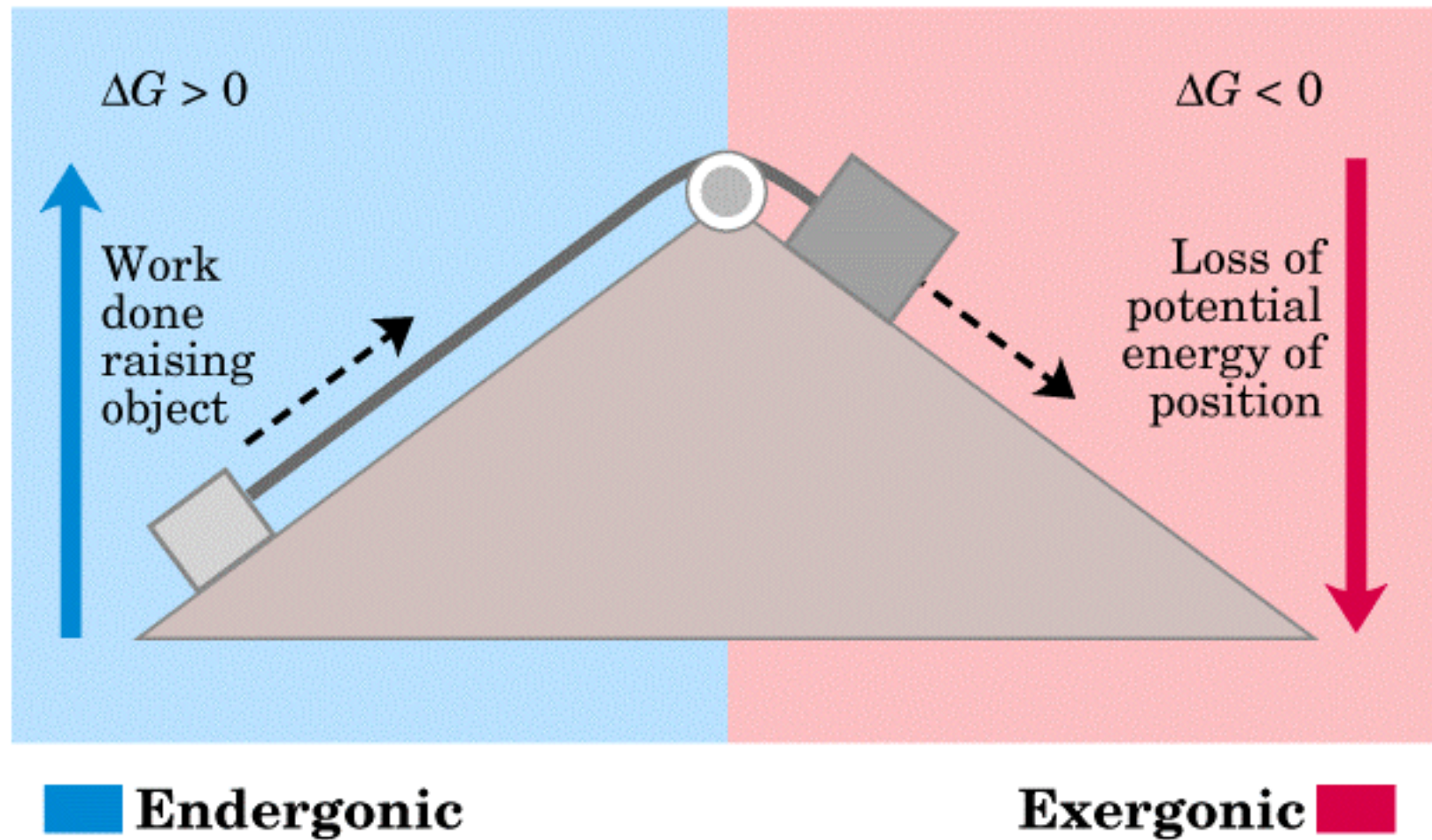


Figure 2-35 *Molecular Biology of the Cell* (© Garland Science 2008)



(a) Mechanical example

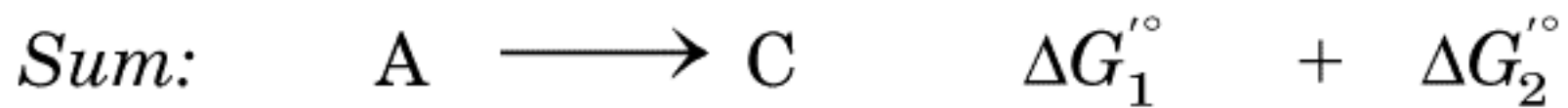
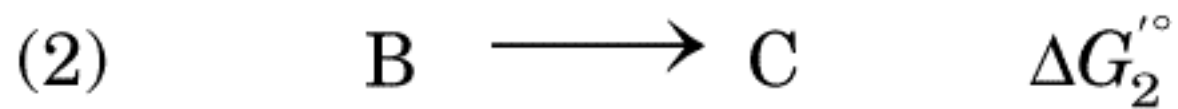


$$\Delta G'^{\circ} = -RT \ln K'_{\text{eq}}$$

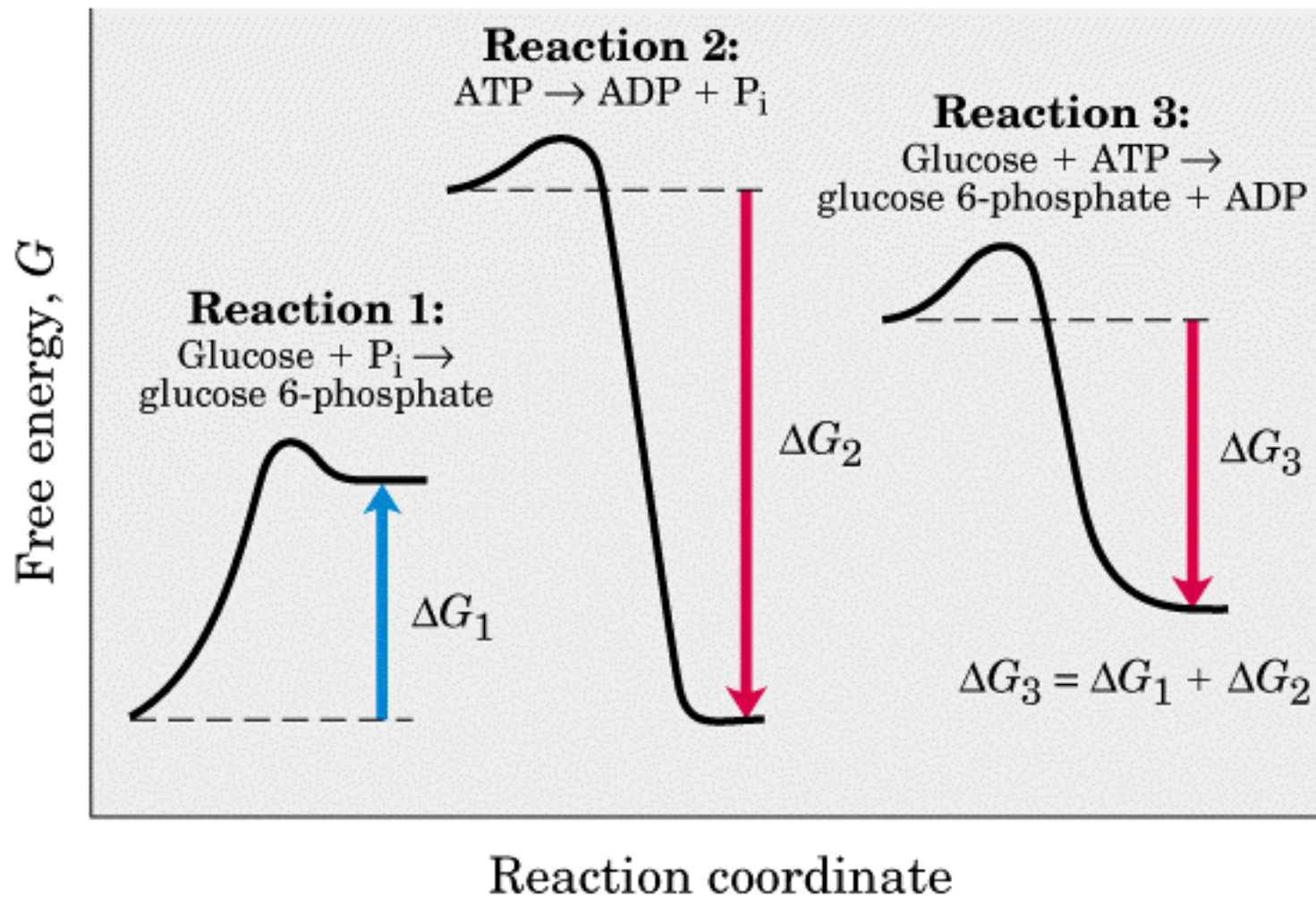
table 14–3

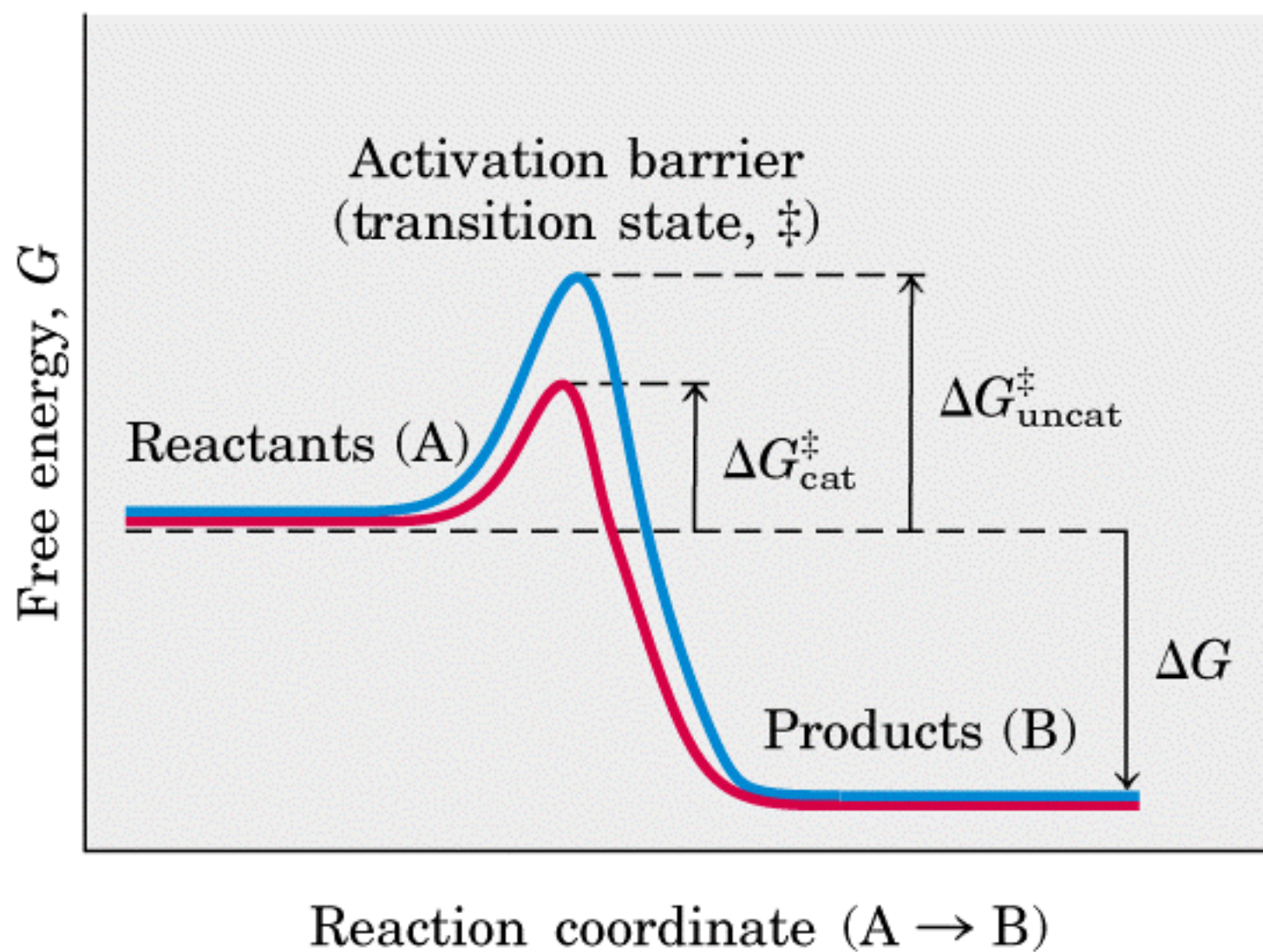
Relationships among K'_{eq} , $\Delta G'^{\circ}$, and the Direction of Chemical Reactions under Standard Conditions

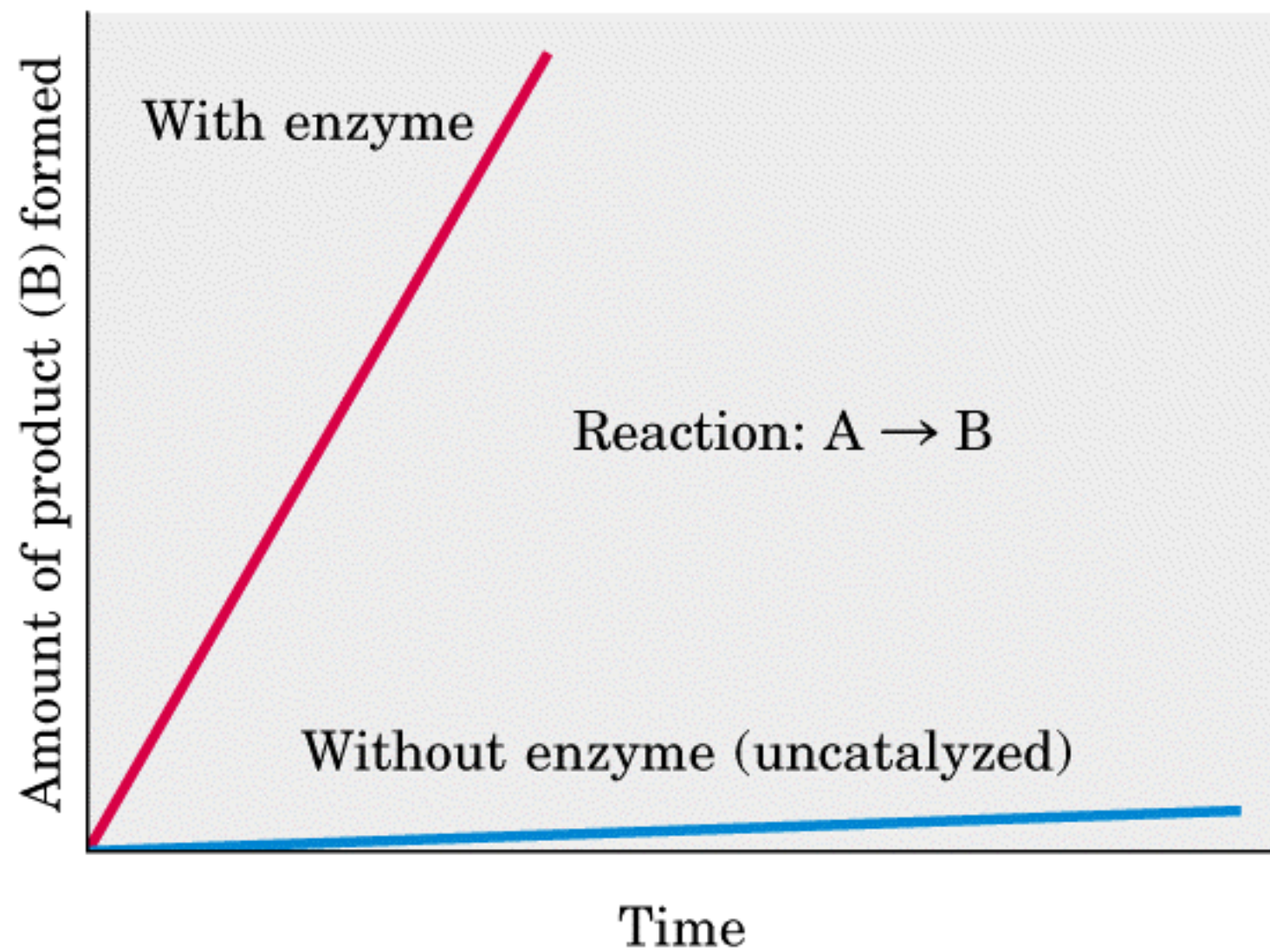
| When K'_{eq} is | $\Delta G'^{\circ}$ is | Starting with 1 M components the reaction |
|-------------------|------------------------|-------------------------------------------|
| >1.0 | Negative | Proceeds forward |
| 1.0 | Zero | Is at equilibrium |
| <1.0 | Positive | Proceeds in reverse |

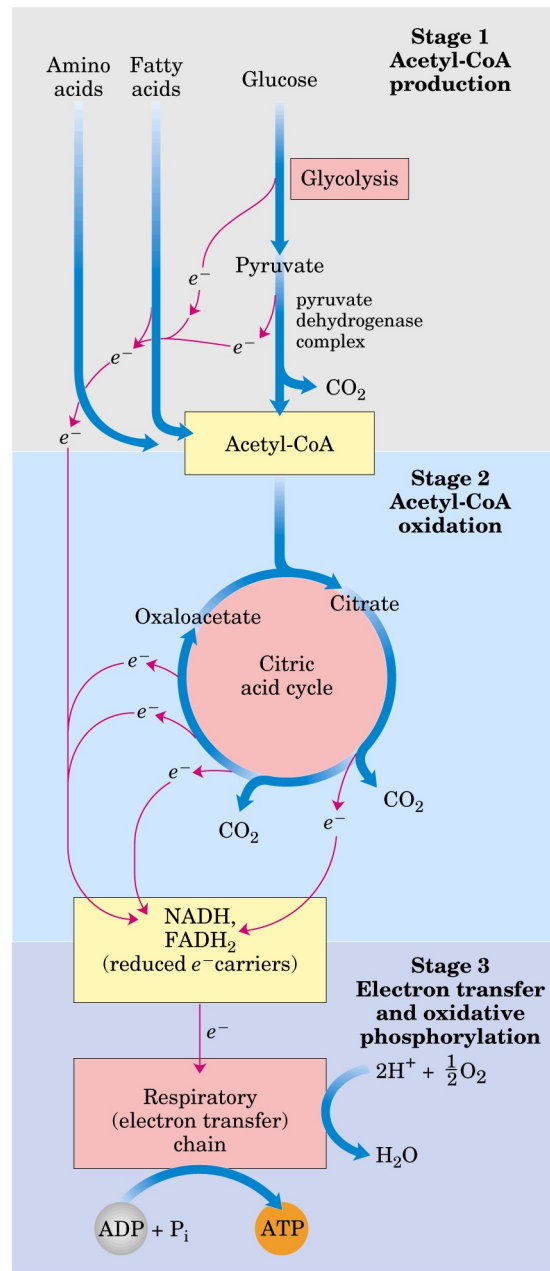


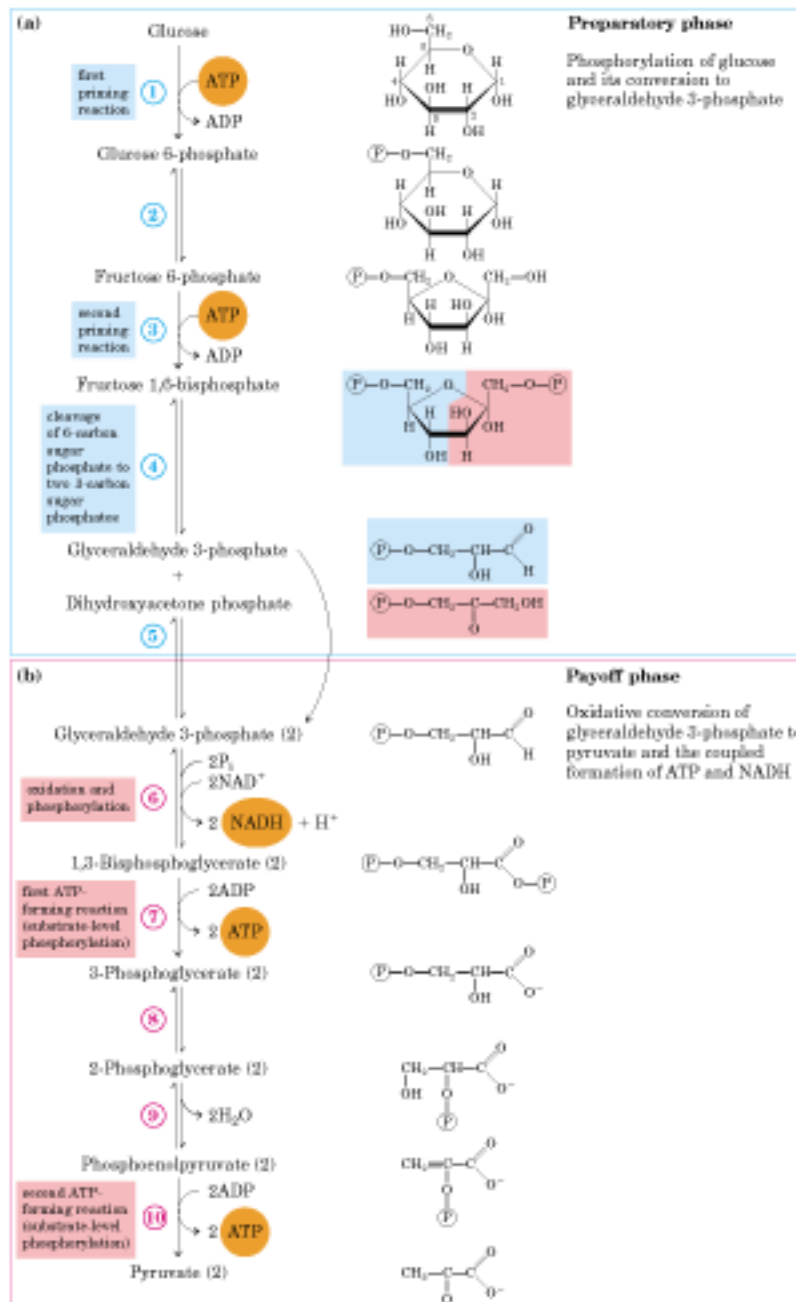
(b) Chemical example

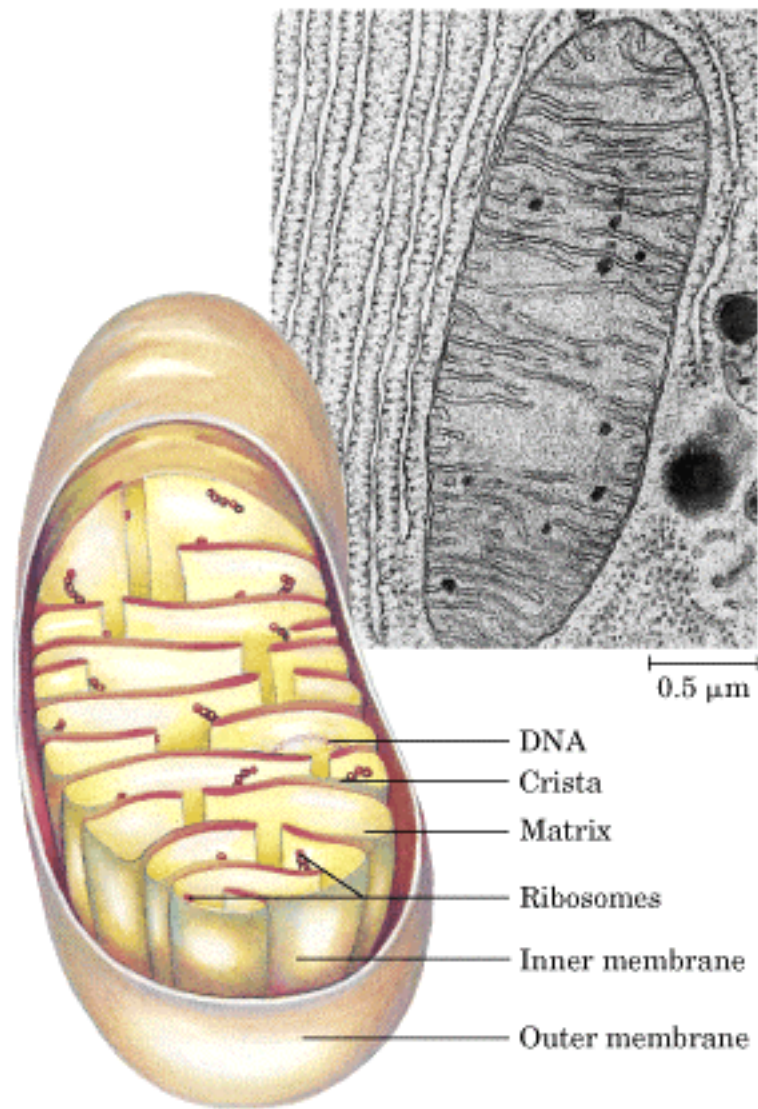


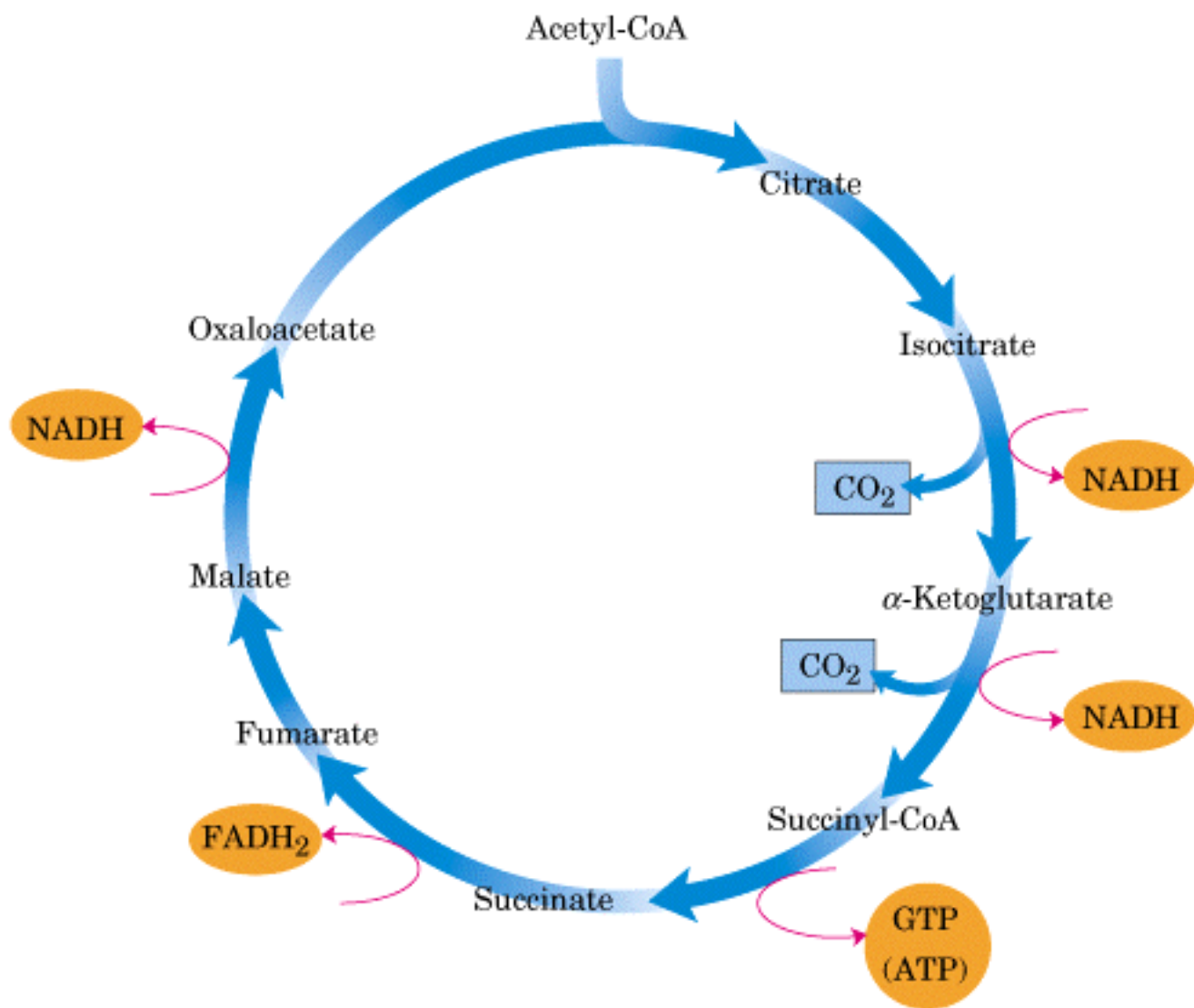












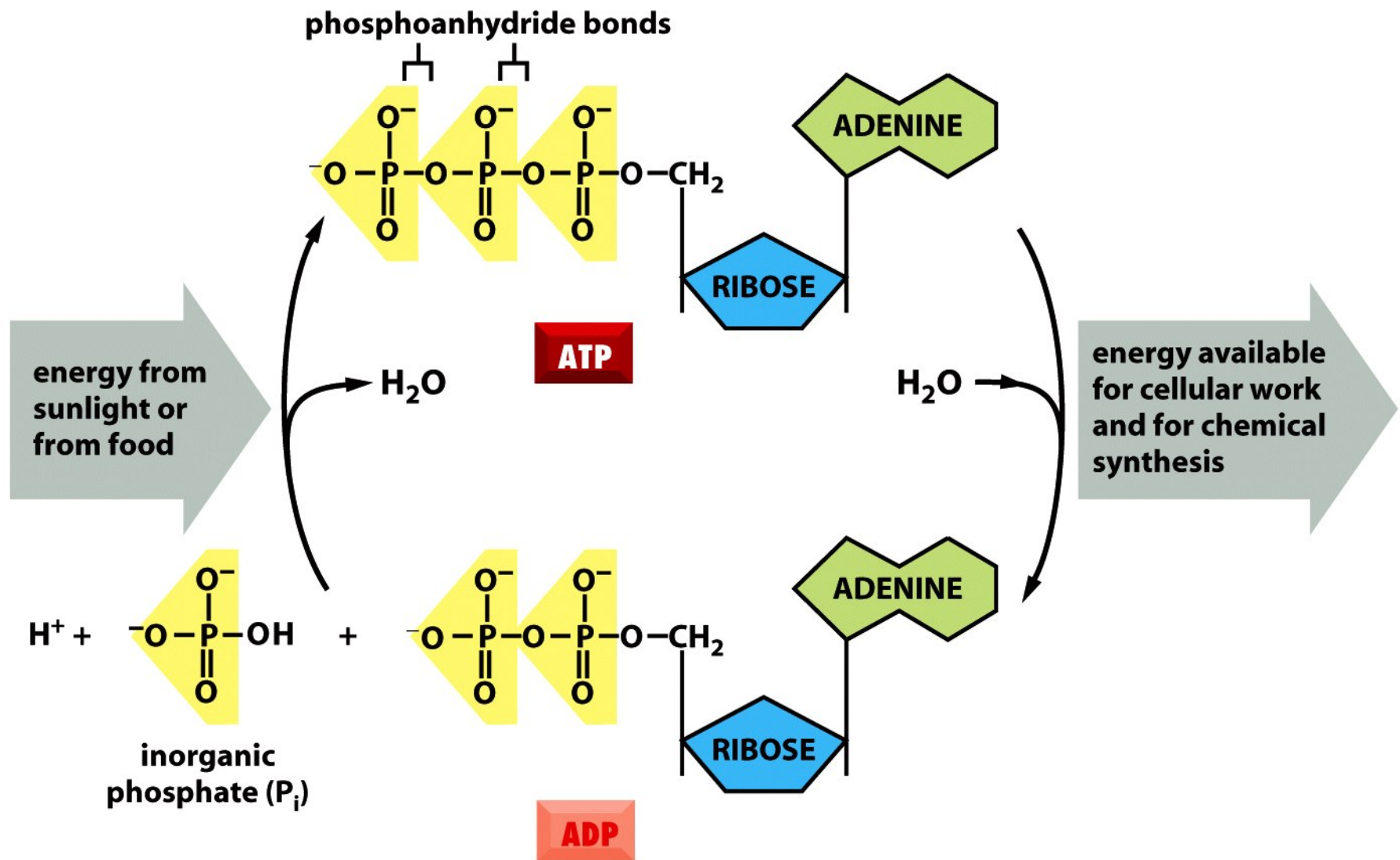
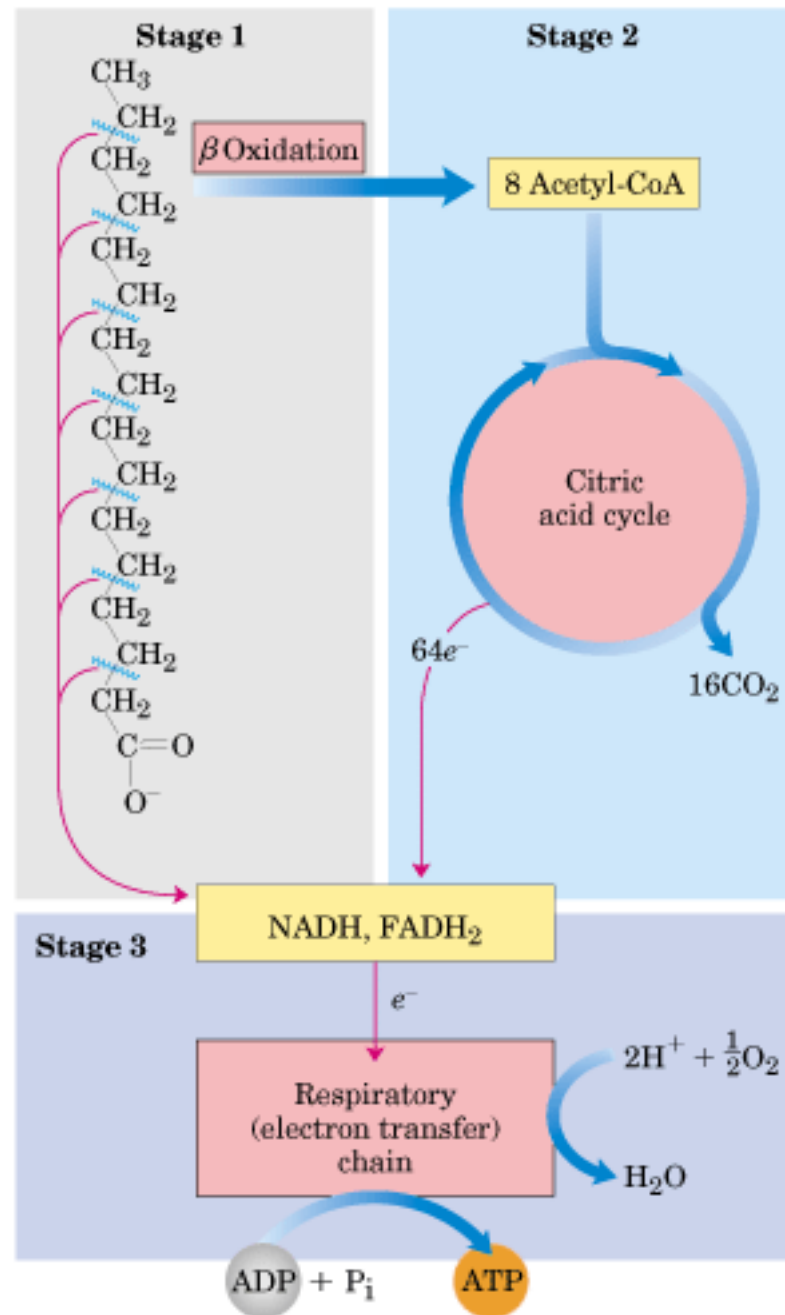
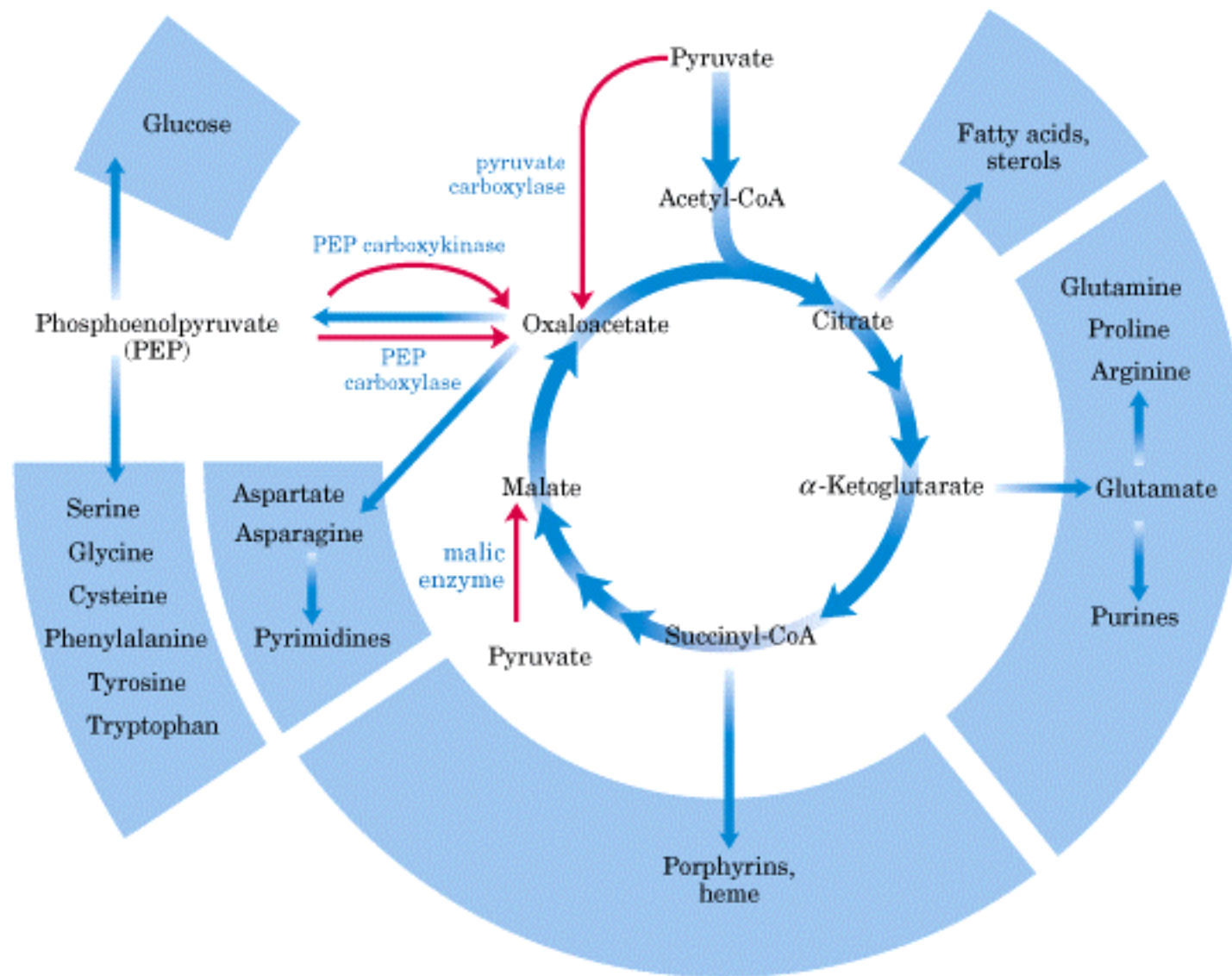
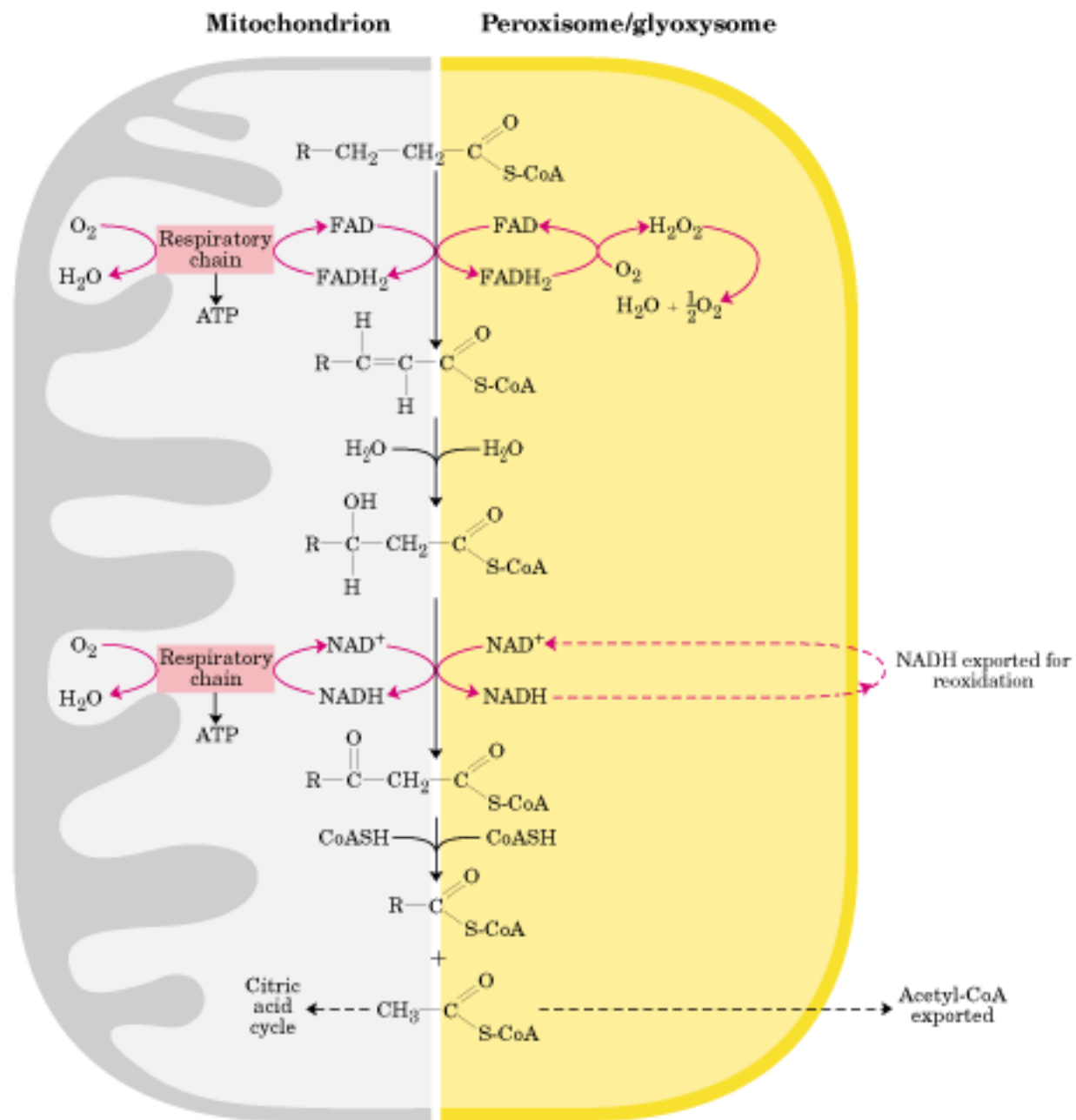


Figure 2-27 *Molecular Biology of the Cell* (© Garland Science 2008)







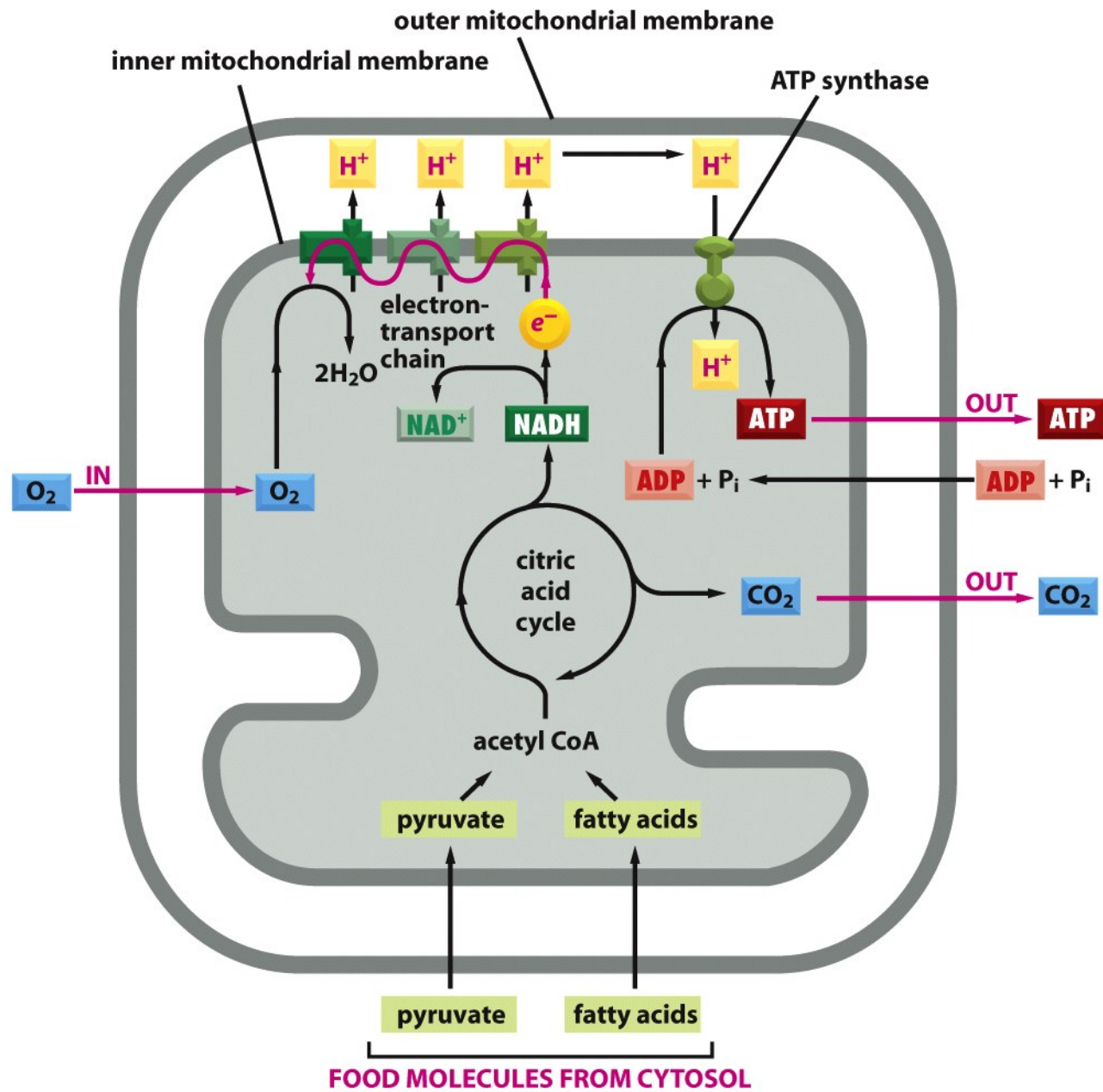
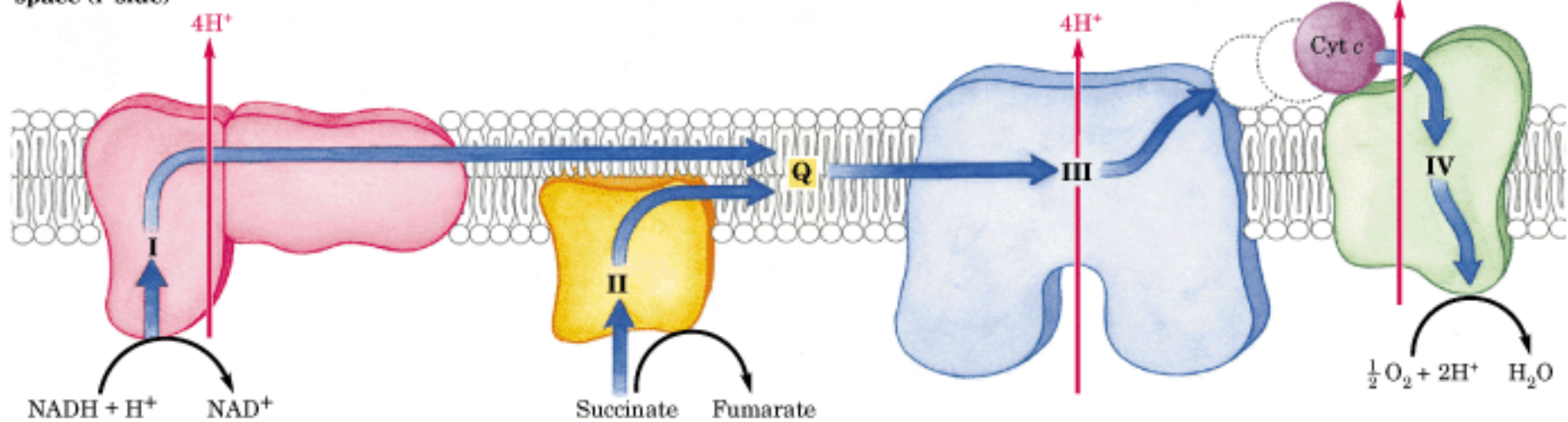


Figure 14-10 *Molecular Biology of the Cell* (© Garland Science 2008)

Intermembrane
space (P side)



Matrix (N side)

MITOCHONDRION

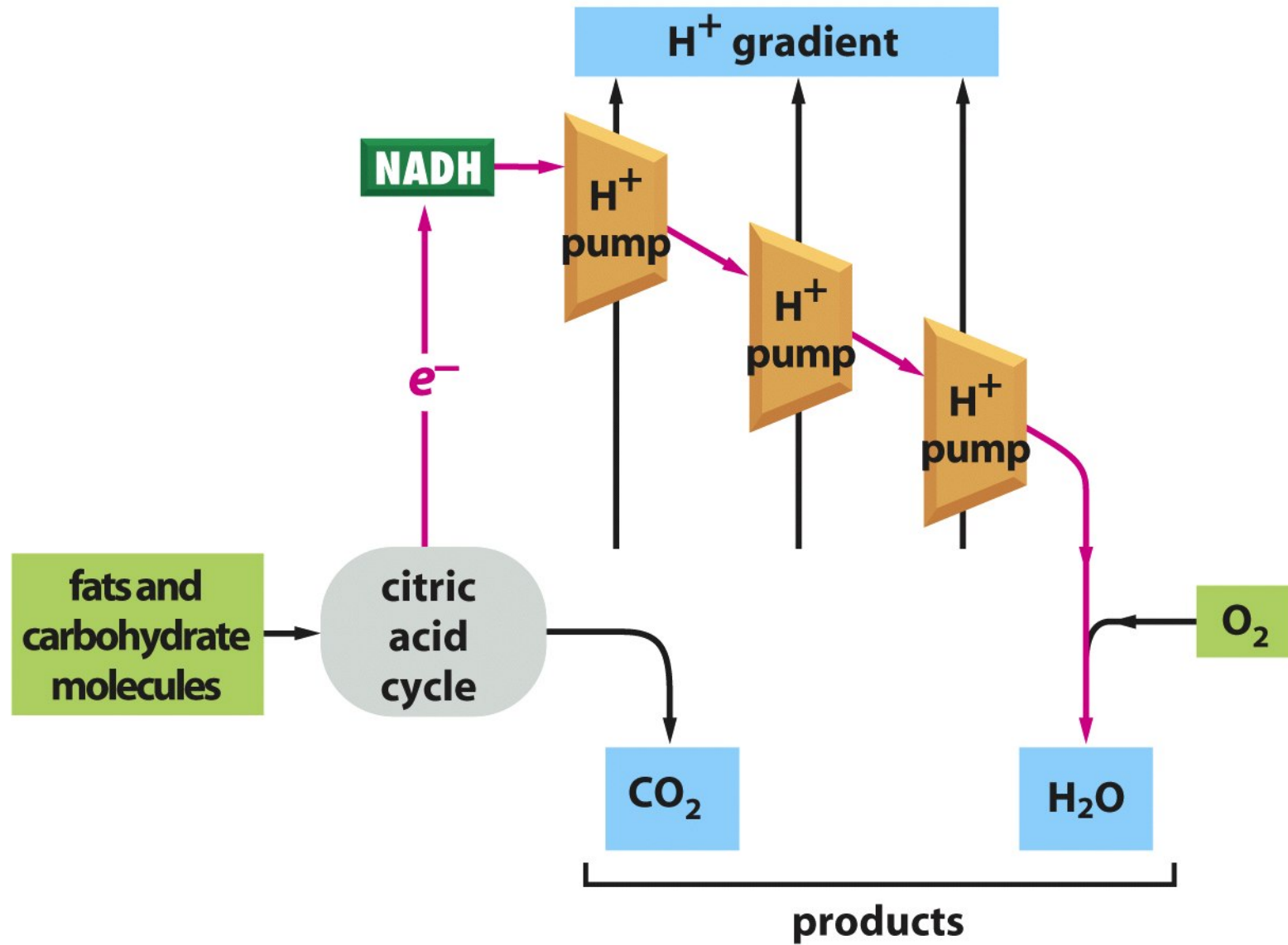


Figure 14-3a *Molecular Biology of the Cell* (© Garland Science 2008)

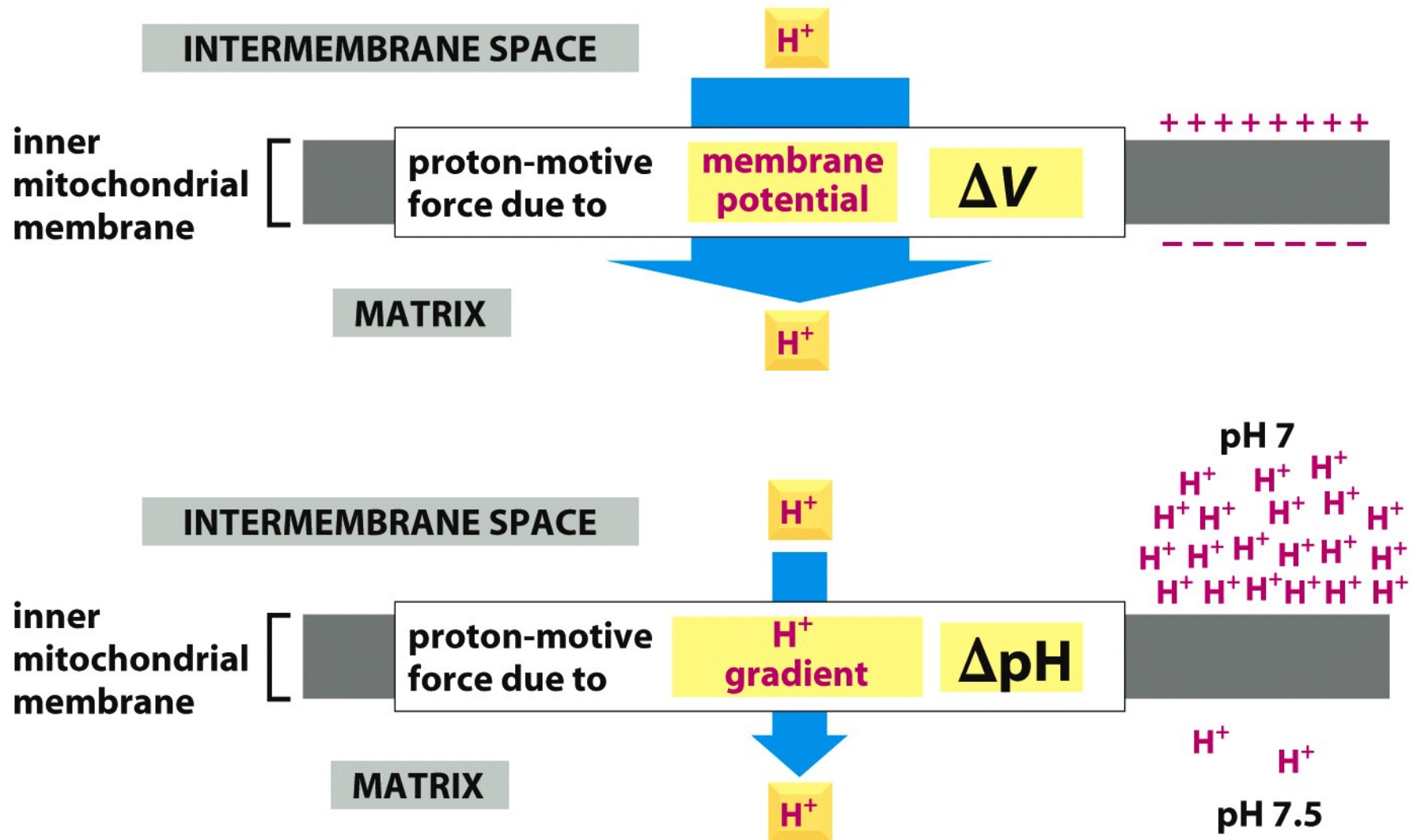


Figure 14-13 *Molecular Biology of the Cell* (© Garland Science 2008)

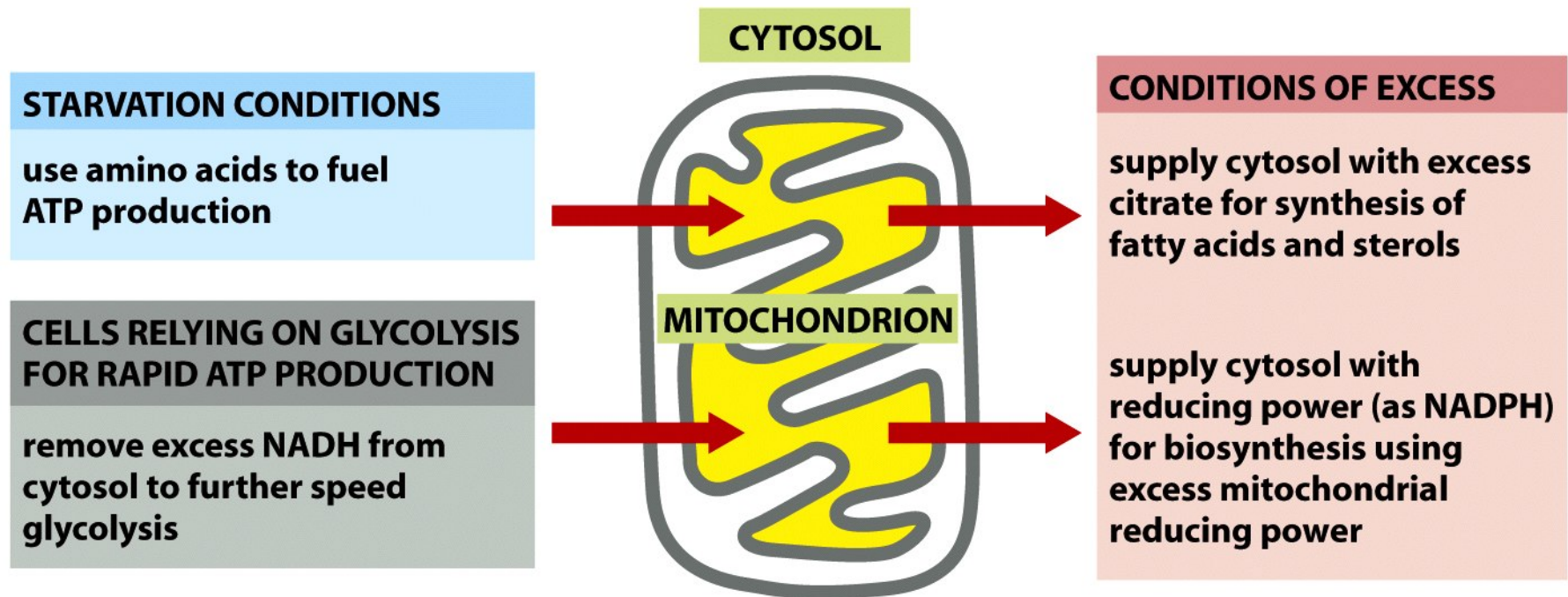
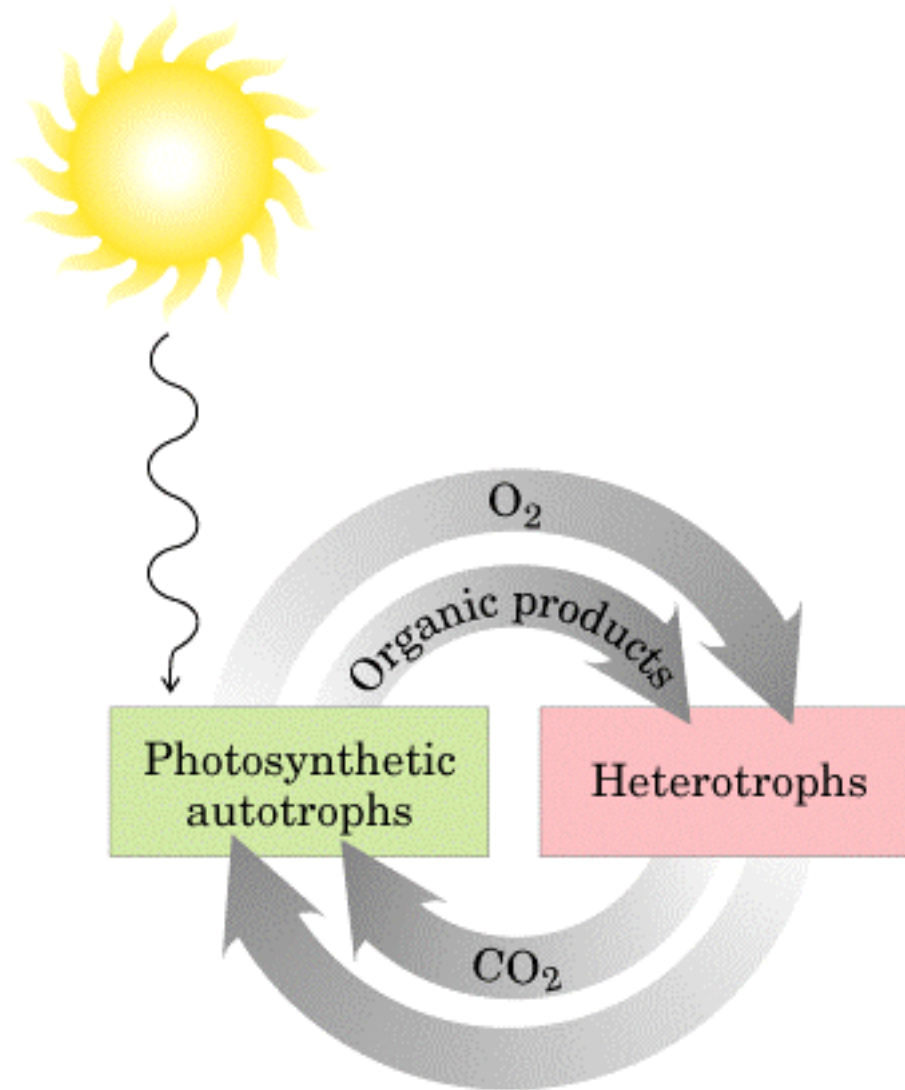


Figure 14-32 *Molecular Biology of the Cell* (© Garland Science 2008)



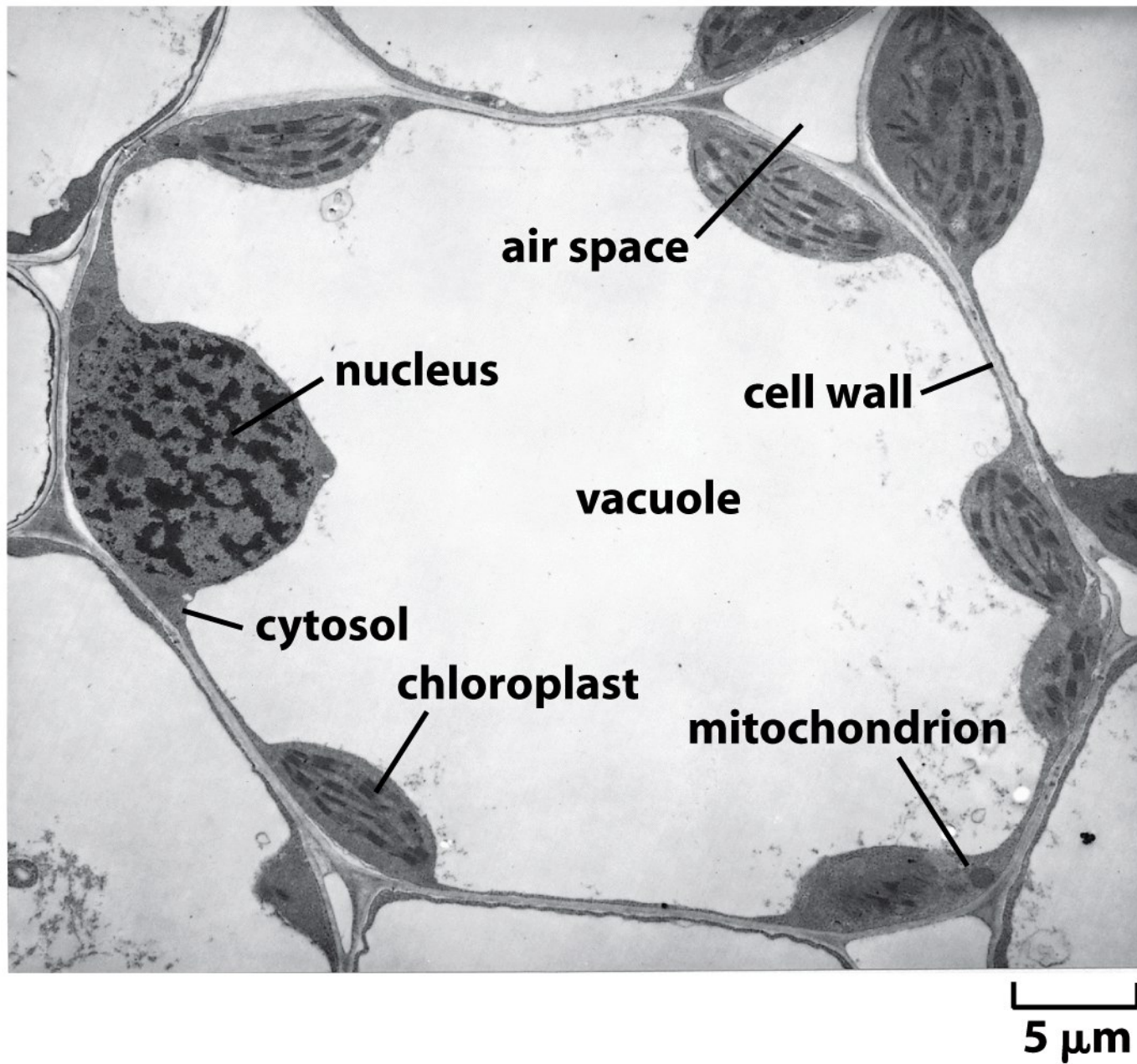


Figure 14-35a *Molecular Biology of the Cell* (© Garland Science 2008)

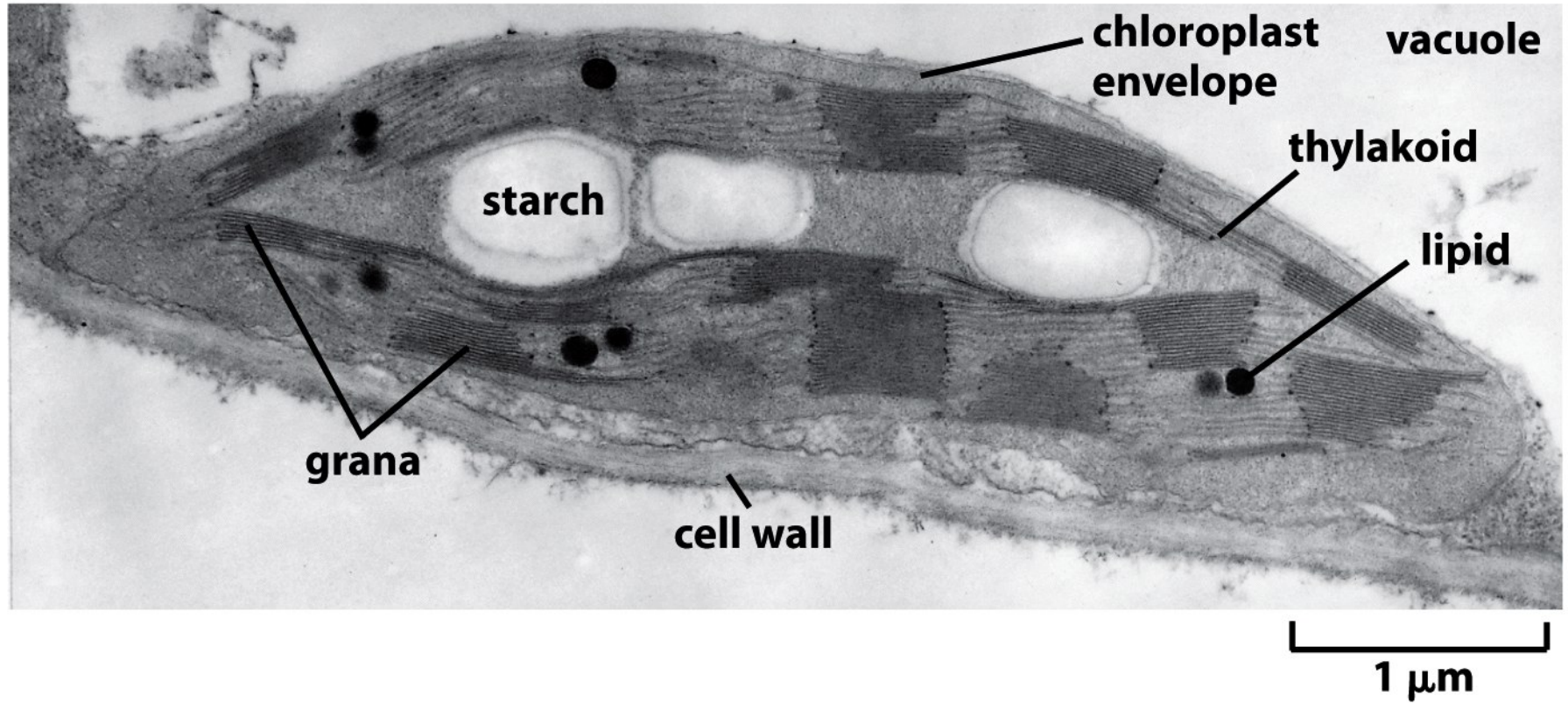


Figure 14-35b *Molecular Biology of the Cell* (© Garland Science 2008)

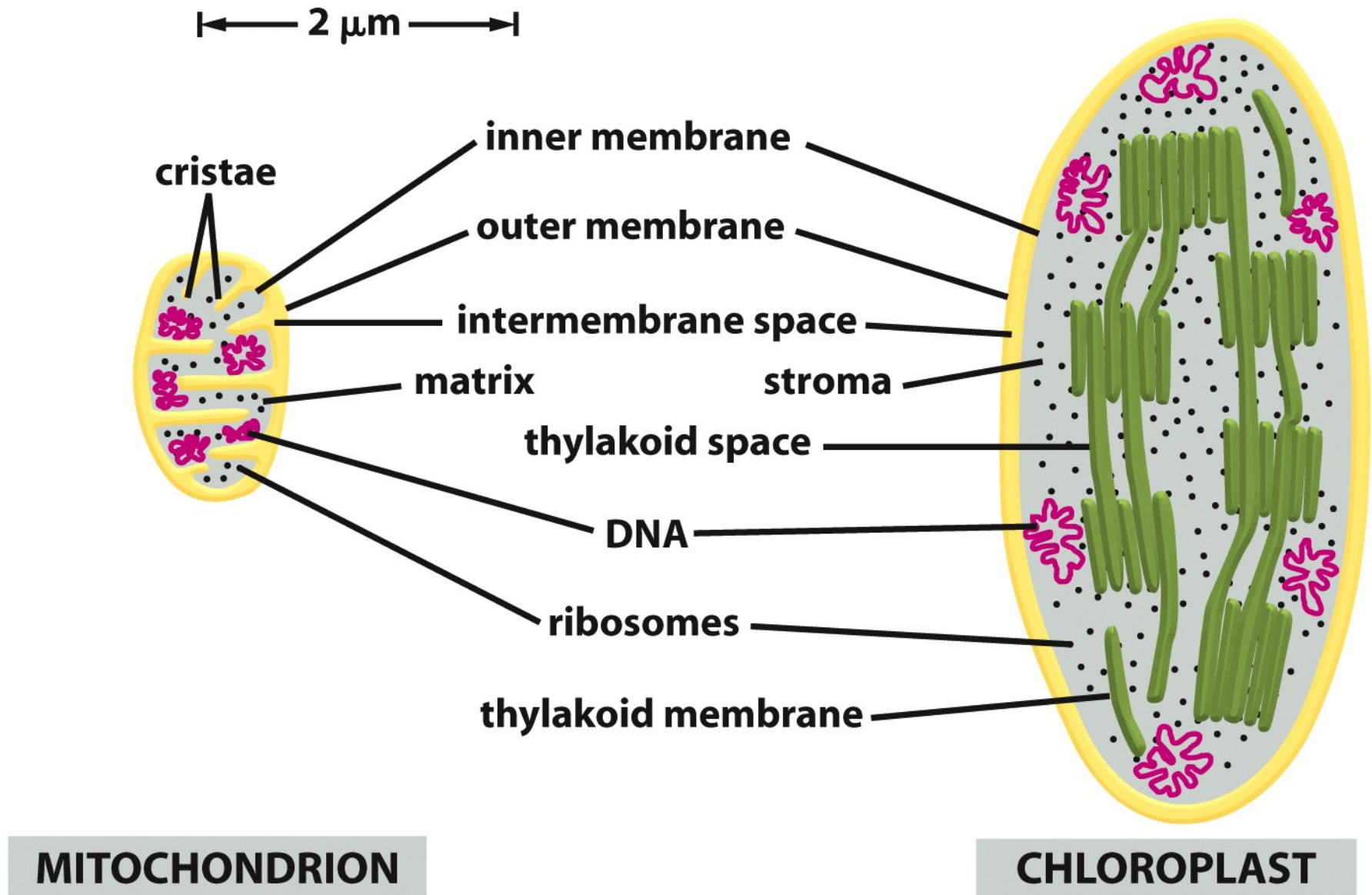


Figure 14-37 *Molecular Biology of the Cell* (© Garland Science 2008)

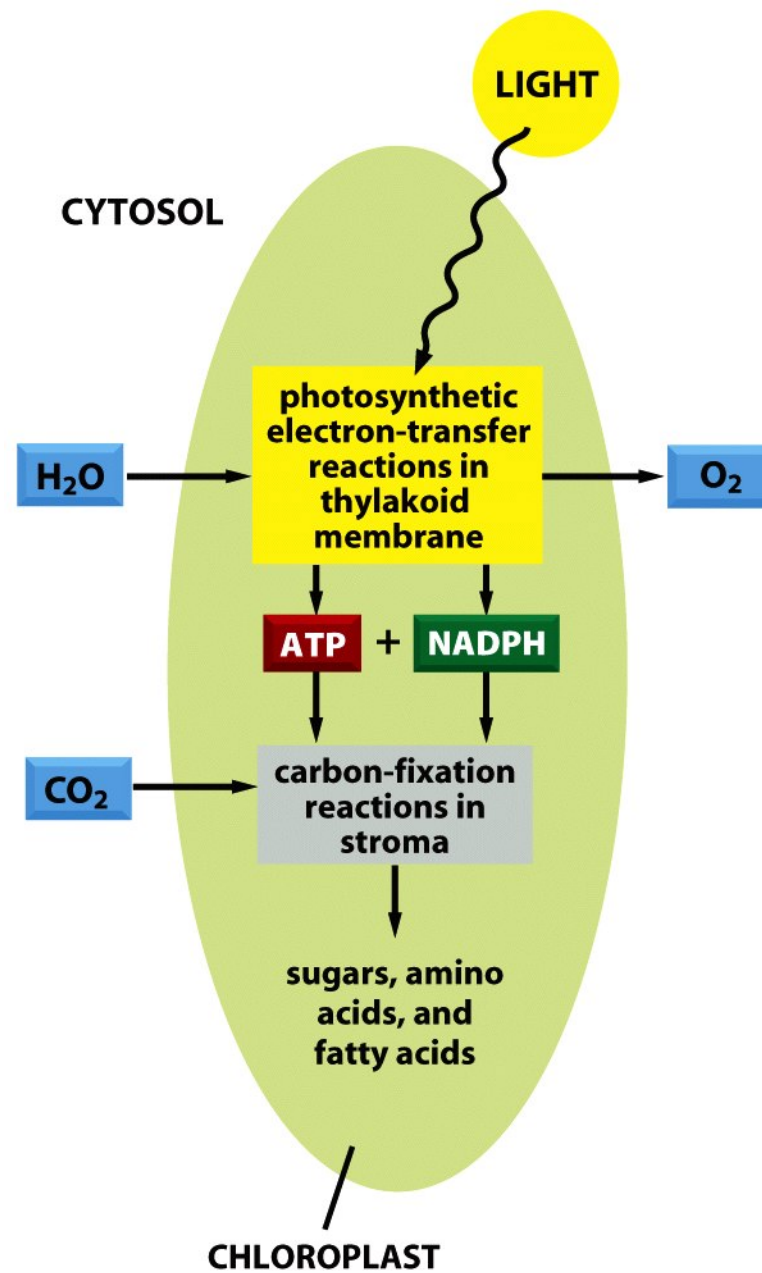


Figure 14-38 *Molecular Biology of the Cell* (© Garland Science 2008)

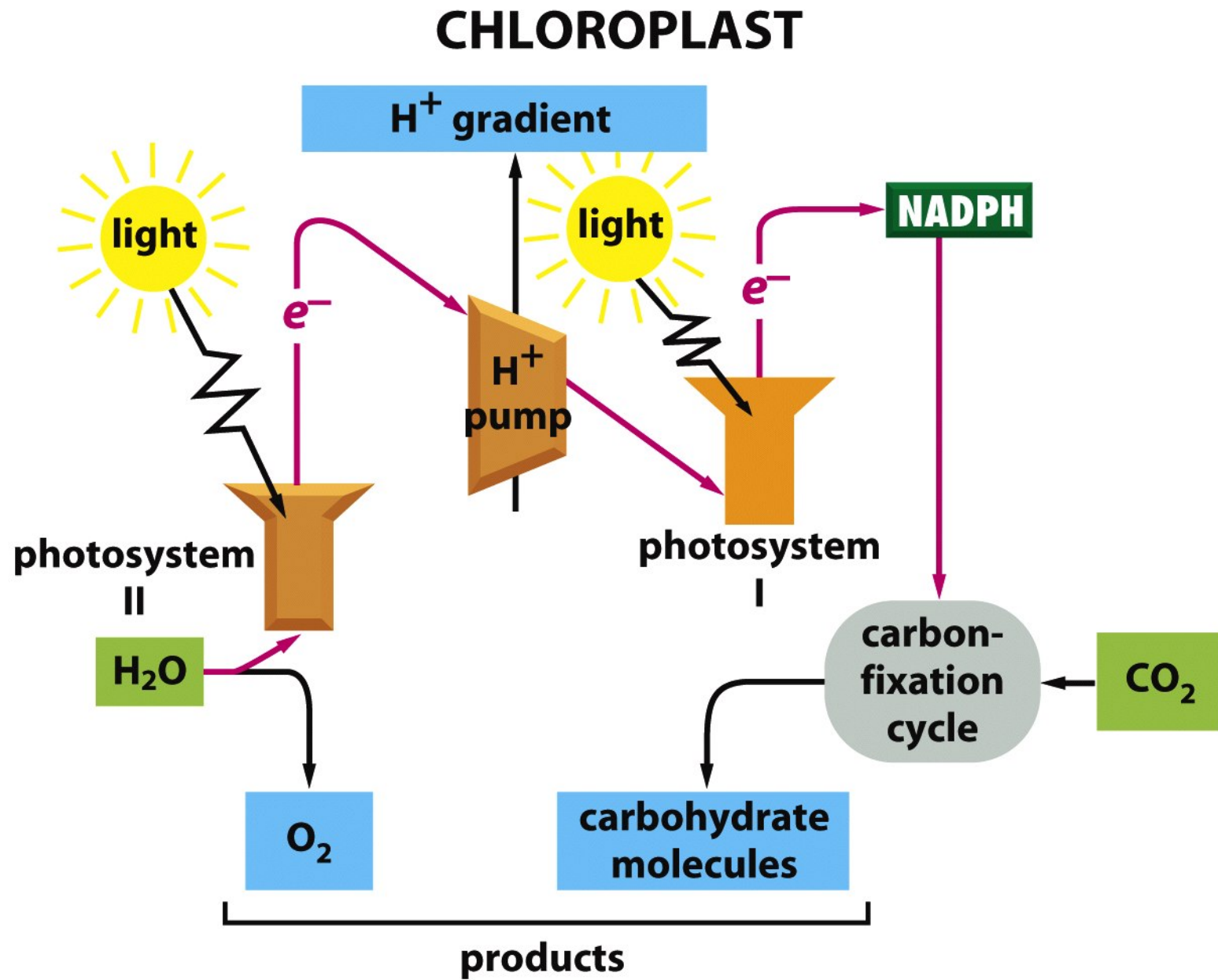


Figure 14-3b *Molecular Biology of the Cell* (© Garland Science 2008)

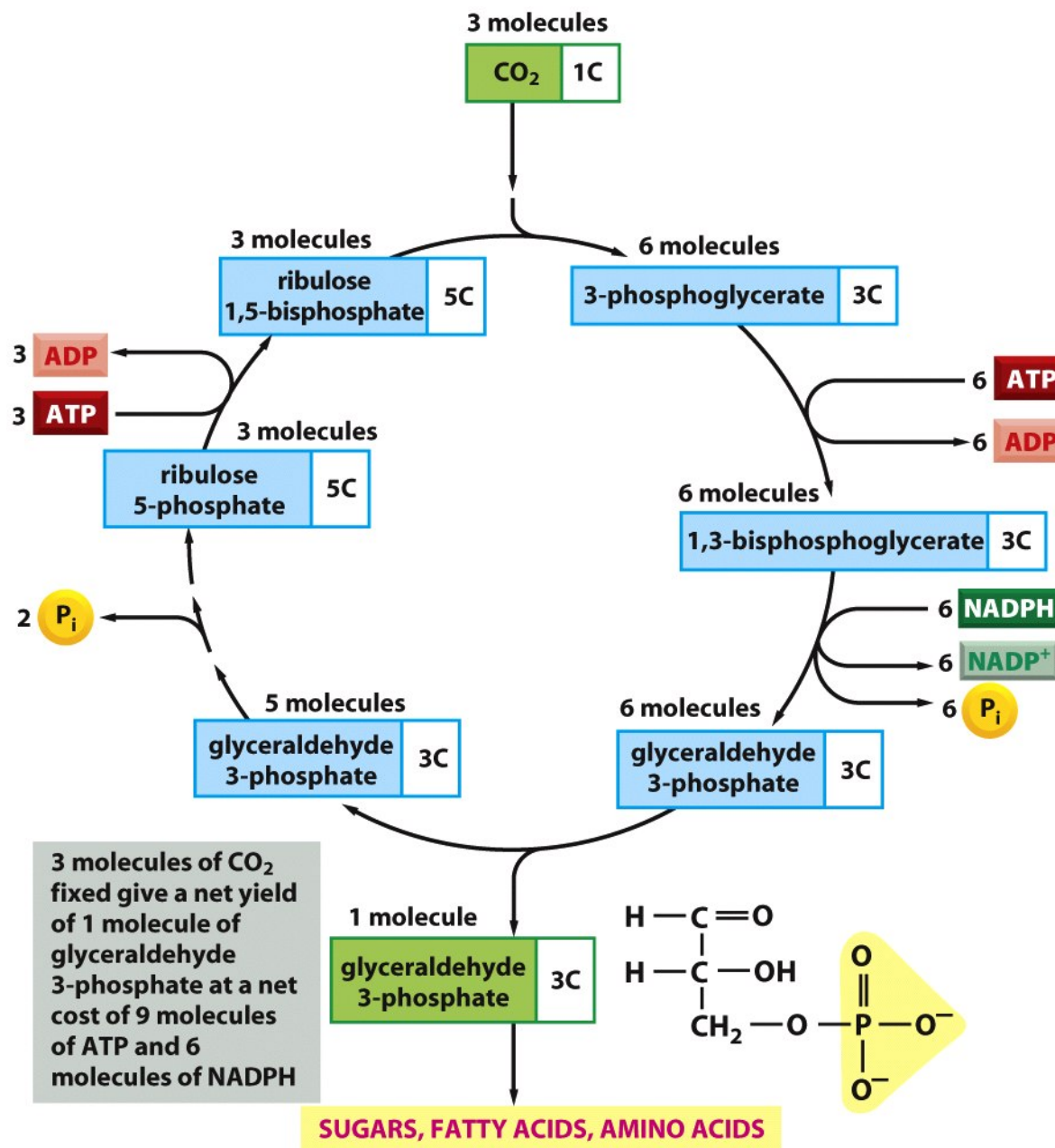


Figure 14-40 *Molecular Biology of the Cell* (© Garland Science 2008)

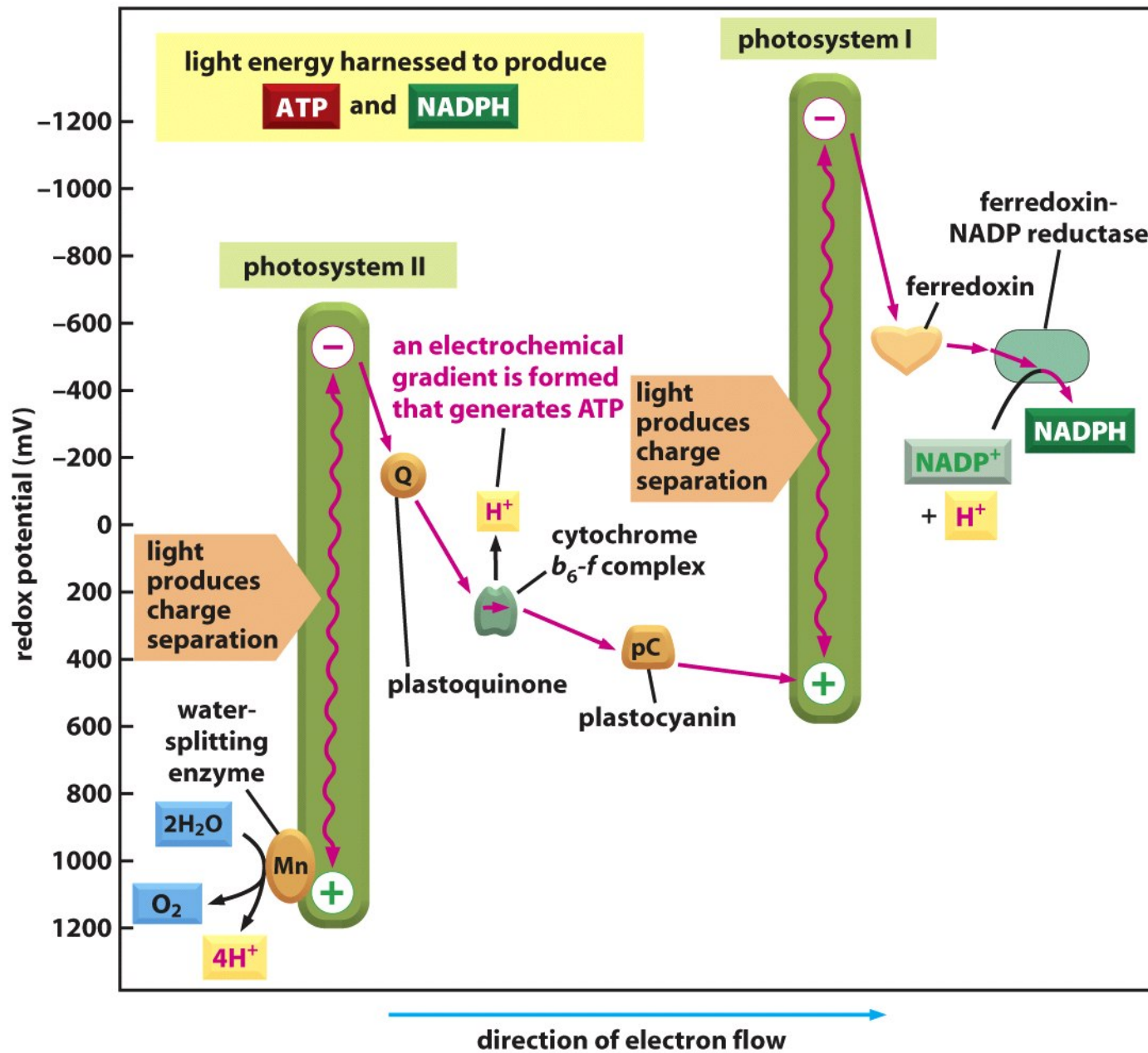


Figure 14-49 *Molecular Biology of the Cell* (© Garland Science 2008)