**Chapter 3 Bioenergetics and Metabolism**

**3.1 Metabolic Energy and ATP**

Berg, J. M., J. L. Tymoczko, G. J. Gatto, Jr. and L. Stryer. 2015. *Biochemistry*. 8th ed. New York: W. H. Freeman.

Nelson, D. L. and M. M. Cox. 2017. *Lehninger Principles of Biochemistry*. 7th ed. New York: W. H. Freeman.

**3.2 Glycolysis and Oxidative Phosphorylation**

Hay, N. 2016. Reprogramming glucose metabolism in cancer: can it be exploited for cancer therapy? *Nature Rev. Cancer* 16: 635-649. [R]

Kuhlbrandt, W. and K. M. Davies. 2016. Rotary ATPases: a new twist to an ancient machine. *Trends Biochem. Sci.* 41: 106-116. [R]

Mitchell, P. 1979. Keilin’s respiratory chain concept and its chemiosmotic consequences. *Science* 206: 1148–1159. [R]

Mitchell, P. 2011. Chemiosmotic coupling in oxidative and photosynthetic phosphorylation. 1966. *Biochim. Biophys. Acta* 1807: 1507–1538. [P]

Saraste, M. 1999. Oxidative phosphorylation at the fin de siècle. *Science* 283: 1488–1493. [R]

Sazanov, L. A. 2015. A giant molecular proton pump: structure and mechanism of respiratory complex I. *Nature Rev. Mol. Cell Biol.* 16: 375–388*.* [R]

Watanabe, R. and H. Noji. 2013. Chemomechanical coupling mechanism of F1- ATPase: catalysis and torque generation. *FEBS Letters* 587: 1030-1035. [R]

**3.3 Photosynthesis**

Baniulis, D., E. Yamashita, H. Zhang,S.S. Hasan and W. A. Cramer. 2008. Structure-function of the cytochrome *b6 f* complex. *Phytochem. Phytobiol.* 84: 1349- 1358. [R]

Kargul, J., J. D. J. Olmos and T. Krupnik. 2012. Structure and function of photosystem I and its application in biomimetic solar-to-fuel systems. *J. Plant Physiol.* 169: 1639-1653. [R]

Schöttler, M. A., C. A. Albus and R. Bock. 2011. Photosystem I: its biogenesis and function in higher plants. *J. Plant Physiol.* 168: 1452–1461. [R]

Vinyard, D. J., G. M. Ananyev and G. C. Dismukes. 2013. Photosystem II: the reaction center of oxygenic photosynthesis. *Ann. Rev. Biochem.* 82: 577-606. [R]

**3.4 The Biosynthesis of Cell Constituents**

Berg, J. M., J. L. Tymoczko, G. J. Gatto, Jr. and L. Stryer. 2015. *Biochemistry*. 8th ed. New York: W. H. Freeman.

Nelson, D. L. and M. M. Cox. 2017. *Lehninger Principles of Biochemistry*. 7th ed. New York: W. H. Freeman.