

## **Structure-Function Reading List, 2009-2010**

**Required Biochemistry, Cell Biology, and Genetics Texts** (needed for the Fundamentals of Cellular Function Unit beginning September 4):

Alberts, B. et al., Essential Cell Biology, 3rd Ed., Garland Publishing Co., New York, 2009.

Smith, C., Marks, A.D., and M. Lieberman. Mark's Basic Medical Biochemistry-A Clinical Approach, 3rd Ed. Lippincott Williams & Wilkins, 2009

Nussbaum, R.L, McInnes, R.R., and H.F. Willard. Thompson & Thompson Genetics in Medicine, 7<sup>th</sup> Ed., W.B. Saunders, 2007.

The 2nd editions of both Alberts and Smith, Marks, Lieberman will be adequate.

**Other Biochemistry and Cell Biology Textbooks.** We require the books above, but some of you may find the following useful and might want to purchase them as well. Note: reading assignments will not be available for these texts.

Alberts, B. et al., Molecular Biology of the Cell, 5<sup>th</sup> Ed., Garland Publishing Co., New York, 2008. (A longer version of the required Alberts book above.)

Goodman, S.R. (Ed.), Medical Cell Biology, 3rd Ed., J.B. Lippincott Company, Philadelphia, 2008. (Good concise text with case studies.)

Schumm, D.E., Essentials of Biochemistry, 2<sup>nd</sup> Ed., Little, Brown, Boston, 1995. (The basics—a good book for students with little background in biochemistry.)

Wolfe, S.L., Molecular and Cellular Biology, Wadsworth Publishing Company, Belmont, California, 1993. (Good integration of cell and molecular biology, and good figures.)

J.M. Berg et al., Biochemistry, 6<sup>th</sup> Ed., W.H. Freeman and Company, New York, 2007. (A new edition of Stryer-- an excellent, large, reference text.)

Passarge, E. Color Atlas of Genetics, Thieme Medical Publishers, New York, 2007.

This is one of a series of condensed pocket book-sized aids for the study of many topics in medical school. It would especially helpful for those students whose genetics background is not up to date.

**Required Physiology Textbook** (physiology begins in November). Most reading assignments will be from this book:

Boron, W.F. and E.L. Boulpaep, Medical Physiology, 2<sup>nd</sup> Ed., Saunders, Philadelphia, 2009.

Some lecture topics are not addressed in Boron and Boulpaep or have more thorough coverage in other books. Sections in the following chapters will be assigned reading

and available on electronic reserve in the Galter Health Sciences Library and through the Structure-Function Blackboard site. The books will also be on reserve.

Guyton and Hall, Textbook of Medical Physiology, 11<sup>th</sup> Ed., Saunders, Philadelphia, 2006.

This book will be used for the following topics in unit II:

Erythropoiesis: chapter 32, pp. 419-428.

Hemostasis: chapter 36, pp. 457-468.

Berne, R.M. and Levy, M. (Eds.), Physiology, 6<sup>th</sup> Ed., Mosby, St. Louis, 2008:

Posterior pituitary hormones (also in unit II): chapter 43, pp. 851-859.

Swallowing (unit V): chapter 31, pp. 549-552.

**Alternative Physiology Monographs.** The following is a recommended series of shorter, very readable monographs on organ systems. Reading assignments will not be available for these books.

**Pulmonary:**

Levitzky, M.G., Pulmonary Physiology, 7<sup>th</sup> Ed., McGraw-Hill, 2007.

Levitzky is better with concepts, but many of the lecture figures come from the following:

West, J.B., Respiratory Physiology: the Essentials, 8<sup>th</sup> Ed., LWW, Philadelphia, 2008.

**Cardiovascular:**

Mohrman, D.E. and L.J. Heller, Cardiovascular Physiology, 6<sup>th</sup> Ed., McGraw-Hill, 2006.

**Gastrointestinal:**

Johnson, L.R., Gastrointestinal Physiology, 7<sup>th</sup> Ed., Mosby Elsevier, Philadelphia, 2007.

**Other Physiology Textbooks.** We require Boron and Boulpaep and recommend the monographs, but some of you may find the following useful and might want to purchase one instead. Reading assignments will not be available for these texts either (except as specified under the required readings above).

Guyton and Hall, Textbook of Medical Physiology, 11<sup>th</sup> Ed., Saunders, Philadelphia, 2006.

Rhoades, R.A. and G.A. Tanner (Eds.), Medical Physiology, 3rd Ed., Lippincott, Williams & Wilkins, Philadelphia, 2009.

Berne, R.M. and Levy, M. (Eds.), Physiology, 6<sup>th</sup> Ed., Mosby, St. Louis, 2008.

**Required Histology Text** (the first histology lecture is on October 9):

Ross and Pawlina, Histology—A Text and Atlas, 5<sup>th</sup> Ed., Lippincott, Williams & Wilkins, Baltimore, 2006.

**(PLEASE BRING THIS TEXT TO THE HISTOLOGY LABORATORY**

**EXERCISES**—in addition to your primary histology lecture reference, the book contains an atlas of histology that is critical to your understanding of the laboratory material.)

**Recommended Histology Atlas.** The required text above has an atlas component; but if you want to buy a separate atlas, this one has excellent figures (including electron micrographs and color line drawings), comments, and brief functional descriptions.

Kerr, J.B., Atlas of Functional Histology, Mosby, St. Louis, 1999.

**Other (Condensed or Review) Histology Texts and Atlases.** You may find these books useful as study aids for an exam or for board reviews, but **they should not be used as replacements for the required text in this part of the course.**

Gartner, L.P. and J.L. Hiatt, Color Atlas of Histology, 5<sup>th</sup> Ed., Williams & Wilkins, 2009. (Good color plates, electron micrographs, and schematics.)

Telser, A. Elsevier's Integrated Histology, Mosby Elsevier, 2007.

Young, B., & Heath, J.W., Wheater's Functional Histology: A Text and Colour Atlas, 5<sup>th</sup> Ed. Churchill Livingstone, 2006. The Fourth Edition of this atlas is much better than previous editions and includes a CD ROM.

**Required Gross Anatomy and Embryology Books** (the first anatomy/embryology lecture is on October 15):

Moore, K.L. and A.M.R. Agur, Essential Clinical Anatomy, 3<sup>rd</sup> Ed., Lippincott, Williams & Wilkins, 2007.

Sauerland, E.K., Grant's Dissector, 14<sup>th</sup> Ed., Lippincott, Williams & Wilkins, 2009.

Cochard, L.R. Netter's Atlas of Human Embryology, ICON Learning Systems, 2002.

This is an annotated atlas, not a textbook. All of the major events, processes, and structures are included as well as summary tables and a glossary in each chapter, but you should read about embryology in more detail. Embryology can be a difficult subject, and you should prepare for the embryology lectures by reading the assignments in the following required textbook:

Moore, K.L. and T.V.N. Persaud, Before We Are Born—Essentials of Embryology and Birth Defects, 7<sup>th</sup> Ed., WB Saunders, 2008.

**Anatomy Atlas:**

Agur, A.M.R. and M.J. Lee, Grant's Atlas of Anatomy, 12<sup>th</sup> Ed., Lippincott Williams & Wilkins, 2009.

**For the dry lab**, each group will need to purchase a shared copy of a photographic atlas. The dry labs are based on the photographs and diagrams in Rohen.

Rohen, J. W., Yokochi, C., Lutjen-Drecoll, E. 2006. Color Atlas of Anatomy: A Photographic Study of the Human Body, Lippincott, Williams, and Wilkins.

**Required Neuroscience Books** (the first Neuroscience lecture is in April):

J. Nolte, The Human Brain—An Introduction to Its Functional Anatomy, 6<sup>th</sup> Ed., Mosby, St. Louis, 2009.

Haines, D.E., Neuroanatomy: An Atlas of Structures, Sections, and Systems, 7<sup>th</sup> Ed., Lippincott Williams & Wilkins, 2008.

**Recommended Neuroscience Book** (the following has more extensive coverage of topics than Nolte):

Squire et al., Fundamental Neuroscience, 3<sup>rd</sup> Ed., Academic Press, 2008.

**Required Lab Materials (available in the Abbott Hall Bookstore).**

**Gross Anatomy.**

1. Disposable lab coats (gloves will be provided in the laboratory).

2. Dissecting instrument kit containing:

- #3 scalpel handle (#10 Bard-Parker blades will be provided in the lab)
- 6" "Mayo"-type scissors
- 4" "Iris"-type, sharp point scissors
- 6" tissue forceps, toothed
- 6" tissue forceps, no teeth
- Probe

It is not necessary for every student to buy a kit. Meet with your dissection group before the first lab to decide what to buy. Three kits should do. Your group also may want to purchase some more specialized tools, such as curved scissors and hemostats (for holding tissue and changing scalpel blades). Each group should also buy a copy of Grant's Atlas and the required Dissector for common use in the lab.