**Instructor’s Manual for Laboratory Manual to accompany**

**Saladin: *Human Anatomy*, Sixth Edition**

The laboratory manual that this Instructor’s Manual accompanies can be used independently or can be used with Saladin’s *Human Anatomy* text. Below is a correlation guide listing the chapters in Saladin’s *Human Anatomy* text that correspond to the exercises in the Wise: *Human Anatomy Laboratory Manual*, 6th edition.

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| **Wise: *Human Anatomy Laboratory Manual*, 6e Exercises** | **Saladin: *Human Anatomy*, 6e Chapters** |
| 1. Organs, Systems, and Organization of the Body | 1. The Study of Human Anatomy |
| 2. Microscopy | 2. Cytology—The Study of Cells |
| 3. Cell Structure | 2. Cytology—The Study of Cells |
| 4. Tissues | 3. Histology—The Study of Tissues |
| 5. The Integumentary System | 5. The Integumentary System |
| 6. Introduction to the Skeletal System | 6. The Skeletal System I: Bone Tissue |
| 7. Axial Skeleton 1: Skull | 7. The Skeletal System II: Axial Skeleton |
| 8. Axial Skeleton 2:Vertebrae, Ribs, Sternum | 7. The Skeletal System II: Axial Skeleton |
| 9. Appendicular Skeleton | 8. The Skeletal System III: Appendicular Skeleton |
| 10. Joints | 9. The Skeletal System IV: Joints |
| 11. Axial Muscles 1: Muscles of the Head and Neck | 10. The Muscular System I: Muscle Cells  11. The Muscular System II: Axial Musculature |
| 12. Axial Muscles 2: Muscles of the Trunk | 11. The Muscular System II: Axial Musculature |
| 13. Appendicular Muscles 1: Muscles of the Shoulder and Upper Limb | 12. The Muscular System III: Appendicular Musculature |
| 14. Appendicular Muscles 2: Muscles of the Hip, Thigh, Leg, and Foot | 12. The Muscular System III: Appendicular Musculature |
| 15. Introduction to the Nervous System | 13. The Nervous System I: Nervous Tissue |
| 16. Spinal Cord and Spinal Nerves | 14. The Nervous System II: Spinal Cord and Spinal Nerves  16. The Nervous System IV: Autonomic Nervous System and Visceral Reflexes |
| 17. Brain and Cranial Nerves | 15. The Nervous System III: Brain and Cranial Nerves |
| 18. Sensory Receptors | 17. The Nervous System V: Sense Organs |
| 19. The Endocrine System | 18. The Endocrine System |
| 20. Blood Cells | 19. The Circulatory System I: Blood |
| 21. The Heart | 20. The Circulatory System II: Heart |
| 22. Introduction to Blood Vessels and Blood Vessels 1: Blood Vessels of the Axial Region | 21. The Circulatory System III: Blood Vessels |
| 23. Blood Vessels 2: Blood Vessels of the Appendicular Region | 21. The Circulatory System III: Blood Vessels |
| 24. The Lymphatic System | 22. The Lymphatic System and Immunity |
| 25. The Respiratory System | 23. The Respiratory System |
| 26. The Digestive System | 24. The Digestive System |
| 27. The Urinary System | 25. The Urinary System |
| 28. The Male Reproductive System | 26. The Reproductive System |
| 29. The Female Reproductive System and Development | 26. The Reproductive System |

**Exercise 1**

**Organs, Systems, and Organization of the Body**

**INTRODUCTION**

In this exercise, you should introduce the field of anatomy with directional terms and general discussions of the systemic study of anatomy. Comparisons of organ systems with regional anatomy are useful for students, and students should list what organs belong to what system and what constitutes an organ. Torso models and organ models are good to set out so that students can begin to associate organs with organ systems.

When discussing the atomic level of organization, having available MRIs from local hospitals or physicians allows students to examine the importance of anatomic study from various perspectives and technologies. It is also important to compare directional terms for quadrupeds with those for humans, as *superior* and *inferior* are specific terms for humans. The terms *anterior/ventral* and *posterior/dorsal* are synonymous in humans while the anterior end of a quadruped is toward the nose and the dorsal side is along the vertebral column.

Planes of sectioning are also important concepts in the study of anatomy. Illustrations of organs that have been sectioned or thin sections of organs embedded in plastic make good tools for discussing sectioning planes. Likewise, the use of torso models for the discussion of body cavities provides a good visual medium for demonstration.

Most students have an intuitive sense and some familiarity with the regions of the body. Particular notice should be given to the specific use of "arm" (from the shoulder to the elbow) and "leg" (from the knee to the ankle) used in anatomy. Descriptions of the abdominal region are also reasonably comprehensible. The term "hypochondriac" comes from the Greek words meaning "under the cartilage." In earlier times the hypochondriac area was thought to be the center of melancholy.

**TIME** 1-1.5 hours

###### Materials

Models of human torso

Charts of human torso

**ANSWERS TO FIGURE 1.2**

1. Integumentary

2. Skeletal

3. Muscular

4. Lymphatic

5. Respiratory

6. Urinary

7. Nervous

8. Endocrine

9. Circulatory

10. Digestive

11. Reproductive

**IN-TEXT ANSWERS FOR PAGE 8**

Shin – crural Shoulder – acromial

Elbow – cubital Thigh – femoral

Neck – cervical Knee – patellar

Toes – digital

**REVIEW ANSWERS**

1. Anatomy

2. Organ systems

3. Anatomical position

4. Abdominal

5. Urinary

6. Digestive

7. Anterior

8. Anterior

9. Proximal

10. Abdominal

11. Right hypochondriac

12. To the shoulder. Proximal refers to being closer to the trunk.

13. On the calf

14. Thoracic

15. Pelvic

16. a. Shoulder and elbow

17. b. Knee and ankle

18. c. Organelle

Use correct anatomical terminology to describe the following relationships:

19. Superior

20. Distal

21. Deep

22. Anterior/ventral

23. Respiratory

24. Circulatory

25. d. Dorsal

26. The abdomen is the region of the belly and the abdominal cavity is a space in the abdominal region.

27.

a. Cephalic

b. Axillary

c. Brachial

d. Antebrachial

e. Carpal

f. Frontal

g. Cervical

h. Acromial

i. Sternal

j. Pectoral

k. Abdominal

l. Coxal

m. Genital

n. Femoral

o. Crural

p. Pedal

28.

a. Frontal

b. Median

c. Transverse

29. The arms are contralateral to each other.

30. The visceral peritoneum is deep to the parietal peritoneum.