Lab Practical 1 - BIOL 2402

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| Exercise 41: Structure of the Heart | | | | | | |
| fibrous pericardium | | | right atrium | | left ventricle | |
| parietal pericardium | | |  | right auricle |  | aortic (semilunar) valve |
| pericardial cavity | | |  | superior vena cava |  | aorta |
| epicardium (visceral pericardium) | | |  | inferior vena cava |  | systemic circulation |
| myocardium (cardiac muscle) | | |  | coronary sinus |  |  |
|  | intercalated disc\* | |  | interatrial septum | cardiac circulation | |
|  | musculi pectinate\* | |  | tricuspid valve |  | left coronary artery |
|  | papillary muscle | | right ventricle | |  | circumflex a. |
|  | chordae tendineae | |  | interventricular septum |  | anterior interventricular a. |
|  | trabeculae carneae | |  | pulmonary (semilunar) valve |  | right coronary a. |
|  | moderator band \* | |  | pulmonary trunk |  | marginal a. |
| endocardium | | |  | pulmonary arteries (L & R) |  | posterior interventricular a. |
|  | |  | left atrium | |  | great cardiac vein |
| ligamentum arteriosum | | | left auricle | |  | middle cardiac vein |
|  | | | pulmonary veins (L & R) | |  |  |
|  | | | mitral (bicuspid) valve | |  |  |

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| Lab Exercise 44: Blood Vessels | | | | |
| tunica interna (intima) | | | artery | |
|  | | endothelium | arteriole | |
|  | | simple squamous | capillary | |
| tunica media | | | venule | |
|  | smooth muscle | | vein | |
| tunica externa (adventitia) | | |  | one-way valve |
|  | connective tissue | | oxygenated blood (red) | |
|  |  | | deoxygenated blood (blue) | |
| **Major arteries and veins - see page 597-611 (text) and attached page** | | | | |

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| Special Circulations | | | |
| Pulmonary | Hepatic Portal System | | Cerebral |
| rt. ventricle | hepatic portal vein | | internal carotid artery (l. & rt.) |
| pulmonary trunk | gastric vein (l. & rt.) | | Circle of Willis |
| pulmonary arteries | splenic vein | | anterior cerebral a. |
| lobar arteries\* | hepatic veins | | anterior communicating a. |
| rt. & l. pulmonary veins | inferior vena cava | | middle cerebral a. |
| left atrium |  | | posterior communicating a. |
|  |  | | posterior cerebral a. |
|  |  | | basilar artery |
|  |  |  | vertebral artery (l. & rt.) |

**\* not in lab manual – check text, website, or other source**

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| Lab Exercise 45: Pulse Rate and Blood Pressure | | | |
| pulse points | | blood pressure | |
|  | common carotid artery |  | sphygmomanometer |
|  | brachial artery |  | sounds of Korotkoff |
|  | radial artery | stethoscope | |
|  | femoral artery |  | auscultation\* |
|  | popliteal artery |  | |
|  | post. tibial artery |  |  |
|  | dorsalis pedis artery |  |  |

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| Lab Exercise 42 & 43: The Cardiac Cycle | | | |
| Cardiac Conduction System | | EKG = ECG = electrocardiogram | |
|  | sinoatrial (SA) node |  | P wave |
|  | atrioventricular (AV) node |  | QRS complex |
|  | atrioventricular (AV) bundle (of His) |  | T wave |
|  | left bundle branch |  |  |
|  | right bundle branch |  | bradycardia |
|  | Purkinje fibers |  | tachycardia |
|  |  |  | fibrillation |

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| Lab Exercises 38, 39, & 40 | | | | |
| Blood cells | | | Tests & Analysis | |
| erythrocyte (RBC) | | | hematocrit - packed cell vol. (PCV) | |
| leukocytes (WBC) | | | Tallqvist hemoglobin test\* | |
|  | granulocytes | |  | |
|  |  | neutrophil (PMN) | blood typing | |
|  |  | eosinophil |  | antigens |
|  |  | basophil |  | antibodies |
|  | agranulocyte | |  |  |
|  |  | monocyte (macrophage) |  |  |
|  |  | lymphocyte |  | |
| thrombocyte (platelet) | | |  | |

**\* not in lab manual – check text, website, or other source**

#### Lab Ex. 46 & 47 Blood Vessels of Systemic Circulation

## Arteries

## Neck, Head, and Brain

Aorta

Brachiocephalic Trunk (R)

Subclavian a.

Vertebral a. (R/L)

Basilar a.

Common carotid a. (R/L)

External carotid a. (R/L)

Temporal a. (R/L)

Facial a. (R/L)

Internal carotid a. (R/L)

Anterior cerebral a. (R/L)

Middle cerebral a. (R/L)

Posterior cerebral a. (R/L)

## Shoulder and Upper Limb

Axillary a. (R/L)

Brachial a. (R/L)

Ulnar a. (R/L)

Radial a. (R/L)

Palmar (volar) arches (R/L)

Digital a. (R/L)

## Thoracic and Abdominal Walls

Intercostal a.

Phrenic a.

Suprarenal a. (R/L)

Celiac trunk

Gastric a.

Splenic a.

Hepatic a.

Renal a. (R/L)

Superior mesenteric a.

Inferior mesenteric a.

## Pelvis and Lower Limb

Common iliac a. (R/L)

Internal iliac a. (R/L)

External iliac a. (R/L)

Femoral a. (R/L)

Popliteal a. (R/L)

Anterior tibial a. (R/L)

Posterior tibial a. (R/L)

Dorsalis pedis a. (R/L)

# Veins

## Head, Neck, and Brain

Superior Vena Cava

Brachiocephalic v. (R/L)

Vertebral v. (R/L)

Internal jugular v. (R/L)

External jugular v. (R/L)

Subclavian v. (R/L)

## Shoulder and Upper Limb

Subclavian v. (R/L)

Cephalic v. (R/L)

Axillary Vein (R/L)

Basilic v. (R/L)

Median cubital v. (R/L)

Brachial Vein (R/L)

Radial v. (R/L)

Ulnar v. (R/L)

### Inferior Vena Cava (L5 - rt. Atrium)

# Abdominal Viscera

Hepatic v.

Suprarenal v. (R/L)

Renal v. (R/L)

## Lower Limb and Pelvis

Common iliac v. (R/L)

Internal iliac v. (R/L)

External iliac v. (R/L)

Femoral v. (R/L)

Great Saphenous v. (R/L)

Popliteal v. (R/L)

Anterior tibial v. (R/L) Posterior tibial v. (R/L)

Dorsalis pedis v. (R/L)

**Also review the Circle of Willis, the pulmonary circuit, & the hepatic portal system**.