

## LAB PART 5- THE FETAL PIG - EXCRETORY SYSTEM

**Procedure 59** To study the excretory system, we will return to the abdominal cavity. In examining the dorsal body wall you will find 2 bean shaped structures - the **kidneys**. Although they bulge into the abdominal cavity, they actually lie dorsal to it, against the ventral surface of the back muscles.

Observation 39 Describe the shape of the kidneys.

**Procedure 60** In examining the kidney, one should notice that a thin layer of tissue (epithelium) covers the ventral surface of the kidneys. PEEL off this protective membrane and you should be able to see the **renal artery** carrying blood to the kidneys and the **renal vein** carrying blood away.

Observation 40 How are you able to distinguish between the renal artery and renal vein?

**Procedure 61** Examine the kidney again to find a tube located at the posterior end of the kidney leading from the kidney to the bladder - this is called the **ureter**. Trace the ureter posteriorly along the muscles of the back to see where it enters the urinary bladder.

Observation 41 Were you able to find and follow the ureters?

**Procedure 62** Examine the flap of tissue that is folded back between the hind legs. In both males and females, the **urinary bladder** is found on the ventral surface just beneath the umbilical cord situated between the 2 umbilical arteries

Observation 42 Describe what the urinary bladder looks like.

**Procedure 63** Remove one of the kidneys and cut it right in half so each half is like a pancake. Examine this cross sectional cut of the kidney

Observation 43 Is there any evidence of blood vessels in the kidney?

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WHAT WOULD BE THE "COMMON" DEFINITION FOR: 1) Artery, 2) Dilate, 3) Barium, 4) Coma

## LAB PART 6- THE FETAL PIG - REPRODUCTIVE SYSTEM

**Procedure 64** Although you will dissect the reproductive system of only one sex, you should study the opposite sex on another student's specimen.

**Procedure 65** Dissection directions are the same for both sexes. With a razor blade, cut through the cartilage of the pelvic girdle and lay the legs out flat.

Look for and identify the following structures:

### Female

- a. Ovaries. Small, bean shaped, light yellow or whitish bodies in the lower end of the abdominal cavity. They are suspended by mesentery.
- b. Uterine tubes and horns. Very small coiled tubes lying on the dorsal surface. These tubes carry the eggs to the uterus. If the egg is to be fertilized, fertilization occurs in this tube.
- c. Uterus. Union of the uterine horns.
- d. Vagina. The two uteri unite and just below this junction you will find the vagina - the birth canal through which the fetus must pass to be born.
- e. Urogenital sinus. Just underneath the tail, you will find the urogenital opening - a common passageway for the urinary and genital systems.

### Male

- a. Urogenital opening. An opening located just beneath the umbilical cord through which urine or sperm may pass.
- b. Penis. A long muscular tube through which urine or sperm passes. The penis is found on the ventral flap of skin located between the legs. It is on the opposite side of the flap from the umbilical arteries
- c. Testes. Carefully remove tissue in the area of the hind legs on either side of your incision. Embedded within this tissue on either side is an elongated, dark colored sac into which the testes descend during embryonic development. The testes are probably located within these sacs.

*Observation* 44 Which of the reproductive structures were you able to identify?

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WHAT WOULD BE THE "COMMON" DEFINITION FOR:: 5) Morbid 6) Tumor 7) Varicose veins 8) Urine

## LAB PART 7- THE FETAL PIG - NERVOUS SYSTEM

**Procedure 66** OPTIONAL - BRAIN EXAMINATION. See Mr. C for instructions

**Procedure 67** OPTION - You may make an examination of the sheep eye. See you teacher to obtain the eye to dissect.

**Questions:**

45. Explain the function of the kidney.
46. What is the function of the renal arteries and renal veins?
47. What is the function of of the ureter?
48. What is the function of the urinary bladder?
49. What is the function of the urethra?
50. State in chart form the functions of the reproductive organs for your particular pig (Consult your lab)

## **DISCUSSION QUESTION OVER ALL OF LAB:**

Discuss the various ways in which the animal you have been dissecting differs from a pig that has been born. Include in your discussion the names and functions of special fetal structures and possible differences in size of organs.

## **CONCLUSION OVER ALL OF LAB:**

Summarize the lab (Parts 1 through 5) by discussing and explaining the interdependence of all the organ systems of the pig.

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Answers: 1) the study of fine paintings; 2) to live longer; 3) what you do when C.P.R. fails; 4) a punctuation mark; 5) a higher offer; 6) an extra pair; 7) veins which are very close together; 8) opposite of "your out"