

MAMMALOLOGY LAB 5 REPRODUCTION

Today's exercise focuses on the reproductive structures and diversity of mammals. Examine the slides, specimens, and diagrams *carefully* and answer the questions completely.

Males

1) Observe the slides of the **boar** (pig), **human**, **bull**, **rabbit**, **horse**, and **rat** sperm.
◆ Rank them from lowest to highest in terms of sperm count (i.e., how many sperm you see in the field of view).

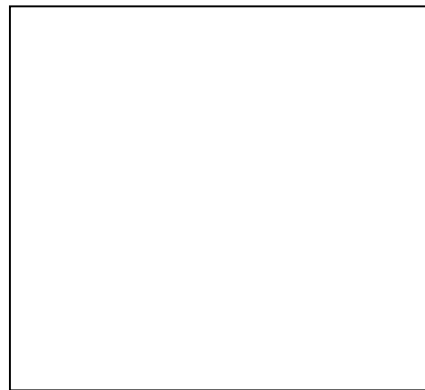
◆ Why might these counts be different? (Suggest at least one reason)

◆ Compare the morphology of the sperm heads of each species.

2) In the slides of the **testis & epididymis** locate the numerous lumens of the seminiferous tubules and the epididymis. Sketch what you see and label **Sertoli cells**, **developing spermatocytes**, **mature sperm**, and **interstitial cells**.



Testis



Epididymis

Name _____

3) Examine the **bull testicle**. Identify the *tunica albuginea*, *testis*, *seminiferous tubules*, *epididymis*, and *vas deferens* (if present).

Females

4) In the slides of the **immature ovary & corpus luteum**, count the number of **Graafian follicles, primordial and growing follicles**, as well as the number of **corpora lutea** present.

of Graafian follicles -

of primordial follicles -

of growing follicles -

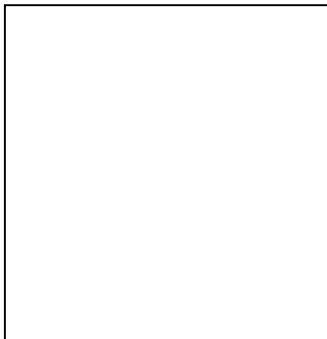
of corpora lutea –

◆ Also view the slide of **maturing follicles** to become familiar with the structure of Graafian follicles.

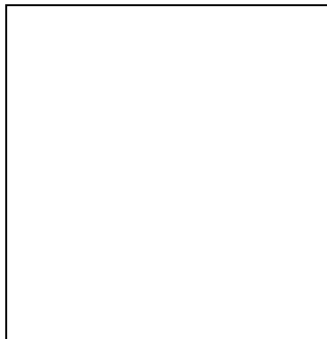
5) Examine the slides of the **active and inactive mammary gland & nipple**.

◆ How do these the mammary tissues differ? (i.e. How can you tell if a sample of tissue is from active versus inactive tissue?)

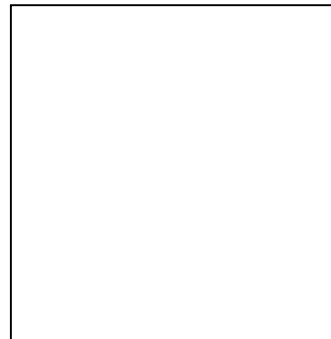
6) Examine the slides of the **nipple & teat**. Sketch what you see below and indicate the structural differences and similarities between the two structures.



Nipple (sec.)



Teat (sec.)



Teat (cross sec.)

Name _____

7) What happens to the marsupial female's reproductive tract to prepare it for birth?
(Note the differences between the drawings provided in lab).

8) Examine the preserved **cat**, **pig**, **sheep**, and **rat** uteri (note that in any given year only some of these may be available).

◆ What types of *uteri* do they have?

Cat –

Pig-

Sheep-

Rat-

◆ What types of *placentas* do the embryos have?

Cat –

Pig-

Sheep-

Rat-

◆ Describe the **4 types** of *placentas* in terms of the degree and distribution of contact with the uterine wall.

Name _____

9) Examine the slide of the **fallopian tube**.

◆ Is it highly vascularized?

◆ Why or why not?

10) Examine the slide of the **pregnant uterus with fetus**. Identify the *chorion*, *allantois*, and *uterine lining*.