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 slide 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**.
3) Examine the bull or pig 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.
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.
9) Examine the slide of the **fallopian tube**.

   ♦ As you can see, this structure is not highly vascularized. Why is this?

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