

# LABORATORY EXERCISE 59

## MALE REPRODUCTIVE SYSTEM

### Figure Labels

#### FIG. 59.1

- |                    |                        |
|--------------------|------------------------|
| 1. Vas deferens    | 7. Ejaculatory duct    |
| 2. Urethra         | 8. Prostate gland      |
| 3. Penis           | 9. Bulbourethral gland |
| 4. Glans penis     | 10. Epididymis         |
| 5. Prepuce         | 11. Testis             |
| 6. Seminal vesicle | 12. Scrotum            |

#### FIG. 59.2

- |   |   |
|---|---|
| 1 | 7 |
| 5 | 2 |
| 4 | 6 |
| 3 |   |

### Laboratory Report Answers

#### PART A

- |                              |                   |
|------------------------------|-------------------|
| 1. spermatic cord            | 11. acrosome      |
| 2. testosterone              | 12. epididymis    |
| 3. gubernaculum              | 13. fructose      |
| 4. inguinal canal            | 14. alkaline      |
| 5. lobules                   | 15. bulbourethral |
| 6. epididymis                | 16. alkaline      |
| 7. spermatogenic             | 17. scrotum       |
| 8. meiosis (spermatogenesis) | 18. glans penis   |
| 9. spermatids                | 19. emission      |
| 10. 23                       | 20. ejaculation   |

#### PART B

1. (sketch)
2. (sketch)
3. (sketch)
4.
  - a. Sustentacular cells support, nourish, and regulate the spermatogenic cells.
  - b. Spermatogenic cells give rise to sperm cells by meiosis (spermatogenesis).
  - c. Interstitial cells produce and secrete male sex hormones.
  - d. The epididymis stores sperm cells while they mature and propels them into the vas deferens.
  - e. The corpora cavernosa and corpus spongiosum form three columns of erectile tissue that contain vascular spaces (sinuses) that become engorged with blood during an erection. They also form most of the body of the penis.

## LABORATORY EXERCISE 60 FEMALE REPRODUCTIVE SYSTEM

### Figure Labels

#### FIG. 60.1

- |                                 |                             |
|---------------------------------|-----------------------------|
| 1. Suspensory ligament of ovary | 5. Fimbriae of uterine tube |
| 2. Uterine tube                 | 6. Broad ligament           |
| 3. Ovarian ligament             | 7. Left ovary               |
| 4. Round ligament of uterus     | 8. Uterus                   |

#### FIG. 60.2

- |                 |                             |
|-----------------|-----------------------------|
| 1. Uterine tube | 6. Labium majus             |
| 2. Ovary        | 7. Vaginal orifice          |
| 3. Uterus       | 8. Fimbriae of uterine tube |
| 4. Clitoris     | 9. Cervix                   |
| 5. Labium minus | 10. Vagina                  |

#### FIG. 60.3

- |                                       |                 |
|---------------------------------------|-----------------|
| 1. Clitoris                           | 5. Labium majus |
| 2. External urethral orifice (meatus) | 6. Labium minus |
| 3. Vaginal orifice/vestibule          | 7. Perineum     |
| 4. Mons pubis                         | 8. Anus         |

#### FIG. 60.4

- |    |   |
|----|---|
| 5  | 8 |
| 10 | 1 |
| 9  | 2 |
| 4  | 7 |
| 3  | 6 |

#### FIG. 60.5

- |                     |                                     |
|---------------------|-------------------------------------|
| 1. Areola           | 4. Alveolar glands (mammary glands) |
| 2. Nipple           | 5. Adipose tissue                   |
| 3. Lactiferous duct |                                     |

### Laboratory Report Answers

#### PART A

- |                                |                       |
|--------------------------------|-----------------------|
| 1. pelvic                      | 11. round             |
| 2. broad                       | 12. cervix            |
| 3. ovarian follicles           | 13. endometrium       |
| 4. oogenesis                   | 14. smooth muscle     |
| 5. follicular                  | 15. hymen             |
| 6. first polar body            | 16. vulva             |
| 7. FSH                         | 17. mons pubis        |
| 8. ovulation                   | 18. clitoris          |
| 9. fallopian tubes or oviducts | 19. vestibular glands |
| 10. infundibulum               | 20. sacral            |

## PART B

1. (sketch)
2. (sketch)
3. (sketch)
4. (sketch)
5.
  - a. A mature follicle swells and ruptures under the influence of certain hormones. As this happens, the secondary oocyte (egg cell) and follicular fluid escape from the ovary.
  - b. The cilia that line the uterine tube beat toward the uterus and help draw the secondary oocyte into the infundibulum of the tube and continue to move it toward the uterus.
  - c. The uterine lining thickens and then it becomes glandular and vascular. If fertilization does not occur, the lining disintegrates and sloughs away, creating the menstrual flow.

# LABORATORY EXERCISE 61

## CAT DISSECTION: REPRODUCTIVE SYSTEMS

### Laboratory Report Answers

#### **PART A**

1. The cat uterine tubes are small, coiled tubes near the ovaries that travel relatively short distances to join the uterine horns. The human uterine tubes are much larger and longer, traveling from the region of the ovaries to the uterine body.
2. The human uterus contains a single chamber in which the offspring develop. The cat uterus is Y-shaped with branches, forming right and left uterine horns.
3. The uterine horns of the cat provide room for many offspring to develop at one time.
4. In the cat, the vagina and urethra open into a common urogenital sinus; in the human each of these organs has a separate opening to the outside.

#### **PART B**

1. The glans of the cat has small spines on its surface, whereas that of the human does not.
2. In the cat, the prostate gland is relatively small and is located some distance from the urinary bladder (it does not surround the urethra). In the human, the prostate gland is relatively larger and surrounds the urethra near the base of the bladder.
3. The seminal vesicles are lacking in the cat.
4. The prepuce of the cat encloses the entire penis for protection. In the human, the prepuce or foreskin is vestigial and only covers the glans of the penis. A circumcision is commonly performed on humans to remove the prepuce for sanitation and other reasons.