

### **Χαρακτηριστικά:**

- Step-by-step coverage of both basic and advanced experimental procedures in reproductive biology and endocrinology
- Detailed modules on ART, including IVF, ICSI, embryo grading and cryopreservation
- Integration of contemporary issues such as ethics and AI in reproductive health
- Rich visual aids, including labeled images, illustrations, histological sections and a step-by-step surgical video guide, to support effective learning
- Glossary of key terms and references to relevant literature for further study

### **Περιεχόμενα:**

Chapter 1: Set up and maintenance of Rodent Animal House facility;

Chapter 2: Display of major endocrine glands and reproductive organ system in male and female rats;

Chapter 3: Microscopic examinations of histological sections using illustrations/permanent slides/photomicrographs of human/rat;

Chapter 4: Surgical techniques: Principles of surgery in endocrinology;

Chapter 5: Dissect and display of the hypothalamic-hypophyseal organ system in rats;

Chapter 6: To study the estrous cycle by observing the vaginal smear of adult female rats (Sprague-Dawley) under normal conditions;

Chapter 7: Study of Exfoliative cytology of human cervix and vagina through micrographs;

Chapter 8: Study of Sperm counting, Sperm Vitality and Sperm Motility in rats;

Chapter 9: Study the Effect of Cryptorchidism on Sperm Count and Motility in Rats;

Chapter 10: Study of Protein Profile of Rat Ovarian Extract by SDS-PAGE;

Chapter 11: Separation of steroid hormones by Thin layer Chromatography and Paper chromatography;

Chapter 12: To determine and quantify glycogen/ascorbic acid levels in rat uterine tissue;

Chapter 13: To determine and quantify fructose in the dorsolateral prostate and coagulating glands of rat; Chapter

14: To Estimate Total Estrogens in Human Serum Samples Using Competitive ELISA technique; Chapter

15: To Understand the Methodology of a Pregnancy Test Kit; Chapter

16: Birth control methods: Study of modern contraceptive devices;

Chapter 17: Retrieval of oocytes by induced superovulation in immature mice;

Chapter 18: Study of causes of infertility in males and females and infertility investigation using secondary data, models and pictographs;

Chapter 19: Setting up and Study of IVF Laboratory Culture Conditions;

Chapter 20: Oocyte scoring and embryo quality grading in IVF for successful implantation;

Chapter 21: Study of Assisted Reproductive Techniques;

Chapter 22: Assisted Reproductive Technology: Ethical principles and laws in India;

Chapter 23: Artificial Intelligence tools for Detection and Management of Sexually Transmitted Infections and Women's Reproductive Health: A Practical Approach for Undergraduate Students.