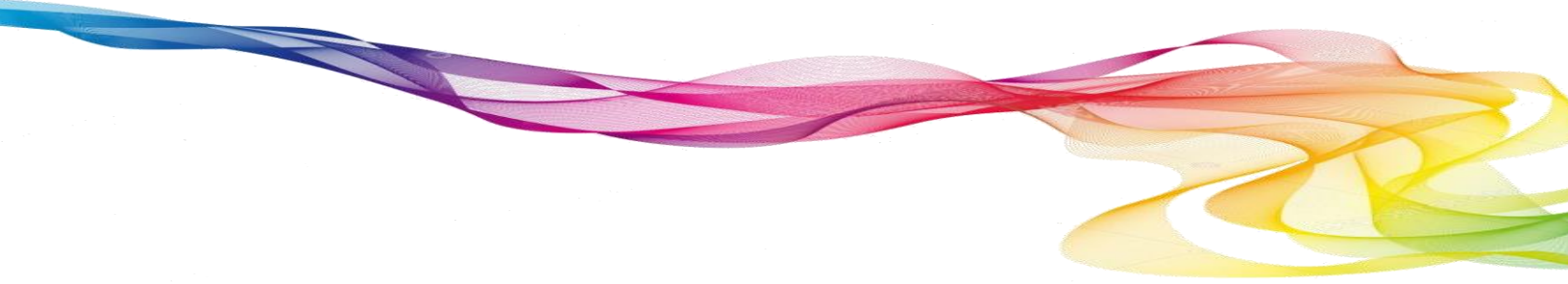


## **In Vitro Maturation and Fertilization of Immature Mouse Oocytes Workshop**

In this workshop the ability to extract immature oocytes from mice, in vitro maturation of mouse premature oocytes, and ectopic fertilization of mouse oocyte in the laboratory will be taught.

This workshop includes:

- **In vitro maturation of oocytes**
  - The necessity for IVM
  - Advantage of in vitro maturation
  - The situations of using IVM
- **Oocyte maturation**
  - Morphological changes during oocyte growth
  - Biochemical changes during oocyte growth
- **Preparation of culture medium**
  - Medium for ovarian dissecting
  - Medium for oocyte maturation
  - Making drops of the culture medium
- **Review of female reproductive system**
  - Removing the ovaries
  - Ovarian dissection
  - Collecting immature oocytes
- **Identification of oocytes**
  - Identification of oocytes in various stages of development
  - Rinse and transfer of the oocytes to the maturation medium
- **Obtaining mature oocytes in vitro**
  - Checking the maturation of oocytes in vitro
- **In vitro fertilization of oocytes**
  - The introduction of in vitro fertilization
  - The situations of using IVF
- **Sperm extraction and detection capacity**

- 
- Dissection of epididymis
  - Detection of sperm capacity in vitro
  - **Extraction of mature oocytes**
    - Separating the oviduct
    - Evaluating and preparing oocytes suitable for fertilization
  - **In vitro fertilizations with inseminate sperm and oocyte**
    - The formation of pronucleus
    - Washing the fertilized oocytes
    - Embryo culture
    - Fertilization, embryo culture, and embryo quality assessments

This workshop is suitable for graduates and students of all academic levels in biology, paramedical, and medical fields. Participants should have previous knowledge about the principles of reproductive biology.