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Class 12th

Subject biology

Date 26.05.20

Mammary Glands:

The presence of functional mammary glands is characteristic of all female mammals

- They are paired structures of breasts that contain glandular tissue and variable amounts of fats.
- Glandular tissue in each mammary gland consists of 15-20 mammary lobes. • The mammary lobes have clusters of cells called alveoli
- The cells of alveoli secrete milk.
- The milk is stored in the lumen or cavities of the alveoli
- The alveoli open into mammary tubules.
- The tubules of each lobe join to form a mammary duct.
- Several mammary ducts join to from a wider mammary ampulla
- The mammary ampulla is connected to a lactiferous duct through which milk is sucked out.

Draw the sectional view of mammary gland from NCERT.

Gametogenesis

Gametogenesis is the process by the primary male and female sex organs produce the male and female gametes respectively.

Spermatogenesis: The process by which the immature male germ cells or spermatogonia produce mature sperm cells in the testis

Oogenesis: The process by which the immature oogonia in the ovaries produce mature ovum

Spermatogenesis:

The process of spermatogenesis begins at puberty and proceeds as follows:

1. The spermatogonia multiply by mitosis to increase in number. They are present in in the inner wall of seminiferous tubules. Each spermatogonium is diploid. Each spermatogonium contains 46 chromosomes.

2. Some spermatogonia called as the primary spermatocytes periodically undergo meiosis to form two equal, haploid cells called as the secondary spermatocytes. They contain 23 chromosomes.
3. The secondary spermatocytes produce four equal haploid cells after they undergo second meiotic division.
   They are called as the spermatids. They contain 23 chromosomes.
4. The spermatids undergo spermiogenesis to form spermatozoa or sperms.
5. The sperm heads are embedded in the Sertoli cells
6. They are finally released from the seminiferous tubules by the process of spermiation