

Quiz - Transgenic Animals

Part A: True/False Questions

1. Plasma membrane of animal cells is hydrophilic in nature.
2. Phosphate group in plasma membrane is organic.
3. Plasma membrane of animal cells is composed of phospholipid bilayer.
4. DNA and plasma membrane repulse each other.
5. Liposome is negatively charged.
6. DNA is attracted to liposome by electrostatic interactions.
7. Lipoplex will fuse with Golgi apparatus to deliver the genetic materials.
8. In transfection, no virus carrier is involved.
9. Transfection cannot be readily applied to plant cells.
10. Transduction requires sophisticated equipment and can be applied to broad spectrum of cells.

Part B: Multiple Choice Questions

1. What is transfection?
 - A. Delivers nucleic acids into eukaryotic cells
 - B. Separates two cells
 - C. Provides energy for cell growth
 - D. None of the above
2. What is the charge of phosphate group in phospholipid bilayer of plasma membrane?
 - A. Positively charged
 - B. Neutral
 - C. Negatively charged
 - D. None of the above
3. What is the nature of the DNA which is intended to be introduced into a eukaryotic cell?
 - A. Hydrophilic
 - B. Hydrophobic
 - C. Positively charged
 - D. Negatively charged
4. How could DNA pass through the incompatible membrane?
 - A. Employment of phagosome
 - B. Employment of liposome
 - C. Release of hydrophilic vesicles
 - D. All of the above
5. What is liposome?
 - A. A small ball with synthetic cationic lipid which is positively charged
 - B. A small ball with synthetic anionic lipid which is positively charged
 - C. A small ball with synthetic cationic lipid which is negatively charged
 - D. A small ball with synthetic anionic lipid which is negatively charged

6. What is lipoplex formed?
 - A. Formed by encapsulation of RNA by liposomeformed
 - B. By encapsulation of DNA by liposome
 - C. Formed by encapsulation of mRNA by liposome
 - D. Formed by encapsulation of t-DNA by liposome

7. How will the cell take up the lipoplex?
 - A. Endocytosis
 - B. Exocytosis
 - C. Cell division
 - D. None of the above

8. Which of the following is one of the unintended effects of transfection?
 - A. Cytotoxicity
 - B. Cell death
 - C. Both A and B
 - D. None of the above

9. What are the characteristics of transfection?
 - A. Low toxicity
 - B. Can be applied to broad spectrum of cells
 - C. No sophisticated equipment is needed
 - D. All of the above

10. Which of the following is not a characteristics of transduction?
 - A. Can be applied to broad spectrum of cells
 - B. Low toxicity
 - C. Both A and B
 - D. None of the above