

SELF-TEST CORNER OF MOLBIOL UNDERGRADUATE: DESIGNING OWN TESTS Part 5.

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*Posted By **Zaure G. Aytasheva**, Wednesday, February 25, 2015*

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Submitted by Zarina Dossova BT 13-10

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End replication: telomerases of tumour, embryonic and normal cells

1. Cell that is known to possess lower level of telomerase activity is:
 - a. embryonic stem cell
 - b. heart cell
 - c. immune system cell
 - d. mesenchymal stem cell**
 - e. blood cell
2. An enzyme that prevents telomere shortening by rebuilding DNA end fragments is:
 - a. protease
 - b. telomerase**
 - c. lipase
 - d. transferase
 - e. isomerase
3. The enzyme telomerase solves end replication problem of linear chromosomes by which method?
 - a. adding a single 5' cap residue that withstands degradation implied by the nucleases
 - b. causing specific double-strand DNA breaks which result in blunt ends on both strands
 - c. causing linear ends of the newly synthesized DNA prior to circularization
 - d. adding numerous short DNA sequences such as TTAGGG which form a hairpin turn**
 - e. adding numerous GC isles which are steady to hydrolysis to maintain chromosome integrity
4. What is the telomerase?
 - a. oligosaccharide
 - b. nitrogenous base
 - c. ribonucleoprotein**
 - d. antibody
 - e. completely unknown structure
5. Additional roles for telomerase including the upregulation of 70 genes known or suspected in cancers' growth has been disclosed by ...?
 - a. Tomas Eding
 - b. Johnathan Andrews
 - c. Melissa Burking
 - d. Augusto Charloing
 - e. Elizabeth Blackburn**
6. Which of the following statements is NOT true of the telomerase?

- a. Telomerase contains a ribozyme
- b. Telomerase activity drops with the cell aging
- c. Telomerase adds a repeating sequence to the 5' end of DNA**
- d. Telomerase adds a repeating sequence to the 3' end of DNA
- e. Telomerase is found only in eukaryotes.

7. What is the role of telomerase RNA in telomere replenishing??

- A. Acts as a template**
- B. Acts as a primer
- C. Acts as a ribozyme
- d. A and B
- e. B and C

8. What is the role of the DNA strand in telomere replenishing?

- A. Acts as a template
- B. Acts as a primer**
- C. Acts as a promoter
- D. Acts as an enhancer
- E. None of the above

9. What is the nature of the enzyme concluded in the telomerase protein?

- A. Terminal transferase
- B. DNA polymerase
- C. Reverse transcriptase**
- D. RNA polymerase
- E. Topoisomerase

10. What is the percentage of human carcinomas with a high telomerase activity?

- a. 50-55%
- b. 5-10%
- c. 80-90%**
- d. 30-40%
- e. 70-75%

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