Assignment 12: Tissue Engineered Products

Cell and Tissue Engineering

Problems

1. Please answer the case study questions (a), (b) and (c) on page 436-437 in your textbook, *Tissue Engineering* by Saltzman.
    a. Describe the differences between hyaline cartilage and fibrocartilage. Histologically, what do these two types of tissue look like (that is, describe the cellular and extracellular features of each)?

    b. What features of the local site of repair would you expect to influence the outcome towards either of these endpoints?

    c. Are there any elements that you could add to the cell suspension that is injected into the defect site, or to the surgical procedure used to deploy the cells, to increase the probability of the most desirable outcome?

2. The review article in your assigned reading this week was co-authored by our guest lecturer Dr. Yusuf Khan. It discusses the state-of-the-art in bone tissue engineering solutions as well as the future directions for this field. After watching lecture 2 and reading this article please provide a summary of bone tissue engineering approaches, tools, limitations and prospects. (350 words or less)

    AT THE END OF THE SUMMARY provide a paragraph comparing and contrasting approaches in bone tissue engineering to approaches in engineered skin grafts (300 words or less).

Rubric

Question	Component	Total Point Value
1	A	5
	B	5
	C	5
2	Summary	7
3	Comparison	8
Total		**30**