

Name _____ Date _____

4. Bacteria, sea anemones, and humans seem, on the surface, to be very different organisms. How can a gene from humans or a sea anemone be expressed in bacteria to make a product never before made in bacteria?

5. Due to a mishap in the lab, bacteria carrying a plasmid with a kanamycin-resistant gene and bacteria carrying a plasmid with an ampicillin-resistance gene were accidentally mixed together. How would you design an experiment allowing you to sort out the two kinds of bacteria? (Hint: Make sure that you do not kill off one of the kinds of bacteria you are trying to sort out!)

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CHAPTER 4A QUESTIONS

1. Why is it important to verify that you have the correct recombinant plasmid?
2. How did your actual gel results compare to your gel predictions?
3. Do you see any bands that were not expected? What could explain the origin of these unexpected bands?
4. Does the gel show that your restriction digest and ligation procedures were successful? Describe the evidence you used to make this assessment.
5. In the geK- and geA- lanes, do you see evidence of multiple configurations of plasmids? Explain your answer.

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CHAPTER 6 QUESTIONS

1. Why is a protein's conformation important for carrying out its function?
2. What properties of the amino acids in a protein relate to protein folding?
3. Does the eluate containing your RFP appear less bright or brighter than it did in the cell lysate following centrifugation? If there is a noticeable difference in the intensity of the red color, what might account for that?
4. What characteristic of RFP is used as the basis for separation by column chromatography?
5. How might the column chromatography procedure be adjusted or modified to increase the purity of the RFP sample?