

Mitochondrial DNA Testimony Questions

Voir Dire:

1. Please state your name for the court.
2. State your current occupation and where you are currently employed.
3. How long have you been employed there?
4. What is your job title and responsibilities?
5. Describe any previous employment or experience.
6. Briefly describe your educational background.
7. Briefly describe any continuing education relevant to DNA testing.
8. Do you belong to any professional organizations?
9. Have you presented Forensic DNA papers at professional meetings?
10. When was the last time you presented at a professional meeting?
11. How many cases have you directed and processed using mtDNA typing techniques?
12. Have you processed any high profile mtDNA cases that received national attention?

Offer as expert in DNA Analysis as applied to Forensic Science

Predicate Questions For Admission of DNA Evidence or Proceeding with mtDNA Analysis:

1. What is DNA?
2. What is mitochondrial DNA and how is it different from nuclear DNA?
3. What are some of the reasons that research laboratories study mtDNA?
4. Why is mtDNA analysis important for forensic purposes?
5. When was mtDNA first discovered and sequenced?
6. How many DNA laboratories are currently performing mtDNA testing?
7. Is mitochondrial DNA testing based on valid scientific theory?

8. Are there scientific articles, books, and literature supporting the scientific theory on which mtDNA testing is based?
9. Approximately how many peer-reviewed scientific articles have been published relating to mtDNA?
10. Are mtDNA testing procedures generally accepted as valid by the scientific community?
11. Do the techniques and procedures used in mtDNA testing produce accurate and reliable results?
12. Will you please explain the scientific theory on which mtDNA testing is based and the techniques and procedures used to perform such testing?
13. Are there standards for mitochondrial DNA testing?
14. Does your laboratory follow these standards?
15. Does your laboratory regularly perform Quality Control/Quality Assurance to ensure the quality of your results?
16. Is your laboratory accredited/certified to perform DNA testing?
17. Does your laboratory participate in proficiency testing?
18. For how long has your laboratory been performing mtDNA testing?
19. How many mtDNA cases has your laboratory performed?
20. Did your laboratory perform validation studies on the accuracy and reliability of mtDNA testing prior to performing forensic casework?
21. What kinds of samples have your laboratory successfully performed mtDNA casework on?
22. Have any of your laboratory's mtDNA cases been tried in a court of law?
23. Has mtDNA analysis been accepted in courts of law?
24. Can you exclude an individual using mtDNA?
25. If you cannot exclude an individual with mtDNA, then what is the significance of a match?
26. How large are the current population databases for mtDNA?

Case Specific:

1. Did you have occasion to perform any DNA testing in connection with this case on trial?
2. Did you use the techniques and procedures mentioned previously to perform the mtDNA testing in this case?
3. Did you properly apply these techniques and procedures to the evidence in this case?
4. When did you receive the evidence for this case? Who did you receive it from?
5. Describe the items of evidence that were received and tested.
6. After you received the evidence, can you explain how the case was processed and analyzed?
7. Did you come to a conclusion regarding the comparison of the mtDNA results from the evidence to the reference standard?
8. From the results of your analysis, can the suspect and/or victim be excluded as a source of the evidence?
9. What is the statistical significance of the mtDNA sequence match?