Mt DNA Lab Report Outline

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Introduction

1. What is mitochondrial DNA?
2. How is Mt DNA inherited?
3. Why are Mt DNA types termed haplotypes?
4. How did the mitochondrial genome evolve?
(http://www.genetocorigins.org/geneticorigins/mito/theory.html)

Problem: How can MitDNA studies help identify a missing child?

Hypothesis: Answer the Problem.

Results:

1. Make a labeled drawing of your gels.
2. Measure and record the distance migrated by the various bands in mm.
3. Graph your results
- **a. distance migrated as the x axis**
- **b. length of bands with the y-axis**
- **c. plot distance migrated versus bp length for each marker fragment.**
- **d. connect data points with a line.**

Analysis:

1. Based on your results identify the mother of the child.
2. Explain the function of each of the following:
- **a. TAQ polymerase**
- **b. primers**
- **c. dNTP**
- **d. magnesium chloride**
- **e. tris-HCL**
- **f. KCl**

3. Explain why each sample had to be amplified.
4. Explain why the Mit DNA Primer/Loading mix contains:
- **a. sucrose**
- **b. cresol red**

5. What is the advantage of carrying this experiment to the next level- sequencing the samples studied?

6. How can Mit DNA testing be used to identify:

a. unknown soldiers killed in Vietnam

b. the remains of the Romanov royal family killed in the Russian Revolution

c. missing persons