

Romanov Assignment C
(Answers are **bold and underlined**)

1. Two “graves” were discovered near Yekaterinburg, Russia. Describe the number of bodies in each grave. **According to the article, there were two graves discovered in 1991 that were connected to the Romanov family. The first grave contained nine members, while the second grave contained two members.**
2. When were the graves discovered? **The larger grave was discovered in 1991, and the second grave was discovered in 2007.**
3. One of the reasons that the family of Nicholas II was executed was because there was a fear that the White Russian Army would save them. Who was the White Russian Army? **According to encyclopedia.com, the White Russian Army was composed of people who were against the Bolsheviks. The White Russian Army was not in support of the communist movement. (encyclopedia.com, 2023).**
4. What type of testing was done to confirm sex and familial relationships among the remains found in the mass grave? **DNA testing was done to confirm sex and familial relationships. The article mentions, “nuclear DNA testing of five STR markers” helped scientists to reveal the sex of the members (Coble, et al. 2009).**
5. Genetically, what does STR “stand” for? **The National Institute of Justice states that STR stands for, “short tandem repeat” testing (NIJ, 2011).**
6. What three types of DNA were used to test the remains found in a second grave? **MtDNA, autosomal STR, and Y-STR.**
7. Of the three types of DNA you listed in #6, which one would have been used specifically to identify Alexis? **STR.**
8. What was the source of the DNA used to identify Alexis? **A fragment of bone from the femoral bone.**
9. Was Anastasia in the grave in which Alexis was found? **It is thought by the US that the female in grave #2 with Alexei is Anastasia, but Russia believes that this female is the other sister, Maria.**
10. Give a brief history (2-3 sentences) of Anna Anderson- both her claims and what is thought to be true. **Anna Anderson (born Franzisca Schanzkowska), claimed to have been the missing princess Anastasia. After performing multiple tests, scientist were able to confirm that she was not in fact the missing princess, Anastasia. Scientists and detectives were later able to piece together Anna’s real name- Franzisca- and discovered that she had been involved in a horrendous accident at her work, causing her to develop mental health difficulties.**
11. Where in the US did Anna Anderson eventually settle? **Charlottesville, Virginia.**
12. Whom did she eventually marry? **According to history.com, Anna married J.E. Manahan (history.com, 2023).**
13. What were the sources of Anna Anderson’s nuclear DNA? **The sources of her nuclear DNA came from bowel and hair samples.**
14. What were the sources of Nicholas’ and Alix’s nuclear DNA? **The sources of Nicholas’ and Alix’s nuclear DNA was their bones.**
15. What type of analysis was done on DNA from Anna Anderson, Nicholas, and Alix? **The researchers sequenced the mtDNA’s non-coding region and compared it with samples of each other as well as other individuals (elaborated in question 16).**

16. Anna Anderson's mitochondrial DNA was compared to the mitochondrial DNA of what two people? **Anna Anderson's mtDNA was compared to the mtDNA of HRH the Duke of Edinburgh, and a man named Carl Maucher, who was Franzisca Schanzkowska's great nephew.**
17. A hypervariable region of the mitochondrial DNA was analyzed. Define a hypervariable region? **Sciencedirect.com defines a hypervariable region as the differences between parts of a genome (Gonzalez-Candelas, Lopez-Labrador, 2013).**
18. What were the conclusions from the mitochondrial DNA comparisons? **The conclusions based on the mtDNA testing was that Anna Anderson was not maternally related to Nicholas, Alexandra, or HRH the Duke of Edinburgh, but that Anna Anderson is actually Franzisca Schanzkowska.**
19. The article which describes the analysis of Anna Anderson's DNA was published in 1995. When were all of Nicholas' and Alix's children finally accounted for? **The first two children were discovered in the same grave as them in 1991. The last two children were found in 2007.**
20. Describe a current treatment for hemophilia. **According to the article provided by the CDC, hemophilia can be treated by receiving clotting factor concentrates via injection.**

Cited Sources

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Gonzalez-Candelas, F., Lopez-Labrador, F.X. Hypervariable Region. *Brenner's Encyclopedia of Genetics (Second Edition)*. 603-605. <https://www.sciencedirect.com/science/article/abs/pii/B97801237498400007622>. (2013).