

## **GUIDELINES**

### **Using DNA Evidence for DAR Applications**

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#### **Introduction**

Due to advances made in the testing and interpretation of DNA results for use as evidence in genealogical research, DNA test results can be used for evidence of lineage for DAR applications or supplemental applications assuming that certain, specific criteria are met.

#### **Background**

There are three main types of DNA tests currently available for use in genealogical research.

1. Mitochondrial DNA (mtDNA) is passed from a mother to all of her offspring.
2. Y-DNA is passed from a father to each of his sons.
3. Autosomal DNA is passed from both parents to each child. Each child receives a random combination of material from each parent.

Certain relationships can be suggested or determined by studying the combinations, changes or mutations to each type of DNA over a specific span of time.

Because of the nature of the combination of autosomal DNA from each parent to each child, determining which strands of DNA were inherited from each parent, grandparent, great-grandparent, etc can be an extremely complex process. As such, the testing, reporting and interpretation of current autosomal DNA tests does not provide sufficient evidence of a specific lineage to fit within the confines of the lineage requirements for a DAR application.

While Mitochondrial DNA is passed only through the maternal line and could, therefore, be used to prove a specific lineage from mother to child, the slow change or mutation rate of this type of DNA does not allow for statistically sufficient evidence of a single common ancestor within the confines of the lineage on a DAR application (150-200 years, approximately 6-8 generations).

The standard mutation rate for Y-DNA is faster than that of mitochondrial DNA. While a variety of tests exist that vary in complexity, the DAR has determined that the currently available level of testing and statistical analysis *does* allow conclusions to be made regarding the probability of a common single ancestor within 150-200 years (or 6-8 generations) from the individual being tested. Therefore, Y-DNA is currently the only type of genealogy DNA test that can serve as acceptable documentation for a DAR application when combined with traditional genealogical evidence and documentation in the correct manner and format.

#### **Criteria for Use on a DAR Application/Supplemental**

Because the use of DNA as proof of lineage can be a very complex process, the DAR has established very specific guidelines for the submission and evaluation of this type of genealogical evidence. These requirements have been carefully and thoughtfully developed to acknowledge the current level of scientific capability; respect the DAR's existing standards for

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genealogical evidence; embrace the historical value of the DAR's previously established lineages; promote a consistent level of evaluation; and provide for a review process that is as concise and accurate as possible.

- **Situations when the use of DNA might be appropriate**

Due to the 150-200 year timeframe (approximately 6-8 generations) at which the most recent common ancestor can be statistically identified, DNA evidence can, in most cases, only be used as proof of the link from the Revolutionary War ancestor to his son.

Because the study of DNA for genealogy purposes is based on the interpretation of test results within the confines of the available traditional genealogy sources, DNA is considered to be indirect evidence of lineage. As with any other type of indirect evidence, DNA will only be considered as proof of lineage when direct evidence is not available. DNA evidence must also be supported by sufficient indirect evidence to conclusively identify the most recent common ancestor. An explanation detailing the efforts undertaken to locate direct evidence of the relationship must be included as part of the DNA submission. This explanation must also describe the indirect evidence that was located to support the identification of the most recent common ancestor.

Because Y-DNA is passed only through the male line, it's important to note that only lineages that descend through the unbroken male line can be used as part of this process. The use of any DNA (including Y-DNA) for genealogical purpose requires the comparison of test results from multiple individuals representing multiple lineages. In order for this comparison process to work within the confines of current DAR standards for proof of lineage, at least two individuals must be tested: one to prove the new male line of descent from the patriot through which the applicant descends and one who descends through a male line of descent that has been previously established by the DAR through traditional, direct genealogical evidence. This process cannot currently be used as proof for recent generations (ie: the applicant's father, grandfather or great-grandfather) or to establish a new patriot ancestor for whom no previous lineage as been established for comparison.

- **Candidates for DNA testing**

All submissions of DNA evidence must include DNA test results for at least two males that meet very specific criteria. The first male to be tested must be a close relative of the applicant who descends through the same unbroken male line from the Revolutionary War patriot. This male must share the applicant's maiden name or her mother's maiden name. Potential candidates for a lineage through the applicant's maiden name could include her brother, father, father's brother, paternal grandfather, and paternal grandfather's brother; or for a lineage through the mother's maiden name, her mother's father, her mother's brother, her mother's brother's son, etc.

The second male tested must be a descendant of the same Revolutionary War ancestor through a different, unbroken male lineage that has been previously proven on a DAR

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application or supplemental (ie: the father, brother or nephew (brother's son) of a DAR member). The previously verified DAR application to which this second test subject connects must meet current DAR standards for proof of dates, places and relationships. If the previously verified application is deficient in any of these standards, additional documentation may be required.

- **Requirements for test and results**

Because the foundation of the use of Y-DNA as proof for lineage on a DAR application is the currently available statistical analysis of such test results, the DAR will only accept Y-DNA results that meet specific criteria for both the nature of the test and the results of the test. The DAR will only accept lineages for which a specific set of 37 markers have been tested and for which the results show an exact match between the two tested males on all 37 of those markers. In addition, the outlined lineages from both tested individuals must demonstrate that the most recent common ancestor was born within 150-200 years of the births of the tested individuals.

- **Other necessary documentation**

In addition to the DNA test results and supporting indirect evidence that meet the previously outlined criteria, the applicant must also submit the documentation to establish the complete lineage from herself to the patriot. All relationships, apart from the one link for which DNA is being submitted as proof, must be proven through direct evidence. No other analyses may be submitted as proof for any other relationship on the application form.

The applicant must then provide direct evidence of her relationship with the tested male in her lineage.

The applicant must also provide direct evidence of the relationship between the second tested male and the member for whom the other lineage from the Revolutionary War patriot has been previously verified. If the previously verified lineage does not meet current DAR standards for proof of dates, places or relationships, the applicant must submit the documentation required to fulfill those requirements.

In order to justify the statistical analysis concerning the relationships between these individuals, and to identify the most recent common ancestor, the dates (exact or estimated) and places of birth of both sons of the patriot must be documented using acceptable sources.

- **Format for submission**

In order to facilitate an efficient and effective review process for DNA evidence, the DAR has created a DNA Report form that must be completed and submitted with copies of all required documents. Any DNA submission that is not complete, does not meet current guidelines, includes inconsistencies in documentation or logic, or is not submitted in the correct format will not be reviewed.

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#### **Disclaimers**

The DAR has created these guidelines to facilitate the review process of DNA evidence under current DAR standards of proof. In order to ensure the successful review of these materials, all applicants, members or researchers should make note of the following disclaimers:

1. All materials must be submitted to the DAR in their original form and in the proper format. The DAR reserves the right to evaluate any interpretations of evidence from other organizations, groups or administrators and to refuse acceptance of these interpretations if they do not conform to the current DAR guidelines for submission of DNA evidence.
2. The DAR will continue to evaluate scientific advances in the field of DNA research. The DAR reserves the right to make changes or modifications to this policy at any time based on changes in testing procedures, variances in the interpretation of results, or re-evaluation of the statistical analysis of suggested relationships.
3. As with all previously established DAR lineages, any lineage established through the use of DNA evidence will be subject to re-evaluation at any future date based on the availability of new or additional documentary evidence that may become available, or due to changes or modifications in these guidelines for the use of DNA evidence for DAR Applications.