

Use of DNA in the SAR Application Process

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At the fall 2005 Trustees Meeting in Louisville on September 30, the DNA Subcommittee met to discuss the use of DNA test results in the SAR application process. Committee members agreed that a DNA test was a good way to find men with genetic matches with whom to share genealogical information, but there are limitations in applying test results to genetically prove descent from a patriot ancestor.

There are two types of DNA tests, one that records data from the Y-chromosome, and one that records data from mitochondrial DNA (mtDNA). The one that would be most useful for the SAR applicant would be the Y-chromosome test, which records markers that were inherited from his father, his father's father, and on back through the applicant's surname (male) line. Accordingly, the Y-chromosome test would not be helpful for all the other dozens of potential lines that an applicant could pursue for SAR membership.

The other test available on the commercial market tests the mitochondrial DNA (mtDNA) that is inherited from one's mother, her mother, her maternal grandmother, etc., on back through the maternal line, but few women served in the American Revolution.

If a SAR applicant knows that he shares with a distant cousin an identical haplotype, or distinctive pattern, of the lettered base sequences at a number of locations (markers) on the DNA strand where variations occur, all that could be claimed is that the two men share a common male ancestor, but the test would not reveal how many generations back that common ancestor was. The common ancestor may have lived two, three, or four hundred years ago. All the sons of that common ancestor, plus all the grandsons through those sons, etc. would share the same marker values.

When a sufficient number of markers are tested, the results can provide a range of generations in which the ancestor occurred, to whatever level of confidence—even as high as 90%--that is desired, although the exact generation can't be pinpointed. The probability range, in conjunction with other evidence, can be persuasive evidence.

By itself, DNA testing cannot prove relationship through a particular common ancestor, but it could be used with evidence from records to build a case from indirect evidence that meets the Genealogical Proof Standard, proving a specific relationship to a known descendant of a patriot ancestor.

If the applicant's line from a particular patriot ancestor is one with a problematic paper link in it, a match with another descendant from the patriot where there is a high probability that their most recent common ancestor lived within the last six to eight generations could weigh heavily in meeting the Genealogical Proof Standard, the

currently accepted standard for proving a relationship by indirect evidence, when direct evidence is lacking or conflicting.

The DNA Subcommittee will be meeting again at the spring 2006 Trustees Meeting, 23-26 February in Louisville, and will propose a policy statement concerning the use of DNA test results in the SAR application process. In the meantime, questions and comments about a proposed policy on DNA use in the SAR application process may be directed to Larry P. Cornwell, DNA subcommittee member concerning this subject. He can be reached at <LaCornwell@aol.com>. Larry is the Family Tree DNA group coordinator for the Cornwell surname, and has served as his chapter and state genealogist. He is currently the senior vice president of the Alabama Society, SAR. He is also a member of the National Society Genealogy Committee. More technical questions may be directed to Donn Devine, past president of the Delaware Society SAR, who also holds Certified Genealogist and Certified Genealogical Instructor credentials. He coordinates two DNA surnames studies – Baldwin and Devine. He authored the article “How DNA Evidence Is Being Employed In The Verification of One’s Lineage” that appeared in the Spring 2005 issue of *The SAR Magazine*. He can be reached at <DonnDevine@aol.com>.

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