



April 4, 2011

Mr. Larry D. Miller
10055 SW 91st Place
Ocala, FL 34481

Dear Mr. Miller,

It is with pleasure that I report that our PatriClan™ analysis successfully identified your paternal genetic ancestry. The Y chromosome DNA that we determined from your sample shares ancestry with **Temne** people in **Sierra Leone** today.

We studied polymorphisms (different forms of DNA) on the non-recombining portion of your Y chromosome (NRY). This segment of DNA is transmitted identically from father to son. A panel of nine genetic markers (also called polymorphisms) on the NRY was analyzed using standard Polymerase Chain Reaction (PCR) methodology. The polymorphisms we examined consisted of the slowly evolving ALU insertion/deletion polymorphism; and 8 highly mutable microsatellites or short tandem repeats (STRs). Differences in chromosome markers correlate highly with the ethnic and geographic origin of the individual. When compared to Y chromosome markers in large databases such as our African Lineage Database (ALD), Y chromosomes collected from individuals like you could be interpreted as genealogies reflecting the paternal lineage history of the human species. Although the informative stretches of genetic information along the Y chromosome represents less than one percent of your entire genetic make-up, it has proven to be a powerful tool for identifying and defining paternal lineages.

This result means that you have inherited through your father a segment of DNA that was passed on consistently from father to son to you. This segment of DNA is presently found in Africa in Sierra Leone. We have enclosed several materials that reflect the results of your analysis and that may help you to research your historical and cultural ancestry. There is a copy of your Y chromosome polymorphisms. We have also included a Certificate of Ancestry authenticating that your polymorphisms matched with Temne in Sierra Leone. You can display it with pride among other important family documents. In addition, we have included a full color map that geographically depicts your ancestral region. Finally, we have included the *African Ancestry Guide to West and Central Africa* to help you learn more about the peoples and cultures in Sierra Leone.

Thank you for your support and interest in African Ancestry.

Sincerely,

Gina Paige
President

Re: Kit ID# 1014075



AFRICAN ANCESTRY

Larry D. Miller

Y Chromosome Polymorphisms

| MARKER | DYS388 | DYS389I | DYS389II | DYS390 | DYS391 | DYS392 | DYS393 | DYS394 | YAP |
|-------------|--------|---------|----------|--------|--------|--------|--------|--------|-----|
| ALLELE SIZE | 13 | 14 | 31 | 22 | 10 | 11 | 13 | 17 | + |

Sequence Similarity Measure: 100%

This means that your sequence is 100% the same as sequences from the Temne people in Sierra Leone today.



Understanding Your PatriClan™ Test Results

What is the Y chromosome?

African Ancestry studies the Y chromosome in order to determine paternal ancestry. The Y chromosome is inherited paternally. Each male has the same Y chromosome as his father, and his grandfather, and his great-grandfather, etc. Therefore, the Y chromosome provides a historical record that contains information about ancestry.

How do we read the Y chromosome?

The Y chromosome has been broken down into “markers”. Markers are standard locations or addresses on the Y chromosome that allow scientists a common language when studying the DNA. Each marker is measured by its allele size. The allele size represents the number of times that a sequence pattern is repeated. For example, at marker DYS388, there is the sequence CATTG. If the allele size for marker DYS388 is 10, that means that the sequence CATTG repeats 10 times. It looks like this:

CATTG CATTG CATTG CATTG CATTG CATTG CATTG CATTG CATTG CATTG

How does the allele size affect the analysis?

Dr. Kittles reads the allele sizes for the eight markers we analyze. He compares the allele sizes to the sequences in our African Lineage Database™. When he finds a sequence that has the same allele sizes for each marker as your sequence, he finds a match. That match indicates the present-day country, and possibly ethnic group, with which you share paternal ancestry. If he doesn't find a match in the ALD, then Dr. Kittles accesses a European database and does the same analysis.

What is the YAP?

YAP stands for y alu polymorphism. Your Y chromosome either has a YAP or not. The presence of the YAP is indicated by a “+” on your printout. If you do not have a YAP, there is a “-” on your printout. Most males of African paternal descent have the YAP. Males of European descent do not. Therefore, the presence of the YAP helps Dr. Kittles with his analysis of your ancestry.

To Learn More about the Y chromosome, we recommend:

http://learn.genetics.utah.edu/content/extras/molgen/y_chromo.html



Dear African Ancestry participant,

Your genetic heritage can save a life.

As you search for your past, someone else is searching for a future. Each year for 10,000 Americans diagnosed with life-threatening diseases, the only hope for a cure is a marrow or umbilical cord blood transplant. Your genetics can save a life.

Your roots are your connection.

Patterns of human migration out of Africa have resulted in greater genetic diversity among African Americans than other races. African American leukemia and lymphoma patients are most likely to match someone of their own race. **Someone like you.**

When a family member is not identified as a match, these patients turn to the National Marrow Donor Program (NMDP), to search the world's largest, most diverse Registry of cord blood and people willing to donate marrow to a patient in need. But the need for African Americans is greater.

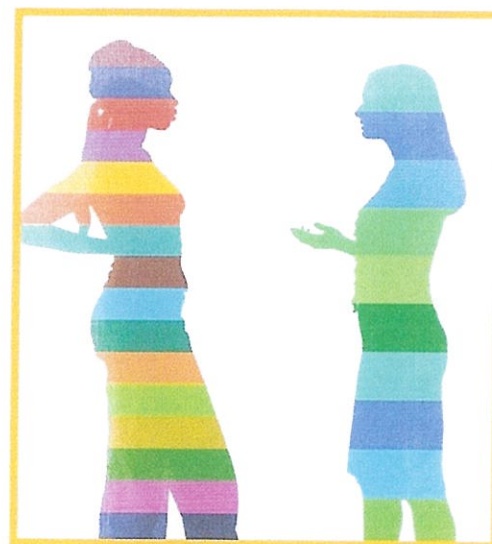
Act now.

Lives are in the balance. Joining the NMDP Registry is simple, painless and free. All it takes is a mouth swab, like the one in the African Ancestry test kit. You could be the match that saves a life.

Learn more at AfricanAncestry.com.

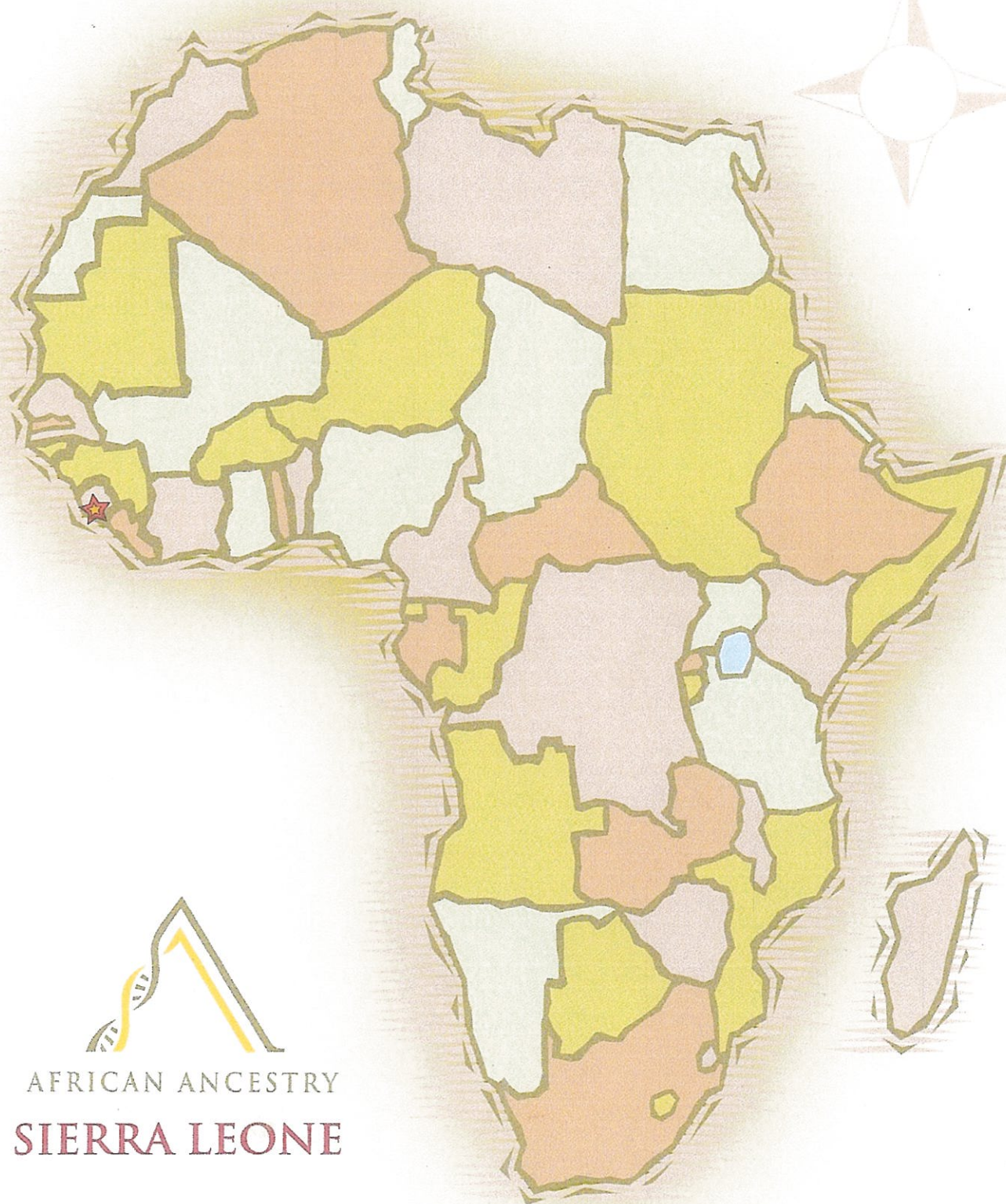
Sincerely,

Gina M. Paige
President, African Ancestry



**More than 50% greater
genetic diversity**

Diversity of African American tissue types
compared to European Americans



AFRICAN ANCESTRY
SIERRA LEONE

CERTIFICATE OF ANCESTRY

African Ancestry hereby certifies that

Larry D. Miller

Shares Paternal Genetic Ancestry with

Temne people in Sierra Leone

Based on a PatriClan™
analysis performed on

April 14, 2011



Rick Kittles

Rick Kittles, Ph.D.
Scientific Director