



DNA Genotek's Sample Collection Blog

Supercentenarians' DNA keeps the grim reaper at bay

Posted by Shauna White on Wed, May 02, 2012 @ 09:50 AM

The remarkable growth in the number of centenarians (people aged ≥ 100) has garnered significant attention over the past 20 or so years. Centenarians have been found to exhibit marked delays in functional decline and age-related lethal diseases such as heart disease, cancer, and stroke. Recently, an even more extreme group, supercentenarians, or people aged 110 and older, has begun to yield sufficient numbers to warrant study. Supercentenarians are living proof that reaching a ripe old age doesn't necessarily mean that you can no longer take care of yourself. Consequently, the interest in [genetic studies](#) of these super centenarians is growing.



The team at [Androcyte, LLC](#), based in Florida, in affiliation with researchers at Harvard Medical School and the University of Liverpool, are collecting DNA samples from the extremely long-lived, in order to find genes that protect these individuals against the ravages of old age, such as cancer, cardiovascular disease, Alzheimer's, diabetes, and stroke. Utilizing bioinformatics and sequencing technologies to discover these beneficial genes, they hope to create drugs, diagnostic tests, and therapies that will bring such disease protection to everyone, not just the few who inherit the right combination of genes. However, collecting genetic data on supercentenarians is not easy.

Androcyte's team started using blood spots which utilize a finger prick to obtain a few drops of blood. In some circumstances, they encountered failures with these sample types, and collecting a blood draw from these long-lived persons is not always possible. Androcyte turned to [Oragene•DISCOVER](#) for its non-invasive collection method, stability at ambient temperature and high-quality DNA.

Once the saliva sample is obtained, the Androcyte team anonymizes the sample, so as to protect the identity of the donor, and sends it to a laboratory for the DNA to be extracted from the samples. The DNA is then sent to another lab which will sequence the DNA, providing the team with the 3.2 billion base-pair genetic code of the donor. When a sufficient number of samples have been collected, processed, and sequenced, the team will use bioinformatics tools to compare the genetic codes obtained from the extremely long-lived individuals with the genes of other individuals, who express various pathologies and die at a much younger age.

After the protective genes are discovered, the Androcyte team will search for drugs that could confer these benefits to others, so that they can live extremely long times without suffering from disease. There are more and more supercentenarians on the planet: will that number continue to grow? Androcyte hopes to make that possible.

Would you want to reach supercentenarian status? Share your thoughts with us. Do you know an extremely long-lived person who has remained healthy and would like to have them included in this study? Email the Androcyte team at james@androcyte.com.

Tags: [Oragene](#), [genetics](#), [DNA](#), [DNA in saliva](#), [dna collection](#), [genetic research](#)

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