



## Ask the Expert: What do genes have to do with ageLOC?

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We've heard a lot about aging lately in the media. Earlier this year, *US News and World Report* and *Time Magazine* reported on a surprising new insight connecting genes and aging. These news organizations are now reporting what Nu Skin has known for some time—that our genes can be positively influenced and we can affect the way we age. By leveraging 30 years of genomic research, Nu Skin has placed itself in front of this scientific trend and is a clear leader in the industry.

The path leading up to our anti-aging science is quite interesting. Since James Watson, Francis Crick, and Rosalind Franklin discovered the structure of DNA in 1953, the field of genetics has been advancing at an amazing rate. By 2003, the entire human genome had been sequenced, or decoded. From this advancement, we now know that humans have somewhere between 20,000 and 30,000 genes. About one tenth of those genes are involved in the regulation of expression of the rest. Our work today is to better understand how gene expression changes with age and how to externally influence it.

The latest technologies are making this task much more feasible. Now, on a single silicone chip about an inch square, we can measure the work output of a single gene in any tissue. By measuring this “work output,” we can track whether the created proteins are structural (like the collagen or the elastin in your skin) or enzymes, which catalyze all of the biochemical reactions that take place in your body. Therefore, we are now capable of measuring the aging process at the genetic level, and determining how external factors affect this process.

Simply put, we are now influencing aging at the genetic level. This is actually quite a liberating concept, and it's not just hype. It turns out that even though we've been focusing on the DNA as the hardwired brain, or computer of the cell, we haven't been considering the software portion of the equation. It's this influencing of the “software” that sets Nu Skin apart with our anti-aging science.

This is an amazing breakthrough, and Nu Skin is positioned to take advantage of these developments to provide a new platform of anti-aging products today and well into the future.