

Business Unit: Environmental Medicine
Keynote: #13

London:



The award of the Nobel Prize in 2017 was the starting signal for us at Salvogene to massively expand our program of EpiGenetic analysis. After the body clock genes, we are now analyzing the level of activity in the all-important cancer suppressor genes.

Dear Customer

This is another big step forward in cancer prevention.

The **cancer suppressor genes** and their respective epigenetic states are hugely significant in deciding whether people get cancer, as was emphasized in the course of many lectures at last year's World Cancer Congress in Chicago.

In addition to natural genetic disposition, our lifestyle is a key factor, because misguided choices cause crucial epigenetic changes that make us susceptible cancer.

In all of this, the **tumor suppressor genes** play an absolutely vital role. If these protective genes are methylated and epigenetically altered as a result of poor lifestyle choices and environmental influences, they can become deactivated and open the way for cancer.

Genes that suppress the uncontrolled division of genomically damaged cells and thereby prevent the development of tumors are called **cancer suppressor genes**. In contrast to the so-called onco genes, which are usually potent cancer growth genes and promote the development of cancer, the cancer suppressor genes in the cells prevent growth getting out of hand. As counterparts to the onco genes, they are therefore called **cancer suppressor genes**. They would have to be shut down or heavily methylated before a cancer could grow. The p53 gene – also called the

cancer suppressor genes. They would have to be shut down or heavily methylated before a cancer could grow. The p53 gene – also called the “guardian of the genome” – is the best-known example. In more than half of all tumors, the p53 gene has mutated or undergone epigenetic changes and can no longer exercise its watchdog function.

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The interplay of genetics and EpiGenetics in the **tumor suppressor genes** is illustrated by the following example: if a person is a carrier of the C/C variant on the known MTHFR gene, folic acid supplementation can result in an excess of folic acid which in turn brings about an overabundance of methyl residues and thus methylates and neutralizes **cancer suppressor genes** such as P53.

It is therefore essential to know what state our cancer suppressor genes are in and what lifestyle will best protect them. We at Salvagene have developed an analysis for this.

It now comes as a standard feature of our Telomer and EpiGenetic module. Since laboratory capacities are still limited, these analyses are at the moment available exclusively to our PREMIUM Membership clients.