Bdour Alhajjaj

Southern Illinois University

2ed Review

To begin, p53 gene is known to be the cancer repressor gene, and the gene that regulate cell cycle and cause cell death “ apoptosis”. To clarify, once the DNA is damaged, this gene prevents the cell from dividing. The mutation on this protein can result of number of cancers. It is very important mechanisms for cells in living organisms to have the ability of destroying the cell than allowing cancer to occur. The normal human body has to have a specific number of chromosomes and these chromosomes go through mitosis and meiosis. Genes encode each chromosome. These genes are the inheritance unit in living organisms. Each person should have 46 chromosomes 23 are from the father and the other half is from the mother; otherwise, many different syndromes will be developed. It was found that p53 is located on chromosome 17. The p53 gene is regulating the cell cycle. It has the capacity that it blocks the cycle of the cell and promotes the cell death “ apoptosis”, thus prevent cancer from devolving. Surprisingly, stress signals as a result of hypoxia activate p53 for example. However, a new study showed that having any type of stress signals is not the only requirement for activating p53. However, it is believed that each stress signal has its own role as a tumor repressor.

The concept of p53 as a repressor gene and its capacity to reverse the cell cycle and stop the tumor from growing is simplified. Some genes would obey the p53 function and stop while others will grow. If the case is fully understood, cancer will no longer exist. Some cases require further manipulations of p53 gene activation in order to cause the death of certain cells.