BioMed Research Journal
BMRJ, 2(2): 34-36
www.scitcentral.com

Mini Review: Open Access

Explanation to the Phenomenon of the Cell Death

Adnan Y Rojeab*

*The London College, UCK, UK.

Received April 9, 2018; Accepted May 14, 2018; Published August 26, 2018

ABSTRACT

Creature cells can be, naturally, directed to be died, in a programmed process of cell death or so called: cell suicide. This process is a phenomenon, which is concerning with the natural characteristic situation of the length of the telomere, of DNA, in the cell. Where, at critical length of the telomere, the DNA [and the cell itself], is not continuing, any more, in the process of replication, to prevent facing any genetic structure changes. Accordingly, cancer cells are not directed to be died, as their telomere, of DNA, is not going to approach a critical shortening length of the shape situation.

INTRODUCTION

The phenomenon of cell death is one of the important subject, which been given a lot of attention, in biological and medical aspects.

There are, two main ways for the cells to be vanished, [died]: either cells die by been damaged, [in variety of methods] or the cells died by their own plan to kill themselves [1].

The planned way of the cells killing themselves, is a programmed way and it is called [cell suicide]. The cell, then, kills itself through internal processes program.

This programmed method of the cell killing them is shown under a way of Apoptosis: where apoptosis is a normal phenomenon, occurring frequently in a multi-cellular organism.

Apoptosis, sometimes called “cellular suicide”, is a normal, programmed process of cellular self-destruction. Even though it involves cell death, apoptosis serves a healthy and protective role in our bodies [2].

Also, apoptosis occurs normally during development and aging and as a homeostatic mechanism to maintain cell populations in tissues [3].

The apoptosis is the method, by which, most cells been died. It is found that the process of cell death is of importance to the creature for future life.

Cells death, [by programming], are for many purposes as to: removing excess cells, create a structure in the body; get rid of extra cells, when cells are damaged, or as cells are infected by viruses [1].

For this reason, it is said that: Programmed cell death is an essential part of staying healthy.

At the process of cell suicide program [apoptosis]: the cell shrinks, smaller in size, and condenses [4]. Also, the nuclear DNA breaks up into fragments. The cell death without damage to its neighbouring cells.

For Cancer cells often resist cell death, even after anti-cancer treatment [4].

As it is shown that: Programmed cell death is an essential part of staying healthy, however, when the process goes haywire, it promotes the growth of cancer [5]. Sometimes, there is not enough cellular suicide, especially in the case of cancer.

Cancers are talented at avoiding death and have sophisticated mechanisms that hijack components of the autophagy, apoptosis and necrosis signalling pathways. When they spread through the body, cancers escape cell death by deactivation these pathways [5].

If the DNA of a cell is damaged to a degree where the cell is unable to repair itself - mechanisms will signal the cell to kill itself, in order to prevent cancerous transformation. Malignant melanoma cells can resist committing suicide when attacked by chemotherapy. The explanation lies in the discovery that a key gene in the cell-death pathway is switched off in this cancer [6].

Corresponding author: Adnan Y Rojeaba, The London College, UCK, UK, Tel: 0(44)7758469962; E-mail: rojeab@lcuck.ac.uk

Citation: Rojeab AY. (2018) Explanation to the Phenomenon of the Cell Death. Biomed Res J, 2(2): 34-36.

An ability to avoid committing suicide is one of the keys to a cancer cell's survival, whether it is spreading from one part of the body to another by metastasis or facing attack from chemotherapy.

Generally, it shows that, it needs to have more researches of explanation, to be done on cell death, as it seems that, there is not, yet, respectively, a lot of research has been done.

DISCUSSION

It is believed that the occurrence of the cell die [called: cell suicide], is caused concerning with the purpose of the importance to save the fundamental of the original genes [of the DNA molecule], characteristics, for the exact certain creature.

The explanation can be shown, firstly, by applying the conditions that: the telomere is shortening in each stage of DNA replication, and that, the critical number of the telomere's base pairs, [telomere length], is causing the process of the DNA replication to be stopped, until the cell been died.

Then, accordingly, the resulting process could be discussed as the following:

Suppose that, if the DNA is going to be continued to be replicated after the state of the critical length of the telomere, then, this will show that, the next stage of DNA replication will be caused to be:

Some of the DNA genes are going to be lost. Where, these genes, are placed, to be nearest to the critical length of the telomere [as this case is concerning with the shortening process of the telomere, in each replication].

Therefore, it shows that, this process, [if it is happened], will leave the replicated, [new], DNA molecule, [and then the cell, as a whole], to be totally different, in its genetic characteristics formation, [inherently], than that of its original one, (as because some of genes are lost from the original DNA structure construction).

This result will lead to that, the, [new], DNA molecule is going to be belonging to a different sort of creature, [kind living], and not to be to the same original one.

Hence, this will show that this creature will hold some cells which are of different types of DNA structure, in its [same] body. Therefore, this is not, [entirely], acceptable in the genetic structure formation characteristics, of a creature body.

Accordingly, for the situation of the state of the critical length of the telomere, of the DNA, the DNA should not going on to be of any further future replication. This means that the DNA [and the cell itself], are, now, in a process of having to finish the performing of their life activity. Then, the lifelike occurrence of the body is that to direct these certain cells to be in the process of the dying action. This action could be shown as it is created by the inherent of the creature itself.

Then, the dying process could be created by a mechanism signal, as it is the right and firm action to prevent any up-normal difficulties could be caused in the cell [as that of the occurrence of different type of genes in DNA].

In other words, it means that, the occurrence of the process of the cell dying is the right, and healthy genetically, action, to prevent any fundamental change could be happened, to the cells of the body, for a certain creature.

Therefore, [at the stage level of the critical length of the telomere of DNA], the death of the cell is of an importance, which is exactly necessary for the original natural and right characteristics of the creature.

Now, it could be discussed, as well, the condition concerning with the cancer situation. It is fundamentally to show that:

There is no cellular suicide for cancer cells. This is true occurrence condition and it is supporting the believe that just been explained here. Which is for the reason behind the cell death [suicide] occurring.

The explanation may be shown as the following:

The, main, condition of the cancer cells, is that, the telomere, (of the DNA), is being lengthening, [after been shortened], during each DNA replication process.

Then this situation leads to show that, there will be not a certain, real, condition, [could be occurred], for a critical length of the telomere, of DNA, in the cancer cell. Accordingly, there is not a certain, [practical], reason to make the cancer DNA to loss any part of its genes, or any of its characteristics.

Now, [for cancer cells], as the telomere, of the DNA, is not going to be in a state of the critical length condition, then, this means that, there is not any certain reason to lead the cancer cells to kill themselves, [i.e., to be in the cell suicide condition]. This is to show that, as long as the telomere, of DNA, of a cancer cell is not going to be shortening, then the DNA [and the cell], is going to be continued to be replicated, for no limit number of times.

Also, as it is concerned with the matter of cancer treatment, it is believed that, a right thoughtful can be applied as, that, of the action of magnetism [or electromagnetic action], in the aiming of the possibility to cure cancer [7].

REFERENCES

1. Eliz Hall W (2017) Cell death. Institute of Medical Research.
2. Dutchen S, Saltsman K (2011) Cell suicide, an essential part of life. National Institutes of Health.

3. Elmore S (2007) Apoptosis: A review of programmed cell death. Toxicol Pathol 35: 495-516.

4. Kerr JF, Wyllie AH, Currie AR (1972) Apoptosis: a basic biological phenomenon with wide ranging implications in tissue kinetics. Br J Cancer 26: 329-357.

5. Hartman B (2017) When cell death goes bad. Anti-Aging Science.

6. Jones PA (2018) Cancer: Death and methylation. Int J Sci.

7. Rojeab AY (2015) Novel strategy to cure cancer. Cancer Res J 3: 6-10.