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Editorial Open Access

Ever Young: A Big Game, Induced Pluripotent Stem Cell a Positive Candidate

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Abstract

Have you ever imagine that you will go to pharmacy to order cells instead of medicine. Yes scientists are trying to making it possible. Lots of trial has already been undertaken to make this scientific imagination true. People don't want to be aged in course of life-time. Everybody wants to remain young. Induced pluripotent stem cells originate from somatic cell more specifically from patient specific somatic cell can be a possibility of this contemplation.

Keywords: Induced Pluripotent stem cell; Ever young; Senility

Editorial

Regenerative medicine and cell therapy become more and more favorite [1] day by day to overcome the adverse effects of drug. Conventional drugs have lots of side effects and also they are not pleasant for cell also drug developed in mouse trialing, is not working in many human diseases [2].

According to the believer after rebirth all the blessed people of heaven will remain young of their rest of life. Its means the cells of their body will never turns to senescence or the aged cells turn again into juvenile stage. This will only be possible for the supreme power that creates all this living being in the earth. As human being we can never stop or slow down the growth of cell even cannot prevent to being aged. Also we cannot return the aged cell into young cell, but we can introduce some way that the senescence cell are somehow replace by young cell time to time.

When some part of body cell will be diseased or deformity they will give some special types of signal to the immune cells of body to save them from invaders or microorganism. The notion of pluripotent stem cell to replace the diseased cell is exactly similar. It is already established by some researcher that using different condition pluripotent stem cells can replace the damaged or diseases cells of the body [3-15].

What would be the possibilities that induced pluripotent stem cells as a candidate of ever young? Well, seems a patient heart attacked by any disease and his cardiac cells going to be dysfunctional. If we treat this patient with Induced Pluripotent stem cell (iPS) generated from his own somatic cell, the new juvenile iPS cells will receive a signals from the diseases cardiac cell that they will understand something really wrong with the cardiac cell and finally due to this signal they will go to their site of action where they start their function and replace the diseases cell in a specific time fashion (Figure 2). In this way the diseases cell become replace by new juvenile cardiac iPS cell and finally the diseases become cure [16-23].

At the same manner liver [24,25] , Kidney [26], stomach [27], muscle [28-32], Nervous system [33-39], blood cells and vascular system [40-43], retina [44], cochlea[45] or any organs diseases can be treated by this way(Figure 1). However come to the main talk. Our question is why a human is going aged day by day because his cells are getting aged, what happens then? The metabolic efficiency and energy production slowly down so why cells become aged.

Now our target is that we will treat these aged cells by the iPS. Just think collect some somatic cell from different organs from the vital part ofbody like from Skin, muscle, heart liver, kidney etc. and then make iPS of these cells in vitro. And again introduce these iPS cells into human body. When these iPS introduced into body by any means they will search the signal from their aged cells, if they get senesces signal from the same cell they will go there and replace the aged cell time to time, in that way the cell of a particular organ will never go aged because they are always in the way of replacing by new juvenile cell (Figure 1).

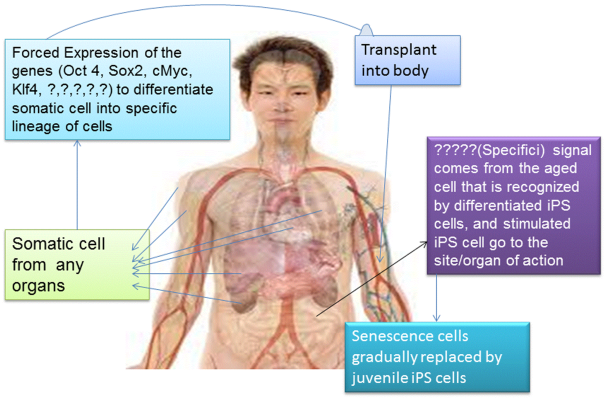

Figure 1: Paths of Everyoung

Another ways is to make the aged cell younger that correction of the genes responsible for senility. In this methods change or convert delete

or knockdown the senile genes from the iPS cell, when theses iPS cell differentiate and replace the aged cell and these juvenile cell will never go to see the senility because they will not have the genes responsible for ageing. Really amusing, interesting and funny (Figure 2), Some clinical trial and successes already underwent about this interesting phenomenon, scientist found that correction of β-globulin genes can prevent sickle cell anemia in mice [46] Genetic correction is helpful in Duchene muscular dystrophy [47] and knockdown of some gene enhances iPS reprograming capacity [48].

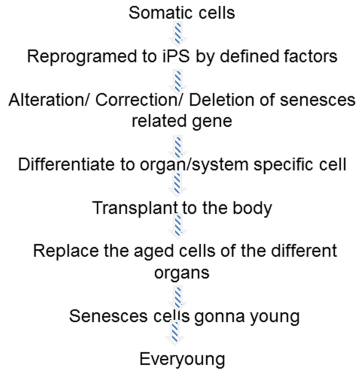

Figure 2: Possible mechanism to everyoung

These are the way to make a man ever young, because if cells always remain young the man will never go to see the senility (Figures 1 and 2).

The same things may be happen for cancer cell as well. Naturally cancer cell nature and secretions are totally different from healthy cell. When we generate some iPS from the healthy part of organ and treated the patience with these iPS cells they will received danger signal from cancerous cell and by receiving the signal they will start their action to replace the cancerous cell and the disease condition of patient will change to healthy.

Usually difficulties or problems with drug or transplantation is that after treatment there is a high chance of rejection but in case of pluripotent stem cell there is very minimum or no rejection [49-52]. Because in case of iPS , cells use from owner that is why we have no worries about self and non-selfantigen cross reaction and rejection. Even nowadays scientists are trying to boostering the immune system using immune cell generated from induced pluripotent stem cell [53].

Summary

It is already proved by the researcher that patient specific iPS cell can replace the diseased cell of nerve, muscle, eye, blood cell, liver, kidney etc. Especially the iPS replacement technique is widely applied nowadays in hepatic and cardiac diseases [54-57].These examples are the great hope for human. In the near future the technology will be adopted that human no need to see their senility. The time period is allocated for his life span will lead as young. It is really amusing.

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