Adenovirus research - a promising way to cancer therapy

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Almost all people are concerned about their physical condition. In particular, cancer has been a main obstacle for people who want to live longer and better. There are numerous therapies for cancer including chemotherapy, radiotherapy and surgery. However, most of these therapies are notorious for raising unfavourable side effects. Human beings have been researching a lot of options to overcome these effects. For decades, doctors and researchers have been searching for another innovative and efficient cancer therapy. Some of them have been paying attention to viruses.

Typically, viruses are known as a cause of many kinds of disastrous epidemics. However, people found that these viruses could turn into a precious treasure if they are modified and controlled appropriately. Adenovirus is one of the viruses that have been modified in order to apply them to clinic trials. There are several successful examples of using adenovirus as a cancer treatment medicine.

However, the way to a complete and efficient cancer therapy is a long journey. Thus, there are still a lot of problems for using adenovirus as a cancer treatment medicine. One of the problems is to increase the specificity and efficiency of adenoviruses as a gene therapy tool. Problems like this can be solved only when people get a better and thorough understanding of human body and the viruses.

In order to contribute to making a minor progress in this long journey, I have been working on an adenoviral capsid protein, which lies on the surface of the virus. This protein is called pIX and it is involved in several processes within the infected human cells. Interestingly, some reports are asserting that this protein can be used in modifying cell specificity of adenoviruses.

I have done several experiments to investigate its function. Finally, I identified specific proteins that interact with pIX. Meanwhile, I also investigated how pIX comes into being within the cells in connection with a certain control mechanism. This mechanism is an abundant control mechanism that makes the cells to produce several proteins from one pre-existing gene.

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