

永保好奇心

文／本庶佑

Mr. President, Dr. Chen, Ladies and gentlemen,

It is my great honor and pleasure to give one word on the occasion of the commencement of 2024 NTU.

I am pretty sure that many of you will become the leader of this country, Taiwan.

Each field, you will polish your skill and knowledge, and thus contribute to your country. I just want to give you one of my words depending on my experience.

The most important word is 'Curiosity'.

If you take everything written as granted, you will lose all your curiosity. Curiosity starts when you have some doubts.

Let's imagine we begin to go mountain climbing, not a huge mountain like Everest, but something small. Even small mountains contain a lot of interesting materials.

One would go up the stream and find some stone which does not look especially precious but its color is a little bit greenish. Your curiosity pick it up and later you try to find what it is.

Another one like to go up to the beginning of the river, and keep on going and reach a small fountain which continues to pour out water and that is the origin of the huge river that runs into the ocean.

You wondered why this happened. Then you start to consider the geography why this mountain was produced.

And then you investigate the ancient dynamics of the island that created various mountains and the whole island of Taiwan.

If you keep your curiosity, something may happen.

In my case, the PD-1 molecule was not found as a negative regulator in the immune system. Dr. Yasumasa Ishida, a graduate student in my lab, had an ambition to find the protein involved in killing T cells recognizing self-antigens that is essential in the immune system to eliminate self-attacking T-lymphocytes. He did a simple experiment to compare express mRNA in activated T cells are induced to die and non-activated T cells and picked up PD-1 cDNA.

The structure of cDNA that tells us the protein structure. And that protein had some

interesting features some common to known cell-activating molecules known at that time but quite unique features that distinguished from the rest of the known proteins on the surface. At that time, people say, rather disappointingly, let's try to look for another source.

But I thought this protein had some interesting features. So I decided to go further into their characteristics. And that was the beginning of PD-1 after knockout of PD-1 in the animal. The animal showed a hyperimmune reaction that clearly indicated PD-1 was negative regulator of T cells. So the discovery of PD-1 as a break of the immune system is what we call serendipity.

Serendipity is luck without expectation. It is also important to know the goddess of luck is hair only at the front, not at the backside of the head. That means to catch the goddess of luck you have to grasp her from her front. If you let the opportunity pass away and later try to catch her, she will be gone. So serendipity can bring chances to anyone on some occasion but you have to be prepared for something important that may appear in unexpected timing. To meet the goddess of serendipity is very important. You keep your curiosity in each field of your specialty.

By the way, the stone he picked up, later examined to be turned out to be jade.

Finally, I would like to close with my deep sympathy to the recent earthquake that caused severe damage to the area of Hua Lian, where I visited and enjoyed the beautiful scenery of white rocks and stones and old culture.

Thank you for your attention.



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1942 年生。日本免疫學家。現任京都大學醫學研究所特聘教授、高等研究院副院長兼特別教授，以及醫學研究所附屬癌症免疫綜合研究中心主任。本庶佑教授為癌症免疫療法先驅，1992 年首先鑑定 PD-1 為活化 T 淋巴細胞上的誘導型基因，這一發現為 PD-1 阻斷建立癌症免疫療法原理做出了重大貢獻，2018 年與詹姆斯·艾利森一同獲得諾貝爾生理學和醫學獎。本校陳文章校長於 2024 年 4 月 23 日在日本京都大學頒發名譽醫學博士學位予本庶佑教授，這是臺大第一次頒發名譽博士學位給日本國籍人士。本文為其 112 學年度臺大畢典致詞。