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[Medicine] National Yang-Ming University Identified Critical Protein Holding Over Neurodegeneration
[Medicine] National Yang-Ming University Identified Critical Protein Holding Over Neurodegeneration (Chinese Version)

The Liberty Times (2012/02/23) & udn.com (2012/02/23) A critical solution to nine incurable neurodegeneration-related disorders including cerebellum atrophy may be discovered. In a nine-year research conducted by Associate Professor Tzu-Hao CHENG at National Yang-Ming University (NYMU) and his doctoral student Chia-Rung LIU the critical factor to delay the incidence, Spt4, has been identified. If the Spt4 drug development goes well, the incidence of these neurodegeneration disorders may be delayed for twenty years, and the patients' lifespan may be extended.

One of the listed author of the article, Chia-Rung LIU, a doctoral student at NYMU indicated that these neurodegeneration disorders are caused via genetic mutation, while what the NYMU team has led to discover is the transcription elongation factor Spt4 is in a hazard relation to the pathogenic genetic mutation. These findings have been applied for patents in multiple countries, and an article about the findings has been published in Cell on February 17.

A press conference was held on February 22, hosted by NYMU President Kung-Yee LIANG. Associate Professor Tzu-Hao CHENG explained at the press conference that Spt4, one kind of protein in the brain, could also be accomplice that helps the mutated or flawed genes yield toxic proteins. The accumulation of toxic proteins in the brain kill brain cells, causing voids in the brain and leading to disorders such as cerebellum atrophy, Huntington's disease, etc. These diseases are presently incurable, and the patients can only let the diseases develop and pass away.

The symptoms of cerebellum atrophy are expressed as gradual dysfunction of the body movement coordination caused by the atrophy or malfunction of the brain, including lisp, swallow difficulty, shaky hands and unsteady steps. They often occur at the age between twenty and fifty, while the mutated genes could be pass down to the offsprings. Huntington's disease is caused by a large volume of loss of the brain cells that leads to discoordinaiton, cognitive decline, and other physical disorders like jerky, random, and uncontrollable movements, lisp, swallow difficulty, incontinence and memory deficits.

Right now the research has entered the phase of animal experiments and new drug design. Also the applications for international patents have been submitted. CHENG said, the new drug that can slow down the speed of degeneration could extend the lifespan of the patients for twenty years and lift the quality of life of the patients.

Further Information:
The Liberty Times 2012/02/23 (Chinese)
Udn.com 2012/02/22 (Chinese)

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