Tsinghua Professors Publish Papers in *Nature* and *Science*

Prof. Wu Jiawei from Tsinghua University published a paper in *Nature* (June 25, 2009, Vol. 459, No. 7250), entitled "Structural insight into the autoinhibition mechanism of AMP-activated protein kinase", shortly after her colleague Prof. Shi Yigong got his recent research findings published in *Science* (June 19, 2009, Vol. 324. No. 5934) titled "Structure and mechanism of an amino acid antiporter".

By conducting an analysis of the structures of two AMPK (AMP-activated protein kinase) fragments that contain catalytic kinase domains, Wu's research team completed a thorough investigation into the mechanical process through which the AMP regulates the activity of AMPK catalytic kinase, proposing a new regulatory model for AMPK activation by AMP. The research findings may lay a theoretical basis for developing new drugs for type-2 diabetes. Based on the research entirely completed in China, this article announces the debut of the Department of Biological Sciences and Technology of Tsinghua University in the arena of Nature, one of the world's top academic journals, marking a great breakthrough in biological research by the Department after other research results obtained by the Department published in Science and Cell successively.

Being a professor of Tsinghua University since 2003, Wu won a project financed by the National Science Fund for Distinguished Young Scholars in 2004, and gradually built her lab into perfection with the aid of the second round of "985 Project" launched by the Ministry of Education. The publishing of the article displays the sound momentum of growth enjoyed by the discipline of biophysical sciences, a time-honored preponderant discipline of the Department of Biological Sciences and Technology of Tsinghua University. Greater achievements are still expected from Prof. Wu's research team.

Prof. Shi Yigong and his team reported their study of the crystal structure of Adic, an arginine-agmatine antiporter that plays an essential role in the acid-resistance system of virulent enteric pathogens. The study revealed the potential ligand-binding sites, and the transport route of the membrane protein zymolyte, and suggested a conserved mechanism for the antiporter activity. Soon after getting supported by the National Science Fund for Distinguished Young Scholars in 2008, Shi got his article published in Nature-Structural & Molecular Biology at the end of the same year, and less than 6 months later, his latest research results were reported by Science.

The research activities of both professors were supported by the National Science Fund for Distinguished Young Scholars.