

Honorary Fellow A Citation



Professor Sun Sai Ming, Samuel, BSc, MSc, PhD

With global population growing by 90 million a year and traditional modes of plant breeding unable to increase staple crop yields, the world has for some time needed powerful new scientific solutions to prevent mass starvation. One of the researchers working at the forefront of finding the solutions is our own CUHK alumnus and colleague, Professor Samuel Sun. Professor Sun first gained the attention of his peers around the world with a famous paper in 1981, published in the foremost scientific journal *Nature*, in which he described his breakthrough achievement of cloning the first plant gene. This was followed in 1988 with another famous paper in the journal *Science* in which he and his team announced the cloning of a pest-resistant gene, arcelin. In 1989 he made history again when he successfully used a genetic transfer technique to enhance the food value of seed protein. This work has enabled farmers not only to increase crop yields significantly and to decrease losses due to pests, but to enrich the nutritional value of crops such as rice, which is the staple for more than half of humanity. It would be hard to think of more important or humane scientific contributions than these.

Professor Sun was educated at The Chinese University of Hong Kong and the University of Hong Kong before going to the University of Wisconsin Madison to do his PhD. From 1981 to 1987 he worked at the ARCO Plant Cell Research Institute of the Atlantic Richfield Corporation in the USA, where he rose to become director of the Molecular Biology Department. From then until 1995 he taught and did research in the Plant Molecular Physiology Department of the University of Hawaii at Manoa.

In 1995 Professor Sun returned here to his alma mater where his scientific dedication continues to this day in a range of bioengineering projects that give The Chinese University of Hong Kong national and international leadership. This leadership was formally recognized in 2000 in the awarding to the University of a University Grants Committee-funded Area of Excellence research initiative in Plant and Fungal Biotechnology, which in 2007 became the UGC-Area of Excellence Centre for Plant and Agricultural Biotechnology. In 2006 Professor Sun was instrumental in establishing the Institute of Plant Molecular Biology and Agricultural Biotechnology (IPMBAB), of which he was founding director. IPMBAB works to address the question of sustained food supply by combining state-of-the-art biotechnology, the rich germplasm resources of China and the traditional wisdom of plant farmers and breeders.

In the same year that the IPMBAB was established, Professor Sun brought further international recognition to CUHK. He was one of seven scientists from five countries invited to take part in the ProVitaMinRice Consortium to engineer so-called "golden rice" for high pro-vitamin A, vitamin E, quality protein, iron and zinc. This humanitarian project was selected for support by the Grand Challenges of Global Health initiative of the Bill and Melinda Gates Foundation.



In 2008, under the leadership of Professor Sun, the University also gained approval from the PRC Ministry of Science and Technology to set up a highly significant State Key Laboratory in Agrobiotechnology (CUHK). The laboratory taps into Hong Kong's advantages in global networking, international human resources and modern management, as well as the mainland's resurgent economic strength, research capacity and abundant natural resources. The laboratory has served as a platform for CUHK's collaboration with the Beijing Genomics Institute (BGI) in Shenzhen to establish the CUHK-BGI Genome Research Centre. The Centre launched the important Soybean Homecoming Project in which genes that had been bred out of the originally Chinese soybean during its five millennia of domestication around the world would be restored to the species. These reinserted genes, which determine salt-tolerance and drought-resistance and can be found in wild species, may make China once again the world leader in soybean production.

In 2003 Professor Sun was honoured for his scientific achievements by being made an academician of the Chinese Academy of Engineering.

These scientific achievements alone would be sufficient grounds for us to honour Professor Sun here this evening. But there is another side to him that also deserves our recognition. Professor Sun is now Master of one of the University's new colleges, S.H. Ho College, which will have its first intake of students in 2010-11. Not only is Professor Sun involved in the detailed planning for this huge exercise, he brings to the task his own distinctive intellectual and moral vision. From his own early days at New Asia College Professor Sun learned that an education should not only be intellectually excellent, it should develop the whole human person. Following what he learned from such respected mentors as Professor Chi'en Mu and Professor Tang Chun-I, he places a great value on social responsibility and the importance of teaching. All his life as a teacher and researcher he has been motivated by the ideal of advancing the well-being of mankind.

Professor Sun's plans for S.H. Ho College are up to date, but they will also advance the founding ideals of this collegiate University: "I expect our students to protect the natural environment and sympathize with the needy. The College will organize activities such as different kinds of voluntary work in poverty-stricken areas for students to learn through practice. In addition, I hope the students will acquire both specialized knowledge and wisdom. They should also have high moral standards, trustworthiness and a strong sense of personal responsibility. Furthermore, it is important to help the students set forth their goals in life. They will not know how to sort out their priorities without guidance."

Anyone who knows Professor Sun will know that he combines the somewhat lonely life of the breakthrough researcher with the highly collaborative life of laboratory and research centre leader, where he is a great builder of research communities capable of achieving results in large and significant projects. He is a man of vision and deep convictions and nobody can doubt his ability to make important things happen. The Chinese University of Hong Kong is indeed fortunate to have a man of such motivations and achievements to head one of its new colleges.



Mr. Chairman, it is my privilege to present to you Professor Samuel Sun, researcher, scientific leader, educator and humanitarian, for the award of an Honorary Fellowship of the University.

This citation is written by Professor David Parker