

Curriculum Vitae of Prof. Hon-ming Lam

Prof. Hon-ming Lam obtained his BSc and MPhil in biology from The Chinese University of Hong Kong in 1985 and 1987, respectively. After receiving his PhD degree in molecular biology from Northwestern University in Chicago, he worked as a post-doctoral fellow at New York University from 1992 to 1996. Professor Lam is currently an associate professor at The Chinese University of Hong Kong and concurrently the associate director of the Molecular Biotechnology Programme in School of Life Sciences. He received two exemplary teaching awards from the Faculty of Science in 1999–2000 and 2005–2006. Professor Lam has been an elected member of the Soybean Specialty Committee of the Crop Science Society of China since 2001 and appointed as a Vice Secretary-General in 2005. In 2008, the Ministry of Science and Technology, PRC approved the establishment of the State Key Laboratory of Agrobiotechnology (The Chinese University of Hong Kong). Professor Lam was appointed the deputy director of this State Key Laboratory while Prof. Samuel Sai-ming Sun was appointed the director.

Professor Lam is an expert in the studies of gene function. During his early research career, he studied the genetic regulation of vitamin B6 biosynthesis in bacteria and proposed the theory that complex operons in bacteria can coordinate different metabolic pathways. In his subsequent research in plant molecular biology, Professor Lam was one of the pioneers to discover metabolic regulation of gene expression in plants, plant glutamate receptors, and the PII nitrogen sensor in plants. Several patents were obtained based on these findings. In addition, he discovered the gene family of asparagine synthesis in the model plant *Arabidopsis thaliana*. These genes are involved in the regulation of nitrogen sink-source relationship and stress responses. The findings have been extended to soybean research. Professor Lam has published extensively on nitrogen metabolism and nitrogen signal transduction in renowned scientific journals, including *Nature*, *Annual Review of Plant Biology*, *Proceedings National Academy Sciences of USA*, *Plant Cell*, *Plant Journal*, and *Plant Physiology*.

In the State Key Laboratory of Agrobiotechnology (The Chinese University of Hong Kong), Professor Lam organized a team effort to identify key genes related to the survival of crops under adverse environments, using elite germplasms. In the last few years, his team has filed five US patent applications. In recent years, he has published his research findings on salinity and drought tolerance genes in soybean and genes encoding new defence response signaling components in rice. These results have been published in scientific journals including *Journal of Biological Chemistry*, *Plant Physiology*, *New Phytologist*, *Plant Cell & Environmental*, and *Journal of Experiment Botany*. In 2009, he chief-edited the book *Researches on Tolerance to Stresses in Chinese Soybean* together with Profs. CHANG Ruzhen, SHAO Guihua, and LIU Zhongtang. This book was published by China Agriculture Press.

Starting last year, Professor Lam launched a large scale soybean genomic project in collaboration with BGI-Shenzhen. Through high-throughput genome sequencing, the project aims at learning about the changes in the genome of soybean under artificial human selection. This research will provide important information to soybean research and breeding programmes. Recent results have become a cover story in the coming issue of *Nature Genetics*.