

Prof. Wang Enduo, Biochemist and Molecular Biologist, principal investigator of Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, the Chinese Academy of Sciences. She was selected a member of the Chinese Academy of Sciences since 2005 and Fellow of the Third World Academy of Sciences in 2006.

Prof. Wang graduated from Shanghai Institute of Biochemistry, the Chinese Academy of Sciences in 1969 and 1981 as a graduate student and Master. She was a visiting scholar at University of California, Davis, U.S., supported by Fogarty Fellowship from October 1984 to January 1987. She was promoted to Principle Investigator in 1993, became Ph. D Supervisor for Biochemistry and Molecular Biology in 1994 and has been the director of the research group of “Interaction between Enzyme and Nucleic Acid” in the Institute since 1995. She has devoted herself to the study of aminoacyl-tRNA synthetases, which are a kind of key enzymes in protein biosynthesis and especially made important contributions in studies on the LeuRSs and ArgRSs from different sources, their interaction with cognate tRNAs, their synthetic mechanism and the editing mechanism of LeuRSs. She published over 100 original papers that were cited by 500 publications. She was awarded the First Class Prize of Shanghai Science and Technology Progress Award in 2000 and the Second Class Prize of National Natural Sciences Award in 2001, Shanghai Women Innovation Award in 2002 and Outstanding Supervisor Award of the Chinese Academy of Sciences in 2003, 2005, 2006 and 2008. She is the Chairperson of Shanghai Women Scientists Union, the Standing Member of the 10th National Women's Congress of China and Deputy of the 10th and 11th National People's Congress.

Prof. Deng Zixin, a professor on microbiology at School of Life Science and Biotechnology, Shanghai Jiaotong University. He is the head of the Key Laboratory of Microbial Metabolism under the Chinese Ministry of Education at Shanghai Jiaotong University, Shanghai, China. He is a Member of Chinese Academy of Sciences and a Fellow of the Science Academy for the Developing World (formally the Third World Academy of Sciences, TWAS).

Prof. Deng was born in Hubei Province, China in 1957. He received his bachelor's degree in microbiology from Huazhong Agricultural University in 1982 and a PhD degree in microbial genetics from the University of East Anglia, UK, in 1987, while working in *Streptomyces* group at John Innes Center. At present, he acts as the Dean of School of Life Sciences & Biotechnology, and Director for Laboratory of Microbial Metabolism of the Ministry of Education of China located at Shanghai Jiaotong University.

Prof Deng's major research interests focus on *Streptomyces* genetics, biochemistry and molecular biology of antibiotic biosynthesis. He is one of the leaders in the field of microbiology in China. He and his colleagues have developed efficient gene cloning systems for several important antibiotics producers (notably polyene, polyether and aminoglycoside classes for medical, agricultural and veterinary uses), leading to the cloning and detailed demonstration of their biosynthetic pathways and regulatory mechanisms. The information obtained was used for the antibiotic overproduction and generation of novel compounds by metabolic engineering or combinatorial biosynthesis, and potentially for engineering plants against fungal/insect attack. He and his collaborators also worked extensively on an unusual DNA modification system by sulphur (S) in widespread bacteria of variable origin and diverse habitat. This study revealed a first DNA modification into DNA backbone to form phosphorothioate, which seemed to have opened up a fascinating new field of research with potential relevance to the understanding of interesting physiological function(s) within the context of a wide-spectrum of life systems.

Prof. Meng Anming, a professor and the director of the Institute of Zoology, Chinese Academy of Sciences, and also a professor at the Department of Biological Sciences and Biotechnology, Tsinghua University, China. He is a member of Chinese Academy of Sciences and a Fellow of the Science Academy for the Developing World (previously the Third World Academy of Sciences, TWAS).

Prof. Meng took an undergraduate study with a major of agronomy in Southwestern Agricultural University, Chongqing, and obtained a bachelor degree in 1983. After completion of Ph.D. study in Nottingham University, Britain, in November 1990, he returned to China and set up his own laboratory in Beijing Agricultural University. From 1990 to 1996, his lab demonstrated that genetic variation in DNA fingerprints of chicken could be used to predict heterosis in egg productive traits, and identified DNA fingerprint bands that linked to egg weight of chicken. As a visiting scholar from 1996 to 1998 in Medical College of Georgia, USA, he in collaboration with his colleagues demonstrated for the first time that cis-regulatory elements in a complex promoter could be identified in a whole animal system through transgenesis, and that a tissue-specific promoter could be used to generate transgenic zebrafish stably expressing GFP. In August 1998, he returned to and set up the first zebrafish lab in China. His research has then focused on molecular mechanisms controlling development of vertebrate embryos.

In the past ten years, his group has identified some factors, such as, Dapper2, Tob1, Amolt2 and Spr2, which modulate or mediate TGF-beta, Wnt or Fgf signals, and elucidated their important functions in mesoderm induction and dorsoventral patterning of zebrafish embryos as well as underlying mechanisms. His lab is currently investigating functional significance of maternal factors in zebrafish through Tol2 transposon-mediated gene trapping approach. His high-quality research leads to many publications in prestigious scientific journals such as Science, Cell, Developmental Cell, Development, PNAS, EMBO Journal and Developmental Biology.

Prof. Zhao Jindong is a professor in biochemistry in College of Life Sciences, Peking University. Dr. Zhao was elected to a member of Chinese Academy of Sciences in 2007.

Prof. Zhao graduated from Southwestern Normal University in 1982 and was admitted to graduate school of Chinese Academy of Sciences. He obtained his Ph. D. degree in 1989 at Department of Botany in University of Texas at Austin. Currently, Prof. Zhao is the director of Institute of Hydrobiology, Chinese Academy of Sciences.

Prof. Zhao's laboratory studies regulation of gene expression of cyanobacterial development and biochemical mechanism of photosynthetic electron transfer in cyanobacteria. His group was the first to identify HetR as key protease in heterocyst development and pattern formation in filamentous cyanobacterium *Anabaena* sp. PCC 7120. They also provided first evidence that free calcium ions were critical in heterocyst differentiation, which shows that calcium is involved in cell differentiation before occurrence of eukaryotes during evolution. Prof. Zhao's group also works on light energy transfer from light harvesting system to reaction centers of cyanobacteria with emphasis on energy balance between the two photosystems. Its study on the mechanism of cyclic electron transfer in regulation of light energy transfer shows that the cytochrome *b/f* complex is a key component in perceiving the imbalance of incoming light.

Prof. Wu Weihua is currently a Professor in Plant Biology (specially appointed Professor of the Cheung Kung Scholars Programme) at China Agricultural University (CAU). Prof. Wu graduated for his Ph.D. in 1991 at Rutgers University (the New Jersey State University), and completed his postdoctoral study at Harvard University in 1993. He has been appointed as a faculty member at China Agricultural University since 1994. He has been the Director for the State Key Laboratory of Plant Physiology and Biochemistry at China Agricultural University (CAU) since 2002. He is a Member of Chinese Academy of Sciences and the Director for Life Science Division of NSFC.

Prof. Wu's major research interests include (1) ion channel regulation and calcium signaling in plant cells, (2) molecular genetic mechanisms of plant potassium and phosphorous efficiencies, and (3) molecular mechanisms of plant responses to salt/osmotic stresses. One of examples is to investigate molecular mechanisms of plant  $K^+$  utilization efficiency. By screening and identifying a number of low- $K^+$  tolerant and low- $K^+$  sensitive Arabidopsis mutants, Prof. Wu and his colleagues have identified and characterized the genes that encode important proteins in the regulation of plant  $K^+$  uptake. The further preliminary results show that expression changes of these genes by genetic engineering significantly affect  $K^+$  utilization efficiency in crops (such as corn, cotton and soybean). Other works from Wu's group are focused on molecular mechanisms of plant responses to high salt, osmotic/drought and low-phosphorous stresses, and is aimed at solving important problems in crop production. Prof. Wu's group is also interested in functional characterization of gene members related to calcium signaling, such as the members in CDPK and CBL/CIPK families.

Prof. Li Jiayang is the Vice President, Chinese Academy of Sciences (CAS). He received his Bachelor degree of Agronomy from Anhui Agricultural College in 1982, Master degree of Science from Institute of Genetics, Chinese Academy of Sciences in 1984, and Ph. D. from Brandeis University in 1991. After the postdoctoral training in Boyce Thompson Institute for Plant Researches at Cornell University, he was recruited as a Principal Investigator (professor) in 1994 by the Institute of Genetics and Developmental Biology, CAS. He has been elected fellow, Asia-Pacific International Molecular Biology Network, Chinese Academy of Sciences, and the Academy of Sciences for the Developing World (TWAS). He has been awarded the Grant for Distinguished Young Scientists in China, the Grant for One-hundred Talents Program by CAS, Prize of Ho Leung Ho Lee Foundation for Scientific and Technological Progress, Cheung Kong Achievement Award, China National Natural Science Award, and TWAS Medal Lecture Award.