Doctor of Science honoris causa
Professor Shang Fa YANG
Citation

Have you ever heard of "The Yang Cycle"? No, it is not a new kind of bicycle developed in China. It refers to Professor Shang Fa Yang's discovery of the pathway of ethylene biosynthesis, a pathway that sheds light on our understanding of plant development and growth. This scientific understanding is of practical importance for the harvesting and storage of crops. Professor Yang, whom we honor today, is a leading international authority in the field of plant biochemistry and physiology. His outstanding research activities have been focused on understanding the biochemistry and physiology of ethylene, an essential gaseous plant hormone of immense importance to agriculture.

One might say that the distinguished mark of Professor Yang's academic career is that of the joy of scientific discoveries. He has devoted almost his entire research career to the central problem of ethylene biosynthesis and made a remarkable series of studies on the synthesis pathway. In the early phase of his work, he conducted elegant experiments that proved unequivocally the role of methionine as a precursor for ethylene biosynthesis in plants. He then established that SAM was an important intermediate in the pathway of methionine to ethylene. A major breakthrough came in 1979 when he discovered the key intermediate, ACC, between SAM and ethylene. The identification of ACC led to the isolation of an enzyme that is involved in the pathway now referred to as "The Yang Cycle".

Professor Yang's discoveries not only have elucidated the role ethylene plays in plant growth, development, senescence, and environmental stresses, but also have significantly contributed to economic agriculture for food. The applications of his research in post-harvest biology have had a significant impact on our understanding of how vegetables, fruits and flowers deteriorate in storage. A theoretical foundation is provided for the control of the deterioration process through biotechnology. By regulating ethylene biosynthesis, the life span and quality of harvested vegetables and fruits can now be prolonged. We have him to thank for apples and tomatoes staying fresh longer. Surely his accomplishments are an inspiration to HKUST students to embark on the journey of scientific research, a journey with the reward of the joy of discovery awaiting you. To savor a little of that joy, read the series of books he recently co-edited with our Professor S D Kung, entitled Discoveries in Plant Biology.

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International recognition of Professor Yang’s achievements is abundant. He figures prominently at major research conferences and served on the editorial boards of leading journals. He has more than 220 publications in the field of plant biology to his credit. Numerous honors and awards have been bestowed on him. He won the Campbell Award of the American Institute of Biological Science in 1969; the J S Guggenheim Fellowship in 1982; the International Plant Growth Substances Association Research Award in 1985; the prestigious Wolf Prize in Agriculture in 1991; and the American Society of Horticultural Science Outstanding Research Award in 1992. In 1990 and 1992, he was elected a member of the US National Academy of Sciences, and Academia Sinica, Taipei, respectively.

Professor Yang was born in Taiwan where he received his BS and MS in Agricultural Chemistry from the Taiwan University. His PhD in Plant Biochemistry was awarded by Utah State University in 1962. After his doctorate, he went to the University of California, Davis first as a Postdoctoral Fellow, then a Lecturer and Assistant Biochemist in 1966. He was Professor and Biochemist from 1974 to 1994, and is still a Professor Emeritus at UCD. In 1994, HKLIST succeeded to lure him over to be a Professor in the Department of Biology. In 1996 he returned to Taiwan to become the Vice-President of the Academia Sinica but continued as an Adjunct Professor with us.

Mr Pro-Chancellor, I have the honor, on behalf of the University, to present to you Professor Shang Fa Yang, Professor Emeritus at University of California Davis and Academician, for the degree of Doctor of Science honoris causa.

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副監督先生，本人謹代表香港科技大學，恭請閣下向戴維斯加州大學榮休教授及院士楊教授頒授榮譽理學博士學位。