

Savio L-Y. Woo, Ph.D., D.Sc. (Hon), D. Eng. (Hon)

胡流源 院士

Dr. Savio L-Y. Woo is a Distinguished University Professor Emeritus of Bioengineering. He is a member of the **National Academy of Medicine (1991)** (formerly the Institute of Medicine), the **National Academy of Engineering (1994)**, and the **Academia Sinica (1996)**, only one of five persons who have gained all three of these honors.

After spending 20 years at the University of California, San Diego (UCSD) as a Professor of Surgery and Bioengineering, Dr. Woo arrived at the University of Pittsburgh in 1990, where he was the Founder and Director of the world-renowned Musculoskeletal Research Center (MSRC), a diverse multidisciplinary research and educational center in the Department of Bioengineering, Swanson School of Engineering.

Dr. Woo received his B.S. degree from Chico State College (1965), and M.S. and Ph.D. degrees (1966, 1971) from the University of Washington. In 1999, Dr. Woo was bestowed an honorary Doctor of Science Degree from the Board of Trustees of the California State University System, and in 2008, he earned an honorary Doctor of Engineering Degree from The Hong Kong Polytechnic University.

Dr. Woo is a pioneer in bioengineering and is renowned for his more than 50 years of translational research in healing and repair of tissues. Together with his team, they have authored **311** original research papers in refereed journals, **158** book chapters and review articles as well as has edited **14** books. Their work has had a significant impact on the management of ligament and tendon injuries including clinical paradigm shifts that have led to improved patient outcome.

More recently, Dr. Woo's research focused on two areas: 1) measurement of the forces in the ligament and tendon and their contribution to joint function using robotics technology and 2) using functional tissue engineering (FTE) approach to regenerate ligaments and tendons. Research projects included the studies of cellular and molecular responses to mechanical stimuli and how they could improve the outcome of ligament and tendon healing. Dr. Woo's team also explored the use of biodegradable magnesium (Mg) and Mg alloys for ligament regeneration. With their pioneering work on the use of robotic technology together with biplanar fluoroscopy, the function of the ACL is better characterized and mechanisms of ACL injury are better understood. Further, improved ways for ACL reconstruction are elucidated and quantitatively based scientific methods for injury prevention could be developed.

Dr. Woo has educated over **600** post-doctoral fellows and students from the U.S., Japan, Germany, Greece, Italy, Taiwan, Turkey, Korea, Canada, England, Norway, India, Thailand, Hong Kong SAR, and China. He has also successfully mentored **37** junior faculty members.

Dr. Woo has been a leader in Bioengineering and Orthopaedics. He has served as **Chair** of ASME's Bioengineering Division, United States National Committee of Biomechanics, and the World Council for Biomechanics as well as **President** for The Orthopaedic Research Society, American Society of Biomechanics, and International Society for Fracture Repair. He has also founded the International Symposium on Ligaments and Tendons (ISL&T) and World Association for Chinese Biomedical Engineers (WACBE).

He has received the highest honors from many professional societies, including the Kappa Delta Award (AAOS/ORS), the Herbert R. Lissner Medal (ASME), the O'Donoghue Sports Injury Research Award (AOSSM), the Giovanni Borelli Award (ASB), the Muybridge Medal (ISB), and the prestigious Diamond Award for Distinguish Achievement from the University of Washington, among others. He was also given the IEEE Gold Medal for Innovation in Healthcare Technology from the Institute for Electrical and Electronics Engineers. In 1998, Dr. Woo received the **Olympic Prize for Sports Science** from the **International Olympic Committee** and the **first Olympic Gold Medal** at the Nagano Games in Japan.

The International Symposium on Ligaments and Tendons (**ISL&T**) honors him with the **Savio L-Y. Woo Young Researcher Award**; the World Association for Chinese Biomedical Engineers (**WACBE**) honors him with the **Savio L-Y. Woo Distinguished Lectureship**; the American Society for Mechanical Engineers (**ASME**) honors him with the establishment of the **Savio L-Y. Woo Translational Biomechanics Medal**; and the University of Pittsburgh, Department of Bioengineering honors him with the **Savio L-Y. Woo Distinguished Lectureship** and the **Savio L-Y. and Patricia Woo Conference Room**.

