**INTERNATIONAL COLLABORATION NEWS:**
**AN INTERVIEW WITH DR. ZHU CHEN**

Dr. Zhu Chen and the Shanghai Institute of Hematology (SIH) are long-established collaborators with the Samuel Waxman Cancer Research Foundation (SWCRF). Dr. Chen is Co-Principal Investigator and Director of the SWCRF in China. Presently, he is the Director of the Shanghai Institute of Hematology at the Rui-Jin Hospital in Shanghai, China. He also serves as Vice President of the Chinese Academy of Sciences and Director of the Human Genome Center in Shanghai, China.

Recently, Dr. Chen gave us an overview of his collaborative work with SWCRF and the important role the Foundation has played in the growth and development of China's biomedical research programs at SIH.

**What is the significance of the role of the Samuel Waxman Cancer Research Foundation (SWCRF) in developing the Shanghai Institute of Hematology?**

Dr. Zhu Chen: The Shanghai Institute of Hematology has been in close collaboration with SWCRF for 15 years. During the past few years, SWCRF has been playing a significant role in promoting the development of SIH.

With the support of SWCRF and other resources, SIH achieved many important breakthroughs in the molecular biological study of leukemia, such as the cloning of PLZF-RARα fusion gene, involved in a subset of acute promyelocytic leukemia (APL), the discovery of structure and functions of the PLZF gene and the establishment of PML-RARα as a quantitative molecular marker in most APL patients. Collaborating with SWCRF, SIH also made major achievements in the treatment of APL. The research team, under my direction, has elucidated the cellular and molecular mechanisms of the therapeutic effects of arsenic trioxide in the treatment of APL and other hematological malignancies. We further found that the combined use of all-trans retinoic acid (ATRA) and arsenic can reach a high quality, disease-free survival (DFS) in almost all APL cases, *making APL the first curable human acute myeloid leukemia*.

The collaboration also witnessed the generation of a talented line-up at SIH, such as Prof. Sai-Juan Chen, Prof. Zhi-Xiang Shen and Prof. Guo-Qiang Chen. Through initial training and long-term strategic collaboration, they have broadened the vision, improved the academic level and strengthened our ability to organize scientific research and international communication.

SWCRF also gave impetus to the internationalization of SIH. Promoted by SWCRF and the International Conferences on Differentiation Therapy, many scientific achievements of SIH, especially the concept of selective induction of differentiation/apoptosis therapy of human leukemia, were soon known by the international research community, benefiting thousands of patients worldwide.

**What has been your role in developing the Chinese biomedical research program as the Vice President of the Chinese Academy of Sciences?**

Dr. Zhu Chen: The SWCRF/SIH breakthroughs in the study of leukemia have promoted the original and creative work in the medical science in China, as well as the combination of clinical medicine and experimental medicine. The work of SIH also serves as a good example for the combination of Eastern and Western medicines. My work in the field of genomics not only made unique contributions, such as the cloning of a series of disease genes, but also advanced human genome research in China toward the international arena.

As Vice President of The Chinese Academy of Sciences, I have been devoted in recent years to strengthening the originality and creativity of biomedicine in China, establishing several medical and public health research institutions and introducing a group of talented scientists from overseas. As the Principal Advisor to the High-Tech Project of China in the biotechnology research field, I promoted the application and development of biotechnologies in medical, public health and environmental fields of China.

**How do you see the growth and development of China's biomedical research and its role in international collaborations?**

Dr. Zhu Chen: Fortunately, the scientific output of biomedicine of China, such as the numbers of research papers and patents, has greatly increased in recent years. Many significant achievements have been made in the fields of human and rice genomes, protein science, neuroscience and evolutionary biology. In addition, the study of pathogenesis and therapies of leukemia, diseases of the cardiovascular system, endocrine system and immunology system also resulted in remarkable new theories and techniques recognized by our international colleagues. A considerable portion of these achievements were due to the benefit of international collaborations. In turn, this success has promoted the cooperation of the Chinese biomedical community with the international scientific community, including the U.S., in wider ranges and deeper levels, which is critical for the progress of human civilization.

**Can you describe your experience working with and collaborating with the SWCRF? Has it helped you achieve your goals?**

Dr. Zhu Chen: The collaboration between my team with SWCRF has a 15-year history, yet still, I can remember the words Prof. Samuel Waxman spoke to me when he invited me to give a talk at a Mount Sinai Grand Rounds Lecture in New York. He said, "You have done a first-class job, so you should be confident. You should face the audience and speak to them with passion." Though 15 years has passed, the encouragement from Prof. Samuel Waxman has become a spiritual force compelling me to work hard.

It is true that the advancement of biomedical science should face the call of society and constantly make new contributions to the foundation of medical knowledge with full passion. Meanwhile, we should be confident to turn knowledge into a tool to save

patients. Medical science belongs to the whole world, going beyond national and geographical boundaries, and also beyond the limitations caused by language, culture, religion and history. The cooperation between SIH and SWCRF is a good paradigm for Sino-US scientific collaboration in the cancer research field specifically, and in medicine generally.