To Play TCM's Role on Building Healthy World

By LI Haoyue & LONG Yun

Professor Rudolf Bauer. (COURTESY PHOTO)

Professor Rudolf Bauer, head of the Institute of Pharmaceutical Sciences at the University of Graz in Austria, became involved in traditional Chinese medicine (TCM) research 30 years ago, when he was invited to serve on the scientific advisory board of the first German hospital of TCM.

Since then, Bauer has developed a keen interest in TCM. Exploring the mechanism of Chinese medicine and tapping into its great potential have become Bauer's lifelong career. Due to his outstanding contribution to promoting international exchanges in the field of TCM, he was presented with the Chinese Government Friendship Award in 2020.

Love of TCM

Bauer has grown to love TCM over thirty years of research and has a profound affinity for China and its deep traditional culture. He believes that the purpose of medical study is not only to solve technical difficulties, but also to thoroughly comprehend the culture behind medicine.

Initially he discovered that TCM culture is vast and complex, making it difficult for him to properly comprehend and convey its concept. Therefore, he decided to introduce the treasure of TCM to more European scientists in order to foster the integration and exchange of ideas between Eastern and Western medical professionals.

Over the past 30 years, Bauer has been to China more than 80 times to increase the mutual understanding between young researchers from China and Austria. Simultaneously, his laboratory has welcomed over a hundred Chinese researchers and students. Bauer has not only developed several international TCM professionals but also disseminated TCM culture to a larger audience.

Exploring the mystery behind TCM

In the long-term cooperation with the Chinese research team, Bauer has been repeatedly impressed by the efficacy of Chinese medicine. He found that TCM often achieves "miraculous" results in the prevention and treatment of diabetes and coronary heart disease. He noted on many occasions that, "Prevention and early treatment is a very valuable aspect of Chinese medicine."

Bauer underlined that TCM regards the human life process as a whole. Simultaneously, it closely combines people with their environment, fully considers all the influencing factors, and maximizes the overall health needs of the human body in the process of diagnosis and treatment.

His understanding of TCM theory and its efficacy laid a solid foundation for his research on TCM. Since the outbreak of COVID-19, he has consistently applauded the clinical value of TCM in combating outbreaks of major infectious diseases. In a letter to Lei Fengyun, Counselor for Science and Technology of the Chinese Embassy in Austria, he wrote, "Such epidemics have a long history in human society, and Chinese medicine has played an important role in the history of human [efforts to] combat severe infectious diseases."

Serving as a bridge

In the 1990s, the research on Chinese herbal medicine in Europe was almost non-existent. "Herbal mixtures are also used in Europe, but Chinese medicine has a deep theoretical foundation of oriental philosophy," said Bauer. With the dedication of a scholar and recognition of Chinese medicine, Bauer began his exploration from "zero" and attempted to fill the gap of European research on Chinese medicine.

He also understands the difficulties and challenges TCM research is facing. Nonetheless, Bauer is quite optimistic about its future. "Although we still know very little about the study of Chinese medicine, compared to the molecules of a newly discovered synthetic drug, we were also initially unaware of its effects. Therefore, humans can't progress unless we continue to explore the unknown," he said.

Bauer has published more than 370 papers and compiled more than 100 collections in the field of Chinese herbal medicine. While making outstanding academic achievements, he also realized that the promotion of TCM research should rely not only on individual efforts, but also on a broader platform along with the strength of more experts and scholars. Since 2008, under his organization and coordination, experts and scholars in the fields of pharmacy and acupuncture from more than 10 Universities in Austria have cooperated with the China Academy of Chinese Medical Sciences, to carry out long-term and stable cooperation. Thanks to his efforts, the University of Graz established several joint research centers with Chinese organizations.

Building a healthy world

In Bauer's opinion, standardized clinical research and high-quality product standards are the foundation for global acceptance of TCM. Therefore, he continues to study TCM quality evaluation and publishes research findings in a timely manner, in order to speed up the globalization of TCM practices. Seventy-three Chinese herbs, including Acanthopanacis Cortex, have been included into the European Union Pharmacopeia (EPU) as a result of Bauer's continued efforts in recent years, accounting for more than one-third of the 184 herbs in the EPU.

Since 2003, he has organized and participated in more than 50 international conferences in the field of TCM held in China. As a member of the World Federation of Chinese Medicine Societies, he participated in the establishment of "World Chinese Medicine Day" and actively promotes TCM in Europe. Bauer firmly believes that, "Chinese Medicine can make an important contribution to building a healthy world."

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Traditional Eastern Wisdom

Bronze Ware Represents China's Ancient Civilization

Edited By BI Weizi

The earliest known bronze in China is an almost 5,000-year-old bronze knife unearthed at the Majiayao cultural site in Dongxiang, Gansu province, which contains 6-10 percent tin and is thought to have been made by smelting. By the Xia Dynasty (2070-1600 BC), China had already started to use pottery mold and piece-mold castings to cast bronze wares, which developed into the Shang and Zhou periods (1600-256 BC), culminating in a large bronze ritual civilization unique to China.

Bronzes from the Shang and Zhou period in China, and those found in other civilizations around the world, mainly differ in the following ways.

First, in terms of volume, the Shang and Zhou bronzes are larger and more elaborate with sophisticated design and manufacturing process.

Second, in terms of function, most of Chinese ancient bronze artefacts are ritual forms rather than vessels and weapons made for practical use.

Finally, inscriptions on the Shang and Zhou period bronze objects, which describe reasons for casting certain vessels, as well as historical events, are of great value for historical and research purposes.

The largest and heaviest bronze ritual vessel ever unearthed in China, Houmuwu ding, along with the Four-goat Square Zun from the era of late Shang dynasty (about 1100-1000 BC) and the Da Ke ding from the Western Zhou dynasty (1046-771 BC), are typical representatives of the high-level craftsmanship and artistry of Chinese bronze casting.

Houmuwu ding is on display in National Museum of China. (PHOTO: VCG)

Myth Busters

By CHEN Xi & BI Weizi

Myth: Long-term mask use will cause growth of lung nodules.

Truth: Proper use will not cause damage to lungs.

Currently, with the ongoing threat of COVID-19, wearing of face masks has become the daily norm. Fear mongering of this part of life filtered in to social media recently, when a post claimed that long-term mask wearing will cause lung nodules to grow, since the melt blown fabric of the mask is a petroleum product and the micro particles will enter human lungs through the respiratory tract.

When this was put to Qian Xiaoming, a professor at the School of Textile Science and Engineering at Tiangong University, he told *Science and Technology Daily* that wearing a mask properly will not produce microscopic particles, let alone allow the particles to enter the lungs.

"In addition to textile materials such as cotton, wool, hemp, silk and regenerated cellulose fibers, many synthetic fibers, including melt blown cloth, are made from petroleum-based materials," said Qian, adding that polypropylene is a major petroleum-based material with a wide range of applications. The melt blown cloth that plays a key filtering role in masks, is a microfiber nonwoven material made of polypropylene polymer materials."

He went on to say that melt blown cloth has good filtration and shielding, and it is impossible to produce small molecules within the normal use time frame. Polypropylene material, which is not resistant to ultraviolet light, will become more brittle and weaker after being exposed to a long period of sunlight, and under external forces, such as twisting and rubbing by hand, it may become powder particles.

However, Qian stressed that such powder particles are in the form of large particles, which are difficult to be inhaled into the lungs. "The melt blown cloth masks will not produce micronized particles as long as they are not exposed to the sun while not exceeding the use period. It is usually no problem to store it in a dark place for two years," he added.

Service Info

Two Bases Established for Better Opportunities in Xiamen

By LUO Lei

June 24 saw the formal launch of "Entrepreneurship and Employment Base for International Students" and "Start-up Incubator & Internship Base for Overseas-Students" in Xiamen, Fujian province.

The two bases, built jointly by the Xiamen Municipal Science and Technology Bureau and other departments, aim to attract more international talent to work and launch businesses in this city, assisting Xiamen in becoming a world-class center of innovation and entrepreneurship.

Daniel, a British international student, currently enrolled at Xiamen University, said, "Start-up Incubator & Internship Base for Oversea-Students offers us an excellent learning opportunity."

This year, with the assistance of the base, he interned at Xiamen Paoyou Network Technology Company, as a script writer. "I enjoy writing stories and am familiar with British culture. I hope to make the most of the situation," he said.

The construction of these two bases represents a major advance in the city's efforts to serve international talent. In order to improve services for those interested in working in Xiamen, cultural experience activities, professional training for entrepreneurship and other activities will be organized following the completion of the base.

According to university officials, international students are very interested in internship and employment opportunities. The establishment of internship bases creates a bridge between students and businesses, allowing students to better comprehend and integrate themselves into the local economy.

In order to further promote the construction of the base, Xiamen Municipal Bureau of Science and Technology recently revised and promulgated new measures to support entrepreneurship of overseas students. The target of support will be extended to foreign individuals who have obtained bachelor degrees or above in Chinese universities. The eligible foreign individual will be given 200,000 RMB to 500,000 RMB of start-up funding in stages.

Since its establishment at the end of 2019, Xiamen Service Center for Foreign Professionals has provided real-time online consultation services for foreign professionals to live, innovate and start businesses in Xiamen. At the same time, the center also offers employment counseling, a cultural salon and other activities. In addition it promoted the establishment of the country's first volunteer service team for foreign science and technology commissioners.

Photo News

A bird view of SCNBG. (PHOTO: VCG)

The South China National Botanical Garden (SCNBG) was inaugurated in Guangzhou on July 11, which was originally established by the South China Institute of Botany in 1956. As the largest comprehensive garden, and one of the top plant conservation institutions in China, SCNBG consists of three divisions:

1) An exhibition zone, occupying an area of 4237 mu, is designed mainly for plant conservation with more than 17,560 plants growing in 38 special living collections.

2) A science research park, covering an area of 552 mu, contains four research centers including Plant Science Center, Ecology & Environmental Sciences Center, Agriculture & Resource Plant Center and Molecular Analysis and Genetic Improvement Center.

3) Dinghushan National Nature Reserve, established in 1956, is the first nature reserve in China and the only nature reserve of the Chinese Academy of Sciences, and is known as the green pearl of the Northern Return Desert Belt. Over 2,291 plant species are conserved in an area of 17000 mu.

A Trip Down NE China Culture Memory Lane

Foreign experts participate in Northeast Characteristics Folk Culture Experience and Trainning. (Photo provided by Jilin Foreign Expert Service Center)

By Staff Reporters

Recently, Jilin Foreign Expert Service Center organized a "Northeast Characteristics Folk Culture Experience and Trainning" for more than 20 foreign experts from Northeast Normal University, Changchun Institute of Optics, Jilin Cardiology Hospital and other educational institutions. The event aimed to show foreign experts working in Jilin the distinctive folk customs and cultural traditions of Northeast China, and help them integrate further into Jilin life.

The first part of the experience was a visit to the northeast farming culture and folklore theme area. Farming is a significant part of Jilin traditional culture, the crystallization of ancestral wisdom and the epitome of local lifestyle. Through the display of objects, illustrations and detailed insights of the guide, local characteristics and other special folk culture were introduced.

This was followed by the nostalgic street, where foreign experts learned about old Changchun, and its culture of the Republic of China (1912-1949). The stone-paved paths, old-fashioned buildings and telephone booths on the roadside, along with ancient retro building complexes made the visitors feel like they had traveled back to that era. In addition to gaining an in-depth understanding of Northeast China's distinctive folk culture, the foreign experts also participated in an immersive live-action drama to experience first-hand the regional folklore.

Source: Jilin Foreign Expert Service Center