

LIFE IN CHINA

An Unforgettable Experience in Yunnan

By BI Weizi & WANG Xiaolan

Dr. Eckehard Scharfschwerdt comes from a small town in Germany. In his childhood, his parents would take him to visit other European countries, where he enjoyed meeting people and learning about different cultures. After graduating from the University of Göttingen with a degree in medicine, he participated in medical aid projects in Indonesia and Nepal. In October 2001,



Dr. Eckehard Scharfschwerdt. (COURTESY PHOTO)

through MSI Professional Services, he moved to Yunnan province, China, where he worked for 15 years in three county hospitals, and was affectionately known by the Chinese people as the "German Bai Qiuen" (the famous Canadian doctor Norman Bethune).

Rising to the challenge

Yunnan is a remote and less-developed region, home to many ethnic minorities. Sixty percent of the population in Heqing County are Bai people and five percent are Yi people. "The medical equipment was rudimentary and practitioners were undertrained back then," said Dr. Scharfschwerdt, recalling his first impression of Heqing County People's Hospital. Instead of retreating from challenges, he was determined to contribute all he could to help the locals, who were, in his words, "Honest and hospitable."

Given the lack of skilled doctors, he referred to many of medical materials and prepared first aid lessons based on local conditions to transfer his medical skills to local doctors. "With the help of many short-term doctors and nurses from other countries and regions, we trained many health care staff. I conducted altogether one hundred one-week courses in 15 years," he said.

Lending goats project

In addition to medical treatment, Dr. Scharfschwerdt also helped the villagers in Honghe County to carry out some poverty alleviation projects, one of which is known as "lending goats". He bought some goats and lent them to the families with the most urgent needs. Villagers were only required to return the same number of goats that they were lent and kept the new born animals for themselves.

In order to make the project work optimally, he went to the mountains to conduct surveys, learned about goat types and prices from herders, and found

the most suitable ones that could be lent to local households. Ultimately, he purchased 145 goats and lent them to 28 families. Worried about the difficulties villagers would encounter in raising goats, he learned about breeding and conducted training for villagers, teaching them to use silage technology to store summer grass for winter feed. By the end of this project, the villagers' living standards had been improved a lot and he had become something of a farming expert.

The new rural cooperative medical insurance

Being a witness to China's rapid development in most areas for the past decades, Dr. Scharfschwerdt was deeply impressed by the Xinnonghe project (a new rural cooperative medical insurance). "The farmers only pay 10 RMB, and the government pays 40 RMB, and they have basic health insurance for the next year. Xinnonghe benefits the people," he said.

China has always been improving its medical system, and the difficulty and cost of medical treatment for the people has been greatly resolved, while the cure rate of diseases has also been increasing, said Dr. Scharfschwerdt, who added that the Chinese government has supported the development of education with much effort. He has witnessed many children coming out of the mountains and going to university in the city, and their families' livelihoods have been improved as a result.

Now back in Germany, Dr. Scharfschwerdt's experience of working and living in China has been unforgettable. "I spent my prime years in Yunnan and have built deep bonds with people there. Yunnan is my second hometown. I hope to return to Yunnan soon to see the new changes there," he said.

The article is also contributed by Yunnan Provincial Science and Technology Department.

Letter to the Editor

China's Food Security Miracle in Past Four Decades

By Rukia Hamdan Suleiman

I have been living in China since 2017. Every day, I feel my life is delightful because China is a friendly country with good people, a beautiful environment, comfortable weather, delicious food, and fast development. It was my dream to go abroad to broaden my horizons and get more experience from other nations. Luckily, I got this golden chance to come to China, and now I am attending a Master's program in International Development Policies and Governance at China Agricultural University (CAU). From 2017 to the present, several things have amazed me concerning China. One that stands out is China's food security, which I find very interesting i.e., China's ability to feed more than one billion people sustainably.

How China has successfully fed its large population in the past four decades remains a miracle. A country that suffered from severe hunger and famine in the late 1950s and early 1960s is now one of the world's most food self-sufficient countries. Structural changes in the late 1970s made China economically prosperous and increased its ability to produce an adequate amount of food to feed its population. As the world worried about China's rapid population increase, the country proved its ability to feed its entire population and even other parts of the world in the past four decades.

Furthermore, with only seven percent of the world's cropland, China currently feeds 22 percent of the world's population. It produces 18 percent of the world's cereal grains, 29 percent of the world's meat, and 50 percent of the world's vegetables. As a result of its success, China has become the

world's most outstanding agricultural economy, and it is the world's largest producer of pork, wheat, rice, tea, cotton, and fish. China's agricultural output has expanded at double the rate of the U.S. total. That is a remarkable turnaround from the problems of China's agriculture in the 1960s and 1970s, under collective farms, before the country's 1978 economic reform. Compared to the rest of the world, China has made significant progress toward long-term food security.

China's long-standing food strategy aims to achieve and maintain a high level of self-sufficiency in food production. Large grain reserves, both on the farm and at the state level, are an essential aspect of food security management. Nonetheless, it has activated important production factors, such as land and finance for the agriculture growth strategy (2015-2030). As a large country with the largest population of about 1.4 billion, China has ensured self-reliant agricultural production to control its food supply based on its experience of strengthening scientific and technological support for grain production, while remaining primarily self-reliant in food supply.

China is currently placing a greater emphasis and priority on agricultural development and rural areas by vigorously implementing the rural revitalization strategy and continuing to modernize and commercialize agriculture.

Rukia Hamdan Suleiman is an MA student from Tanzania. This article belongs to the Outcome of 2021 MA Teaching Project "PBL Pedagogy on China Experience Sharing" by Li Li, Associate Professor, CIDGA, CAU.

Myth Buster

Orange Juice-Cola False Positive Myth

By ZHANG Jiaxing & BI Weizi

Recently, a social debate has been making waves online after people found that inserting orange juice or cola into the COVID-19 antigen tests' inlet can result in a positive test result. Some netizens caused an uproar, claiming false positive results can be produced too easily. However, from the perspective of researchers, these so-called "false positives" are completely false.

"It is common sense that any test product should be used in accordance with the instructions in order to get accurate results," Xu Lei, director of re-

search and development at Huada Yinyuan Pharmaceutical Technology, told *Science and Technology Daily*, adding that though some antigen detection products are accessible out of the laboratory, the process of testing and verification is ultimately a rigorous scientific operation.

Zhu Yuqing, professor in Department of Clinical Chemistry and Immunology, Shanghai Center for Clinical Laboratory, conducted a validation test on the above operations. She found that some test kits can screen out "bad tests" and show as invalid, others will be "masked" and show as weak positive.

So why would orange juice and cola

cause false positives?

A true positive result appears when the antigen test captures the virus protein, and the antibody-virus protein binding reaction occurs at the test line and stimulates a chromogenic reaction, with both the quality control and test lines showing colors.

The orange juice and cola also allow you to get a positive test line because the two acidic solutions directly stimulate the chromogenic reaction without the presence of viral proteins. In chemical reactions, the pH within the solution system is critical and determines the dissociation and binding of ions.

In the design of the antigen test kit, buffer solution is employed to avoid the pH change. This solution acts as a buffer against small pH fluctuations brought about by sweat, air, etc., to avoid drastic changes in the entire reaction system. Even so, the buffer solution cannot "buffer" the damaging effects on the overall experimental results caused by the addition of large amounts of artificial acids.

It's not the antigen test that is prone to "false positives," but is it not being used in accordance with instructions, so the blame is not the orange and cola in this case.

Traditional Eastern Wisdom

Wu Qin Xi: A Classical Indoor Exercise

By Staff Reporters

Hua Tuo, a renowned ancient Chinese physician, was a pioneer in developing numerous classical ways of promoting health and well-being. He attached great importance to the benefits of moderate exercise in preventing diseases.

Hua is said to have developed a form of exercise called Wu Qin Xi (the Five-Animal Mimic Boxing) 2000 years ago, which imitates the movements of the tiger, deer, bear, monkey (ape), and bird (crane).

He believed that Wu Qin Xi movements, when correctly performed, stimulate the internal lubrication of free-flowing qi and blood to our continued health and sense of well-being. Qi (also known as chi) is sometimes interpreted as "vital life energy" in traditional Chinese medicine. According to classical Chinese philosophy, qi is the power that creates and holds everything together in the cosmos.

Symbolically, the five animal-inspired positions reflect various internal organs and systems of the body. As a result, each of the five types of gestures is intended to manage the functions of the associated organs and body systems.

First of all, the Tiger move is associated with the wood element and is intended to strengthen the liver and gall bladder. Secondly, the Deer move is related to the water element and is used to enhance the function of the kidneys and bladder.

Meanwhile, the Bear move aims to improve the spleen and stomach function, which is associated with the earth element.

The Monkey move is associated with the element of fire. Once consistently practiced, the heart and small intestine's function will be enhanced.

Finally, the Bird move is related to the metal element and it is designed to improve lung capacity.

Photo News

International Nurses Day



International Nurses Day is an international day celebrated worldwide on May 12 (the anniversary of Florence Nightingale's birth) each year to mark the contributions nurses make to society.

Florence Nightingale (1820 - 1910) was a pioneer of public health and the founder of modern nursing. In 1860, Nightingale laid the groundwork of professional nursing by establishing her nursing school at St Thomas' Hospital in London. It was the first nursing school in the world. Because of her, nursing is one of the most respected professions in the world.

Since the COVID-19 outbreak, China has not only made all-out efforts to treat patients and save lives domestically but also actively assisted countries around the world in combating the pandemic.

A large number of nurses and other medical workers have raced against time and fought tenaciously against the virus on the front lines in response to the pandemic. They have exemplified the wonderful spirit of putting saving lives first with absolute devotion and unconditional affection.

The picture shows the Florence Nightingale Museum at St. Thomas Hospital in London, England, which focuses on the contribution of Nightingale. (PHOTO: TIAN XUEKE From S&T Daily)

Infrastructure Construction, Highlight of China's Development

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To empower the digital economy, a mega project was approved in February 2022 for the construction of eight national computing hubs along with plans to build 10 national-data center clusters, to channel more computing resources from east China to its less developed yet resource-rich western regions.

Like the South-to-North Water Di-

version Project and the west-east power transmission program, this project will improve the nationwide resource allocation and utilization efficiency, and promote green and coordinated development.

Benefiting for the world

To fulfill its commitment to carbon neutrality, China has facilitated a green transition of its energy structure. Data

from the National Energy Administration showed that, by the end of 2021, the country's installed capacity of renewable energy totaled 1.06 billion kW, accounting for 44.8 percent of the total installed power generation capacity.

Meanwhile, China is to better connect itself to the rest of the world through infrastructure-related cooperation under the framework of the Belt and

Road Initiative (BRI), providing over 100 countries with support for the construction of roads, railways, power plants, ports and other infrastructure projects.

This effort could generate broad economic growth for the countries involved and the global economy. The World Bank estimates that recipient countries' GDP could rise by up to 3.4 percent thanks to the BRI.



International students at China University of Petroleum (UPC) practice Wu Qin Xi to experience the traditional Chinese culture. (PHOTO: XINHUA)