

Dialogue

Making Science More Popular

By LONG Yun & BI Weizi

Aldo Tagliabue is an Italian scientist who has made significant contributions to the field of immunology and vaccine research. He has been employed at the Shenzhen Institute of Advanced Technology (SIAT) since 2021, having previously worked in Korea and collaborated with scientists from Fudan University before being formally invited to China.

Long illustrious career
Tagliabue told *Science and Technology Daily* recently that the development of vaccines is a team effort, and he feels fortunate to have worked with excellent colleagues.

As the chief scientist of the Laboratory of Inflammation and Vaccines of SIAT, he has 40 years of experience in his field. Tagliabue has played a key role in developing several vaccines, including an oral vaccine against typhoid fever, a vaccine against pertussis (whooping cough), and vaccines against meningococcal B. These vaccines have had a significant impact on the healthcare industry and have saved countless lives.

Tagliabue is optimistic about the future of vaccine research and is confident that science will continue to innovate and find solutions to the world's most pressing health problems.

In recent years, infectious diseases have gained worldwide attention due to the COVID-19 pandemic. Tagliabue noted that infectious diseases were often overlooked before this pandemic. From his perspective, infectious diseases are mainly problems pertaining to developing countries and the people living in these countries. However, COVID-19 has shown that a global pandemic can have far-reaching consequences and that infectious diseases are a concern for everyone.

Power of international cooperation
Tagliabue said that the development of COVID-19 vaccines in less than



Professor Aldo Tagliabue. (COURTESY PHOTO)

It is vital to provide accurate and understandable information to ensure that the public understands scientific advancements correctly.

a year is a significant achievement for science. He believes that the success of these vaccines is a testament to the power of international collaboration and innovation.

In his view, international cooperation plays an important role in scientific research. He said that exchange programs are a critical aspect of international cooperation, enabling scientists from different cultures to come together and share their knowledge and experience to achieve the best results.

At the same time, Tagliabue emphasized international cooperation is essential for the advancement of science and human health, such as jointly testing the efficacy of vaccines.

Furthermore, he acknowledged the challenges posed by infectious diseases and how they affect human health and

the environment in the long term. Therefore, he said that international cooperation plays an essential role in combating these infections, noting that scientists should work together to find solutions that benefit all humans, irrespective of their cultural or geographical background.

Rewarding experience of China
According to Tagliabue, China is a country that has made remarkable progress in science and innovation in the last two decades.

He applauded the role of the Chinese government who planned in advance to govern a country with a large population effectively. China is a significant player in the changing global landscape, he said.

His decision to work in China was influenced by his interest in traveling

and collaborating with scientists around the world, particularly in Asia, and he was motivated when he saw an opportunity to interact with young scientists in China and build new projects together. China's investment in research and innovation was another factor that attracted Tagliabue to the country.

While understanding the cultural differences between the West and China, he believes it was an opportunity to learn and grow, and he therefore encouraged young people from the Western world to come and work in China, learn Chinese, and collaborate with young Chinese scientists.

Being prepared for future changes
According to Tagliabue, it is essential for society to be aware of the importance of science and innovation. Scientists have a duty to explain the significance of their work to the public, he said, adding that the need for scientists to connect with the public demonstrates that they are ordinary people with unique jobs.

Tagliabue does, however, have concerns about sci-tech information sharing. According to him, the ease at which information can be shared via social media also gives rise to the wide circulation of misinformation. "It is vital to provide accurate and understandable information to ensure that the public understands scientific advancements correctly," he said.

He also encourages young people to be aware of the constant changes in science and innovation. With the rapid pace of technological advancement, it is crucial to make future generations informed and prepared to deal with the changes.

Overall, Tagliabue's views underscore the importance of science outreach activities in creating an informed and engaged public.

This article is also contributed by ZHANG Xiaomin from SIAT.

Foreign Expert's Book House in Tianjin

Expats Activity

By Staff Reporters

Recently, Tianjin Municipal Science and Technology Bureau facilitated a "Foreign Expert's Book House" event to host reading and exchange activities for foreign experts in Tianjin, focusing on *Xi Jinping: The Governance of China IV*, which received their positive feedback. A selection of their views follow.

Yang Long, a Canadian professor at Tianjin University of Traditional Chinese Medicine, said that the 20th National Congress of the Communist Party of China (CPC) has drawn a grand blueprint for building a modern socialist country and promoting the great rejuvenation of the Chinese nation in an all-round way, contributing Chinese solutions to the common problems faced by humankind, demonstrating the responsibility of a great eastern country, adding he is confident about China's future.

Peter Taylor, a British professor at Tianjin University, said the report to the 20th CPC National Congress is both a profound summary of past achievements and a practical plan for China's new journey. In the report, President Xi states that education, science and technology, and human resources are the fundamental and strategic pillars for building a modern socialist country in all respects. In addition, China firmly believes that clear waters and lush mountains are invaluable assets, which moti-

vated the leader's team to focus more on resource recycling and turning environmental advantages into comprehensive development advantages in the future.

Mercier Frederic, a French teacher at Tianjin Normal University, believes that China's social and economic development in recent decades has impressed and inspired other countries. This is particularly evident in the development of public infrastructure and urban areas, the dynamic economic activity throughout the country, and the improvement of the quality of life and the environment.

American expert Sun Jing and Canadian expert Yang Hong from Tianjin Medical University, said that this event helped them to systematically understand and appreciate Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and to gain a deeper sense of his superior wisdom in governing the country and his sincere feelings for the people.

Bienvenido Engono, an international student from Tianjin University of Technology and Education, said he is proud to study in such a country as China, and will definitely stay here to work and live after graduation.

Tianjin will continue to promote communication among foreign professionals. The Foreign Expert's Book House will become a platform to spread the voice of Tianjin and a new opportunity to serve foreign experts.

This article is contributed by Tianjin Municipal Science and Technology Bureau.



Foreign experts exchange ideas after the reading activity. (PHOTO: Tianjin Municipal Science and Technology Bureau)

Traditional Eastern Wisdom

Ridge-furrow Method: Innovative Farming

By BI Weizi

The ridge-furrow method (Daitian fa) is a farming system invented and popularized by the agronomist Zhao Kuo in the middle of the Western Han Dynasty (202BC-8AD). It involves, three ditches (field drains), one chi (about 33.33 cm) wide and one chi deep, which are dug on a long strip of land measuring one mu (0.0667 ha). The locations of the ditches change every year, hence the

name "ridge-furrow method". The seeds are sown in the ditches, and when they germinate and grow leaves, the ridge soil on both sides of the ditches is raked down to bury the roots of the crop during mid-tillage and weeding, which helps to resist wind, lodging and drought.

First, in this method, the ridges and furrows are interspersed. Seeds are sown in the furrow, and after the seedlings emerge, the ridge is flattened with mid-tillage and weeding to protect

against wind and drought. Second, the ridges and furrows are exchanged every other year. Since crops are always sown in the furrow, the exchange of ridges and furrows allows the land to rest and regenerate.

The ridge-furrow method was the first new agricultural technique to be organized and promoted by the emperor. Zhao Kuo personally supervised experiments in the countryside and organized local officials and agricultural experts to

receive training in the new farming method and new farming tools, and then gradually extended it to other parts of the country.

The implementation of the ridge-furrow method achieved remarkable results in terms of higher yields and more reclaimed fields, which played an important role in the socio-economic recovery of the late Han Dynasty and took the development of agricultural productivity to a new level.

Service Info

Suzhou Taihu National Wetland Park

By Staff Reporters

Suzhou Taihu National Wetland Park is located in the western part of Suzhou, Jiangsu province. With a total planned area of 4.6 sq km, its 2.3 sq km first phase opened to the public in February, 2010, of which the water area accounts for 71 percent. The park brings

together the ecological environment, vacation and leisure, tourism, science education and other functions in one location.

The scenic area management authority says it has integrated sightseeing, leisure and recreation, and planned and designed seven major functional zones to cater for these activities.



An aerial view of Suzhou Taihu National Wetland Park. (PHOTO: VCG)

Allergic Rhinitis: Symptoms, Diagnosis & Treatment

Science Outreach

By Staff Reporters

Spring is a great time for hiking, but it is also a very painful season for some people, who get plagued with runny noses and sneezing. Medically, this seasonal disease is diagnosed as seasonal allergic rhinitis (hay fever)

What is seasonal allergic rhinitis?
Allergic rhinitis is a chronic, non-infectious inflammatory response in the nasal mucosa of the Th2 type caused by human exposure to allergens

and mediated by specific immunoglobulin E.

Allergens are harmless to most people. But when you have hay fever, your immune system thinks the allergen is invading. The immune system tries to protect your body by releasing natural chemicals into your bloodstream. The most important chemical is called histamine. It causes the mucous membranes in your nose, eyes, and throat to become inflamed and itchy as they try to flush out the allergen.

The most common allergens are pollen, fungi, and other seasonal inhaled allergens. Symptoms of hay fever include: Nasal congestion, sneezing, and runny nose; Itchy nose, throat, and eyes; Headache, sinus pain, and dark

circles under the eyes; Increased mucus in the nose and throat; Fatigue and malaise (general feeling of being unwell). In severe cases, it can also trigger asthma, with symptoms such as coughing and difficulty breathing.

How is seasonal allergic rhinitis diagnosed?

Your healthcare provider will examine you, ask about your symptoms, and evaluate you for other conditions, such as the common cold or asthma. Depending on your condition, a physical exam, allergy testing, blood tests, and nasal challenge tests may be recommended to help your healthcare provider make a diagnosis.

How is allergic rhinitis treated?

1. There is no way to prevent hay fever, but lifestyle changes and some al-

lergy medicines can improve symptoms and help you live with allergies. To reduce symptoms, you should go outside less often during peak pollen season. If you do go outside, use protective masks and glasses and nasal pollen blockers.

2. Use nasal and oral medications such as glucocorticoids, antihistamines, antileukotrienes, corticosteroid nasal sprays, decongestants, anticholinergics, leukotriene inhibitors, and immunotherapy.

3. Other eye discomforts can be treated with various types of eye drops, hand hygiene and avoiding eye rubbing. If asthma is present, respiratory consultation is recommended. If there is a skin rash, a dermatologist should be consulted.