High-tech report

中国日報 CHINA DAILY A JOINT PUBLICATION OF CHINA DAILY AND STATE-LEVEL WEIFANG HIGH-TECH INDUSTRIAL DEVELOPMENT ZONE

A technician at Shandong IMCELL Biomedical Technology Co tests a reagent.

Biotech company breaks barriers to stem tide of disease

By ZHUAN TI

Shandong IMCELL Biomedical Technology Co is looking to overcome technology barriers and a lack of information in the marketplace to offer new hope to Chinese patients suffering from a range of chronic conditions.

IMCELL is a bioscience company that focuses on the development of stem cell, immune cell and cell biology technologies and products in the Weifang High-Tech Industrial Development Zone.

"There is tremendous scope to develop the stem cell therapy industry in China, so I think the future looks very promising," said Zhang Jidong, chairman of the board of IMCELL.

According to Zhang, stem cell therapy can be used to treat a range of conditions, including Parkinson's disease, Huntington's disease and Alzheimer's disease.

"Stem cell transplantation is an effective way to treat leukemia and lymphoma," Zhang said. "In addition, stem cells can sometimes be used to treat autoimmune diseases."

In 2012, Zhang's father received stem cell therapy overseas after he was diagnosed with Type 2 diabetes. He also suffered complications, including high blood pressure, as a result of the condition.

"We decided to try stem cell therapy because we know long-term drug treatments may cause other problems," Zhang said.

Following his treatment, Zhang's father recovered and his blood pressure stabilized.

"Although stem cell treatments are becoming more common in China, many patients remain unaware of the full range of treatment options," Zhang said.

Surgery, radiotherapy and chemotherapy are currently the three main types of cancer treatment in China, Zhang said. The technology barrier is another reason why stem cell treatments aren't more widely used, he added.

"Chinese companies were among the pioneers of stem cell treatments and technologies," Zhang said. "However, few Chinese firms have established a strong global market presence due to the huge initial investment required, as well as weak policy support and technology barriers."

Zhang and IMCELL began working on a new sample density gradient media with the aim of using it to test, develop and then store a new reagent. Zhang partnered with top research institutions, including the Li Ka Shing Faculty of Medicine of the University of Hong Kong, Shenzhen University's faculty of medicine and Tongji University to work on the new reagent.

"We hoped that the new reagent would improve the treatment of diseases at the clinical stage," said Chen Wei, general manger of IMCELL.

Tests showed that the reagent developed by IMCELL separates bone marrow, cord blood and peripheral blood more effectively than previous reagents, according to Chen.

The sample density gradient media developed by IMCELL has also cut down on storage requirements, allowing the reagent to be stored in two bottles instead of three.

"The new product has lowered the manufacturing costs of the reagent and also made it easier to use," Chen said.

"The new reagent is very easy for healthcare service providers to handle, which will help to expand the coverage of stem cells treatment in China," Chen added.

IMCELL successfully registered a patent for its sample density gradient media in the United States on January 26.

Zhang said it took a lot of work to get from the research stage to mass production and then clinical application.

"We have traveled a lot in the past two years," Zhang said. "We made regular morning trips to Beijing to get technological advice from experts and in the afternoons we visited hospitals in Shenzhen to compare our products with those already in use."

IMCELL's products are currently used in 12 hospitals in provinces and cities throughout China, including Beijing, Sichuan, Shandong and Shenzhen.

The company launched immune cell treatments and stem cells treatments in 2014 and more than 1,000 patients have been treated with products developed by IMCELL in the past two years, according to IMCELL.

The central government has indicated new support for stem cell treatments and Zhang hopes this support will eventually lead to new policies that will promote the development of stem cell treatments in China.

In future, Zhang plans to develop a platform in the zone that he hopes will popularize and promote science, technological research and development, gene testing and precision medicine.

"If the 20th century was the era of drug treatments, the 21st century will be the era of stem cell treatments," Zhang said.

Zhuang Jian contributed to this story.

Workers prepare rebar at the construction site of the second phase of GoerTek's optoelectronics industrial park, one of many key projects the Weifang High-Tech Industrial Development Zone is building to support its economic growth. PHOTOS PROVIDED TO CHINA DAILY

Zone to accelerate key project construction

New buildings, businesses will support economic growth

By ZHUAN TI
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The Weifang High-Tech Industrial Development Zone will accelerate key project construction to support its economic growth in 2016.

Construction of the second phase of GoerTek's optoelectronics industrial park, one of the key projects in the zone this year, is progressing smoothly.

The 3.4 billion yuan ($525.2 million) project will have 8,450 pieces of production equipment and is expected to generate 30.8 billion yuan in annual income for GoerTek upon completion, according to the zone.

"It is very important for the zone to select projects driven by high-tech. Those projects will support the zone's economic growth and develop the zone into an innovation role model in Weifang," said Chu Baojie, director of communications at Weifang and secretary of the Party working committee of the zone.

The development zone is practicing the principles of innovation, coordination, greenness, openness and sharing to support development of the region. It plans to advance 125 key projects to support the high-end manufacturing industry, modern service industry, recruitment, livelihood enhancement and urbanization in the coming years. Total investment in those projects will reach 78 billion yuan, according to the zone.

The zone also plans to streamline investment attraction and registration processes to ensure projects go through smoothly.

An internet-based automobile manufacturing base is the first of its kind in the country. The project, with an investment of 3 billion yuan, will be capable of producing 300,000 units of D01 diesel power engines and 400,000 G03 gasoline power engines annually.

The zone said the new project, which is in the preliminary design stage, would meet the criteria of Made in China 2025 and Industry 4.0. It would provide reliable data and allow information sharing through the internet once completed.

"We should be problem-solvers who can provide monitoring and coordination services when advancing a key project," said Song Chifeng, deputy secretary of the CPC Weifang High-Tech Development Zone Working Committee and director of the zone's Administration Committee. "We will strive to meet the timeline so the project can be put into operation quickly."

According to Song, the zone has divided key projects into groups and assigned people to take care of each individual group. Those responsible would provide all necessary support from project registration to completion.

Local authorities have introduced a failure tolerance mechanism to encourage staff members to bring new and innovative ideas to promote key project development.

There is also an investigation mechanism to identify those who do not perform well in their daily work.

The two mechanisms will ensure all key projects in the zone progress as expected, according to local authorities.

The zone reported a positive outcome after implementing the two mechanisms in 2016.

Weichai Power's global parts distribution center is building warehouse facilities. The new premises of the Weichai Vocational Institute will be ready for use in the first half of 2016.

GoerTek's Green City international community construction project, Shengrui 8AT's Complementing Industrial Park and Hansheng International School will break ground soon, according to the zone.

Liu Jie and Gao Xufei contributed to this story.

Area maps out education expansion plan

By ZHUAN TI

The Weifang High-Tech Industrial Development Zone will deepen reforms in the education sector to provide premium services to students this year.

The local education authority said it plans to integrate the internet into an education service model to enhance learning standards.

It is also planning to upgrade the infrastructure of several schools in the zone, most notably Phoenix School. The second phase of an upgrade for the school will begin in September. Li Hongwei, the school's principal, said once expanded, the school will have 48 classrooms to accommodate more than 2,000 students, almost double from previous years.

The zone said it will add nine new schools in the coming years, according to the zone's education bureau.

Expansion projects for seven schools and kindergartens, including Xinchang School and Gangcheng Modern School, will be completed before September, according to the zone's education bureau, which currently has 17,000 students. Local authorities said the zone would provide education services to 30,000 students by 2017 after the addition of schools.

"The moves will relieve overcrowding in schools," said Liu Mincheng, head of the education bureau's construction planning department in the zone.

Global vision

The development zone's education system is gaining a reputation for its global vision and unique courses.

Many schools in the zone have recruited foreign-language teachers and launched a range of foreign-language courses.

The zone also upgraded its internet infrastructure to provide online education services to students. Some schools have established digital classrooms that are equipped with broadcasting and recording facilities, mobile terminals and digital blackboards.

The zone is also working to develop free digital books for students.

Local authorities have also made efforts to enhance the quality of the zone's education standards by visiting other schools. Du Quanping, director of the zone's education bureau, led a delegation in March to visit seven schools in Tianjin and Beijing to learn about the latest concepts and ideas.

Service providers

The zone's education bureau has also been collecting suggestions from schools and kindergartens on a quarterly basis since 2014. Education authorities said they would provide support in areas such as the maintenance of school facilities and surrounding traffic systems. Local authorities said staff members in the education bureau were urged to change from administrators to service providers to more efficiently deal with issues.

The education administrative departments in the zone adopted an online learning platform launched in March that allows staff members in the zone to establish study plans and join training courses.

Li Jinle, head of the Commission for Discipline Inspection of the Communist Party of the Education Bureau, said the bureau launched an internal communications magazine and that staff members are welcome to share their experiences.

The education authorities also encourage school principals to learn from leading companies in the zone so they can manage a school like a business.

Zhuang Wenshi contributed to this story.

Teachers at the zone's Qingping Primary School commonly allot points to students for good behavior.