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The world's most advanced biomedical R&D center

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Bangalore: China Medical City (CMC), also known as Taizhou National Medical Hi-tech Industrial Development Zone, is China's high-tech development zone focusing on biomedical R&D, manufacturing and commercialization.

Situated in Taizhou city, Jiangsu Province, CMC has developed into a fully-integrated mini city consisting of six functional districts spanning across 30 square kilometers. Taizhou is considered to be an advanced center for research and manufacturing in the pharmaceutical, biochemical and biotechnology fields.

Tracing back to the roots, on February 25, 2010, the Ministry of Science and Technology, the Ministry of Health, the State Food and Drug Administration, the State Administration of Traditional Chinese Medicine of the People's Republic of China, and the Jiangsu Provincial Government formed an alliance to combine strategic efforts towards the development of CMC.

CMC is currently the only national level biomedical park co-built by ministries and provincial government in China.

Today, there are over 50 pharmaceutical and biological research institutes settled in CMC. The platforms in CMC such as R&D platform for biological macromolecular drug and a pilot platform have been in operation for the last four years. Biopharmaceutical companies could use these platforms for clinical sample production and carry out the clinical declaration for phase I, II.

Moreover, the Vaccine Engineering Centre, a platform built specially for vaccines, provides a wide range of services including vaccine R&D, pilot process development, sample testing, evaluation of clinical trials, as well as independent PI offices and laboratories to biopharmaceutical (vaccine) companies.

Jiangsu Provincial CFDA has set up the only branch office in CMC which could perform the provincial CFDA function. The branch makes a point-to-point application through a special channel to central CFDA. The institute for drug control, Port institute for drug control and medical device testing institute have been set up in CMC, which greatly shorten the time for products to obtain importing and registration approval.

Under the support of ministries and provincial government, CMC is the core area for the developing biomedical industry in Jiangsu Province. CMC is also the strategic production base for national essential drugs which will benefit CMC products to be included in the national essential drug list and healthcare reimbursement list.

Meanwhile, Jiangsu FDA vaccine batch release institute will settle down in CMC Vaccine Engineering Center, which will help companies in CMC to reduce the production cost for bioproducts and vaccines, improve testing efficiency, and shorten the time to market.

CMC, therefore, offers research platforms, manufacturing facilities, land and intelligence to companies. Besides, CMC also helps companies with clinical trials, product registration and sales.
CMC totally consists of 6 different functional districts:

R&D district
CMC builds platforms for pharmaceutical research and provides services for scientific production for incubation, transformation and industrialization.

Manufacturing district
CMC provides land and rent standard manufacturing facilities to company that focus on vaccine, biotechnology pharmaceuticals, new chemical medicines, hi-end medical devices, traditional Chinese medicine and healthcare products.

Exhibition and trade district
This district is built for pharmaceutical and medical products exhibition and trade, technology transferring and conferences. By now, 6,000 square meter facilities have been built and 4 consecutive China (Taizhou) International Medical Expo's (CIME) were held.

Healthcare district
For the benefits of the health of humans and to transfer as soon as possible the latest pharmaceutical technologies into clinical use, CMC plans to build specialized hospitals in this district for therapeutics and clinical trials.

Education district
Since pharmaceutical industry requires a lot of intelligence, CMC is striving to build this district into a well-known university cluster with distinct features and a world-class scientific research and training base. Now many domestic and overseas universities have decided to set branches in CMC to provide talent support to settled companies.

Residential & commercial district
There are also decorated departments, shops, restaurants and bars in this district. Employees at CMC can live in this district and also tend to enjoy recreational activities.

There are established national incubators in CMC, which aid companies to develop into high-growth enterprises with low-risk and low-cost. The incubator acts as public service function for SMEs business venturing, overseas student business

venturing, overseas personnel venturing, ready-made project incubating and new drug incubation.

The total planned incubation area is about 60,000 square meters, in which 38,840 square meters had already been established.

About 30,217 square meters are used for enterprise incubating, which takes account of 77.8 percent of the total area. So far there are about 140 biological and chemical labs, and 120 offices, whose unit area reaches 27,000 square meters.

The incubator induces the entry of medical related scientific and technological enterprises, and equips necessary public service facilities and apparatus sharing, based on the practical needs of the incubator.

CMC offers business and VIP services aiming at intellectual property of high-growth enterprises, IPO, loan financing, product or technology factoring and market circulation channels. It provides business-series-solutions based on the different demands of different high-growth enterprises, follow-up and support after inputting in an enterprise data bank.

CMC also creates conditions and organizes high-growth enterprises to take part in exhibitions of different specifications. Besides, it promotes the product and brand, expands market impact, enhances brand awareness and improves market covering rate.

The Pharmaceutical, biochemical and biotechnology industrial output value for China is RMB 1.87 trillion in 2013. The value for Jiangsu is RMB 264.78 billion, which is 14.18 percent of entire China.

Taizhou value is RMB 61.82 billion, accounting for 23.35 percent of Jiangsu. Thus, many international and domestic pharmaceutical and biological companies set branches and manufacturing bases in Taizhou.

CMC has advantages in the application for science and technology funding at all levels including Major New Medicine Innovation and Development Program, Science and Technology Support Program, International Science and Technology Cooperation Program, Innovation Funds for Small and Medium-sized Technology-based Enterprises and Torch Plan.

Jiangsu provincial leaders visit CMC for investigations repeatedly, to plan and guide CMC development and help coordinate and resolve major problems in CMC.

For biotech start-ups needing funding help, they can obtain government funding as part of government support, and some may get funded through venture capitalists. There are three affiliated venture capital investment firms and one financing assurance company in CMC. They provide financing services including venture capital investment and guaranteed loans. The affiliated venture capital investment firms have invested in more than 30 projects, totaling about RMB 200 million so far.

In the education area of CMC, Nanjing University of Traditional Chinese Medicine, Hanlin College have set up pharmacy, pharmaceutical engineering, pharmaceutical preparations and other specialties with pharmaceutical characteristics. The annual enrolment number is about 1,100 and there are over 4,000 students now.
At CMC there are integrated technological platforms for drug development. Firstly, the analysis and test platform provides apparatus configuration, analysis method development, standard research, personnel training and standard operation document for chemical and biological R&D enterprises.

This platform has been established according to national and international regulations and standards, which include two top labs of chemical drug analysis and biological drug analysis. And there are over 90 sets of R&D apparatus, such as HLPC-MS chromatographic instrument with high resolution, atomic absorption spectrometer, Fu Liye infrared spectrometer, fluorogenic quantitative PCR, nucleic acid isolation machine, fermentation cylinder, biological analysis meter, freezer dryer and many more.

Secondly, the new preparations pre-production service platforms are solid preparation and freeze-drying preparation workshops. The quality control system has been built referring wholly to the requirements of GMP. The platform provides advanced pharmaceutical preparation technical services for enterprises inside and outside the park, including sustained-release and targeting agents' formulation design, technology incubators, sustained and targeted performance evaluation, preparation process improvement, and pharmaceutical adjuvant development.

Thirdly, the Animal Centre lab, which is currently under construction, is a preclinical drug safety evaluation public service platform aimed at providing services to R&D of pharmaceuticals at home and abroad, and provides experimental animal models needed in new drug R&D, toxicological and pharmacological tests, and advisory services for new drug screening for domestic and foreign pharmaceutical enterprises.

Fourthly, the medical information resource network public service platform is built in cooperation with Jiangsu Science and

Technology Information Institute to provide literature, patents, standards and other types of pharmaceutical sales inquiry, strengthen information sharing between enterprise and pharmaceutical industry, and improve the overall level of pharmaceutical R&D, production and sales.

Lastly, the high-end medical equipment service platform provides enterprises settling in the park with R&D, pilot scale production, quality control, inspection and testing, technical training, standard advice, quality system assessment, product registration and other services on high-end medical devices.