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China will overtake Japan in R&D spending: Report

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Singapore: China's biomedical sector is rapidly transforming itself from a manufacturing base to an innovation hub, investing billions of dollars and setting up innovation centers in a bid to catch up with the West by the end of the 12th Five-Year Plan, according to Lux Research.

The research and development (R&D) investments-reaching a cumulative $160 billion last year and close to surpassing Japan's spending-are paying off with exponential increases in pharmaceutical-related patent filings, catapulting the Asian giant past the US and Japan. Also, the pace of establishment of 15 new drug innovation centers and clusters is remarkable, with super clusters forming around five major provinces.

In the report, Lux Research analysts examined the state of China's biomedical sector, with particular attention to its R&D. They found that China's drive to innovate is fueled by sustained, and ever-increasing, funding. With cumulative funding reaching $160 billion in 2012, China is poised to overtake Japan and become the second-largest R&D spender in the world, behind the US. Also, biomedical research has emerged as a focus area with funding shifting from traditional basic research to greater emphasis on commercialization.

Also, the Major New Drug Innovation Program (MNDIP), which was started in 2009, has emerged as the source of innovation in China, producing over 3,000 patents and 12 products. With funding of over $4.5 billion by 2012, China has set ambitious goals of developing 30 new innovative drugs and powering 200 drugs to sales over $16.35 million (RMB 100 million). It is targeting 100 innovative new drugs to be discovered by 2020.

Besides, Oncology has received the most attention-56 of the 127 MNDIP projects seek to develop drugs to treat cancer, which is now the leading cause of death in China. Biologics outweigh small molecule drugs by a large margin-34 for developing biologics versus only 22 for developing small molecule drugs.

In addition, Chinese pharmaceutical's rapid growth has been aided by timely changes in patent and related laws since 1992 when the nation joined the TRIPS (Trade-Related aspects of Intellectual Property rights) agreement. A latest revision has made biomedical patent protection truly enforceable, and is sure to act as a stimulus to further innovation.