

#### Top 25 Pharmaceutical Companies (Source: GlobalData)

GlobalData released the results of their pharmaceutical market analysis, highlighting the top 25 publicly traded global pharmaceutical companies by Market Cap (Mcap). The collective Mcap of the top pharma companies reached roughly US\$2.7 trillion, with growth at 1.1% in Q2 2018.

The leading companies—Merck US, Bayer, GSK, Eli Lilly, CSL, and Shire—achieved double digit Mcap growth during the same period. Unchanged, Johnson & Johnson held on to its No. 1 position in the top 25. However, Chinese pharmaceutical company, Jiangsu Hengrui Medicine, made its first appearance on the list.

Six companies saw positive Mcap growth, with CSL, Shire, and Bayer achieving double digit growth rates of 24%, 20%, and 16%, respectively.

Due to what is believed to be the result of significant share trading, Bristol-Myers Squibb saw more than a 10% decline in Q2 2018. Celgene also experienced a similar decline due possibly to setbacks in some key pipeline drugs.

Geographically, the data reveals that North America contributed an aggregate Mcap of US\$1.5 trillion, with 13 companies from this region featuring in the top 25 list. The Mcap of European and Asia-Pacific pharmaceutical companies grew 3.2% and 16.5%, respectively.

According to GlobalData, the results show a growing trend among big pharma to focus on their core business areas.

## AI - Microsoft - China - Healthcare

(Source: China Daily)

Microsoft Corp plans to deepen its artificial intelligence push in China by teaming up with healthcare players and empowering them with algorithms needed to prevent and detect certain diseases, according to the company's top executive in China.

Through partnerships with United States pharmaceutical major Eli Lilly and Chinese image cognition startup Airdoc, the tech giant plans to create an AI-powered ecosystem in China that can reduce the burden on the country's growing healthcare system, said Alain Crozier, CEO of Microsoft in China.

"China is going to play a fantastic and big role in this field ... we (need to) make sure companies partner together in order to resolve some of those big challenges that not only touch China but the rest of the world," Crozier told China Daily in Shanghai.

Under the agreements, Microsoft will extend its AI and cloud computing capabilities in the realm of medical imaging and disease screening to its partners and will optimize workflow such as digitalization of medical records using natural language processing. For example, by looking at someone's retina, Microsoft and its partnering firms can determine whether that person is likely to develop diabetes through image analysis powered by algorithms.

The potential for AI in healthcare cannot be overstated and China is moving rapidly to master the technology. A recent

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In Brief...

• The Healthcare Distribution Alliance (HDA) has elected *Greg Drew*, president of Value Drug as chairman of its board of directors, and *Dr. Robert Mauch*, executive vice president and group president of AmerisourceBergen Corporation, as vice chairman. HDA also announced the appointment of *Chad Gielen*, president and CEO of Louisiana Wholesale Drug, to its executive committee. *Michael Broome* of Mutual Wholesale Drug, *Saul Factor* of Smith Drug, *Juan Carlos Hernandez* of Drogueria Betances, *Nishit Mehta* of *HyGen Pharmaceuticals*, and *Jacob Paskes* of BluPax Pharmaceuticals were also named to HDA's board of directors.

• **Pfizer** announced that *Ian Read* will step down as chairman and CEO of the company effective January 1, 2019, and will transition to the role of executive chairman. He will be replaced by Pfizer's current COO, **Albert Bourla**. Read stated "with Albert at the helm, our dedicated colleagues across the globe are poised to deliver the next stage of growth. I look forwarad to working with Albert and the board to continue serving patients and delivering value for shareholders."

• Teva Pharmaceuticals announced the exclusive first-tofile launch of a generic version of Eli Lilly's *Cialis (tadalafil)* tablets in 2.5 mg., 5 mg., 10 mg. and 20 mg dosages. *Tadalafil* is a phosphodiesterase 5 inhibitor used in the treatment of erectile dysfunction, as well as the signs and symptoms of benign prostatic hyperplasia (BPH). "This launch represents

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# For FY2017 Japan's Healthcare Spending was a Record US\$371 Billion

(Source: PharmaJapan)

Japan's overall healthcare expenditure in FY2017 ended March 2018 rose 2.3% year on year to a record 42.2 trillion yen (US\$371 billion), according to data released by the Ministry of Health, Labor and Welfare (MHLW) on September 21. The increase comes after a 0.4% dip in FY2016, when the government saw a pullback in demand for novel hepatitis C therapies and implemented a fee schedule revision in April.

Meanwhile, drug costs grew 2.9% to 5.7 trillion yen (US\$50.1 billion) in FY2017 after a 6.7% drop in FY2016, because of dwindling demand for hepatitis C medicines - this marked the first decline since the ministry started collecting data in the current form in FY2005. The volume-based generic share (the number of generics/the number of generics plus original drugs with generic versions) came in at 73.0% at the end of March 2018, up 4.4 points a year before. By prefecture, the highest generic share was scored by Okinawa at 83.0%, while the lowest was logged by Tokushima at 65.3%.

Dispensing technical fees for pharmacists in FY2017 totaled 1.9 trillion yen (US\$16.7 billion), up 3.4%.

### FOCUS AI (cont.)...

International Data Corp report suggested that the AI-backed healthcare market in the country is predicted to reach US\$930 million by 2022. Microsoft is joining a wave of companies delving into the smart medicine field. Google Inc is investigating how deep learning can be applied to digital pathology by creating an automated detection algorithm that can naturally complement pathologists' workflow.

Royal Philips NV now adopts diagnostic imaging solutions to detect early symptoms of certain diseases in the lungs, breasts and other areas. China's domestic tech conglomerates have also reviewed an opportunity, with both Alibaba Group Holding ltd and Tencent Holdings ltd, setting up dedicated research units for developing AI diagnostic tools.

By working with more than 100 hospitals nationwide, voice recognition specialist iFlytek is working to improve clinicians' workflow, where doctors' voice diagnosis can be translated into digital texts in real time. Crozier said Microsoft's strength lies in the profound partnerships it has forged in China and the vast resources it can leverage from its global network.

"Through partnerships, companies can bring you a set of data that will enrich the solutions and algorithms that you provide," he said. "Sometimes it is an even better solution because it will be open for others to participate in the ecosystem."

## Astellas to Create a New Business Fused with Technology

#### (Source: Pharma Japan)

Japan's Astellas Pharma has launched a new "Rx+" business to create a business beyond its core prescription drug business. Astellas defines "Rx+" as a business different from conventional prescription drugs that will "leverage its strengths and experience .... fuse with technologies and knowledge from different fields," and "offer sustainable profits." Different divisions at Astellas have been studying the feasibility of such a business since FY2015, and the company approved a general plan for it, establishing a new "Rx+ Business Accelerator" division in April this year.

The company will approach this business from two perspectives. One is "the patient journey" from the promotion of health to the diagnosis, treatment, prevention, and management of diseases. Combining antibodies, radiotherapy, and nanomaterials will increase the accuracy and speed of diagnosis, making it possible to diagnose cancer at an earlier stage. To prevent breast cancer from relapsing due to the failure of completely removing cancerous lesions, the division plans to develop diagnostics that make it possible to visualize cancer cells. Products that increase surgical precision, if developed, will help doctors improve patients' prognoses and quality of life (QOL).

The second perspective is that of healthcare technology, which will add modalities such as digital and medical devices to prescription drugs.

This business approach will be required to independently generate profits, so the division will adopt a "lean start-up" strategy involving learning while producing products at low costs in short cycles. This is the antithesis of new drug development, which requires huge investments over long periods. "We will be required to speed up decision-making and commercialize products faster while repeating failures and successes," said Yuta Watanabe, vice president of the Rx+ Business Accelerator division. Since the usual decision-making process would take much time and money, the division will emphasize agility. The division aims to work out an optimal business model through collaborations with IT-related companies and startups outside the pharmaceutical industry. Establishing a joint venture is another option.

Pursuit of a business other than prescription drugs is likely to be understood as business diversification, but Astellas denies such intention. Its core prescription drug business will continue to encounter a harsh environment due to ongoing drug pricing reforms; however, Mr. Watanabe said, "Since the roles of drug makers are changing along with the healthcare environment, we thought about how we could more effectively contribute to strategic patient support." Profitability will continue to be an issue going forward, but rather than considering how the new Rx+ business will be able to contribute to Astellas' overall business, the new business division will focus on maintaining profitability through continuous patient support.

## In Brief (cont.)...

an important addition to our generics portfolio, building on our exclusive launch of a generic version of *Viagra (sildenafil)* tablets last year." Teva executive vice president and head of North America commercial *Brendan O'Grady* said in a statement.

• McKesson Corporation kicked off American Pharmacists Month with a new interactive site, and a video thanking pharmacists for their role in supporting patients, emphasizing the crucial role pharmacists play in keeping communities safe and healthy. Through their ever-vigilant focus on delivery quality patient care, which addressing reimbursement and regulatory changes, retail pharmacists continue to expand their role as a healthcare provider on the front lines of patient care.

• A group of major American hospitals has launched a mission-driven, not-for-profit generic drug company, **Civica Rx**, to combat price spikes on old drugs and long-lasting shortages of critical medicines that have left these entities battered. The company is backed by seven large health systems and three philanthropic groups and will be led by an industry insider who has refused a salary. The company will focus initially on price transparency and stable supplies for 14 generic drugs used in hospitals, without pressure from shareholders to issue dividends or push a stock price higher.

(Sources: Bioprocess Online, Drug Store News, The Independent, and Press Releases)

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