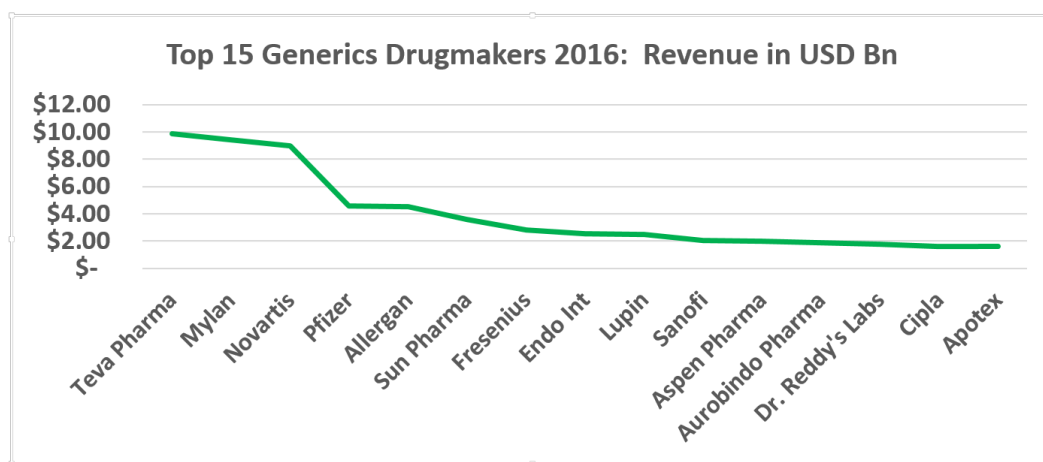


**Markets, Finance & Funding**

**The Top 15 Generic Drugmakers by 2016 Revenue**

Teva topped the 2016 FiercePharma Top 15 Revenue List, just as it did in 2014 and its ongoing poll-topping position looks probable for some time, following its \$33.4 billion in cash and 100.3 million in shares of Teva stock, valued at \$5.4 billion in August 2016.



Source: Evaluate & FiercePharma

Behind Teva came Mylan, on the back of a big deal of its own last year also in its \$7.2 billion purchase of Meda which boosted its OTC portfolio and provided it with entry into new emerging markets.

In third spot was Novartis, whose Sandoz unit delivered \$9 billion in off-brand sales for the year, according to commercial intelligence firm Evaluate.

From there, the industry saw a drop with Pfizer in fourth place with \$4.6 billion and Allergan in fifth with near similar revenues.

Despite likely legislative challenges ahead in the U.S., Evaluate predicts that generics will grow to \$115 billion in 2022, up from \$80 billion in 2016.

**Vesalius Biocapital to Invest in Later-stage European Life Sciences**

Specialist life sciences venture capital investor, Vesalius Biocapital, has announced the first close of its third fund, Vesalius Biocapital III securing over €65 million of commitments. Until the final closing in 2018, Vesalius Biocapital III will accept new investors on a “rolling closing” basis. Starting immediately, the fund plans to invest in later-stage European life sciences companies across drug development, medtech, diagnostics and digital health, providing capital to support their development.

Now in its tenth year, Vesalius Biocapital has raised over €150 million for its two previous funds. The firm has completed over 20 investments with lead or co-lead positions, and achieved numerous exits through trade sales and IPO.

## **VC Aims to Raise €50 million for Italian Biotech Sector**

Aurora-TT, a Milan-based Technology Transfer Intermediation company, has announced plans to raise €50 million in the Italian Biotech sector. Established in 2017, Aurora-TT intends to focus on Technology Transfer to exploit research potentials of academic and research institutions in Italy by providing capital and support for translating breakthrough discoveries into patient therapies.

## **Roche and Novartis Fund Gene Therapy Start-up**

European biotech start-up, Vivet Therapeutics has received a €37.5 million (\$41 million) kick-start, for its gene therapies for a host of rare diseases.

Novartis Venture Fund and Columbus Venture Partners led the round, with Roche Venture Fund, HealthCap, Kurma Partners and Ysios Capital also taking part.

The funding will go towards early work on a group of rare and inherited metabolic diseases, including Wilson disease. It is estimated that around 10,000 patients in the U.S. and 15,000 patients in the EU are sufferers.

Vivet Therapeutics was founded in Paris in 2016, with a wholly-owned subsidiary in Spain, and founded by ex-executives from Anokion, Novartis, Gensight Biologics and Sanofi.

## **GSK looking at Consumer Dominance with \$10.3B Novartis JV Buyout**

Next March, GlaxoSmithKline will have the option to buy out Novartis' stake in their 2014 established consumer health JV.

According to London's *Sunday Times*, it is preparing for an £8 billion (\$10 billion) offer for Novartis' partner's 36.5% share. Industry rumors are hinting that Novartis could use the windfall to help fund a major takeover—possibly AstraZeneca—a notion dismissed as fantasy by many.

**GSK declined to comment but it has said in the past that its aim was to keep the JV in tact, long-term.**

However, buying out Novartis would give GSK control of the world's biggest consumer health operation. GSK has "been consistent all along that this is a business they want to own, and will move forward when the time is right," a source told the *Times*.

## **Merck to Invest \$310 Million in Biologics Facility in Ireland**

Merck & Co. says it will invest further in Ireland with a \$310 million expansion at two sites which will also deliver 330 new jobs.

Merck, known as Merck Sharp & Dohme outside of North America, has announced that it will invest €280 million over the next three years at its biologics operation in Brinny, County Cork, and also at its vaccines and biologics facilities in Carlow. The company said it will add about 120 jobs at the Carlow plant which does some of the work on its hugely successful immuno-oncology drug, Keytruda.

In addition, the company will add more than 200 jobs at its fermentation and sterile filling operation in Cork where it does work on a number of its lung cancer, rheumatoid arthritis and Hepatitis C programs.

## **Novartis Cuts 500 Manufacturing Jobs but Adds 350 in 'High Tech' Posts**

Swiss drugmaker Novartis will cut hundreds of jobs in areas like “traditional manufacturing” in and around its Basel headquarters over the next 18 months but it will be increasing its staff numbers in hi-tech areas by adding 350 roles in development and innovative biologics manufacturing.

The company says it remains committed to its home-country amid media rumblings that some jobs were being transferred to India where it opened an administrative center in 2015.

Overall, Novartis delivered healthy financials in the first quarter of this year and exceeded revenue expectations at \$11.54 billion.

## **Mylan Investors to Vote Against Chairman’s \$97M Pay Deal**

Some institutional investors are calling for Mylan’s Chairman Robert Coury’s to be ousted following his \$97 million compensation award in 2016.

Coury was the highest paid pharma executive in 2016, according to FiercePharma research. He reportedly received \$97.6 million in compensation last year, including stock worth \$50 million and a \$20 million bonus. This has enraged some investors since during the period, Mylan was under fire over price hikes on its EpiPen product and under investigation by Congress and federal agencies.

However, with regards to his \$20 million bonus, the Mylan board decided that Coury had exceeded expectations with his “strategic vision,” the company’s “short- and long-term value creation for shareholders,” and its \$7.2 billion buyout of Meda.

The aggrieved investors however believe that Coury’s compensation in 2016, when vesting of prior awards was factored in, totaled more than \$160 million.

## **AstraZeneca Shareholders Revolt Over CEO £13M Pay Package**

AstraZeneca has suffered a shareholder backlash over executive pay, as two-fifths opposed a £13 million pay package for its CEO, Pascal Soriot.

40% of investors voted against the group’s 2016 remuneration report at its AGM in London, last month while support for its new pay policy got the backing of 96% of investors.

Mr. Soriot received a total pay package of £13.4 million last year comprising salary, bonus, long-term incentive plan (LTIP) and a one-off compensation payment.

His annual salary of £1.2 million was topped-up with an annual bonus of £1.2 million, and though lower than the £2 million he received in 2015, his package was boosted by a further £6.9 million LTIP payment, plus a one-off payment of £3.6 million in compensation for lost bonuses following his departure from his previous employer.

Going forward, AstraZeneca said it had made changes to its long-term incentive plans and that its remuneration committee would “continue the dialogue with shareholders, as appropriate, regarding any concerns following its AGM.”

## **UK: NHS Funding Squeeze Could See Drugs Firms Leave Britain**

Some of the globe's largest drugs companies could abandon Britain and delay new product launches and developments, unless an extra £20 billion is provided to the National Health Service (NHS), according to the Association of the British Pharmaceutical Industry (ABPI) who represents more than 100 manufacturers.

The trade body says an increase in health spending from 9.9% to 11% of GDP is required.

According to the *Times* newspaper, ABPI President, Lisa Anson, claims that a funding squeeze on the health service could lead to an exodus of drugs firms from Britain.

Ms. Anson, who is also UK and Ireland President of AstraZeneca, also said the future of the UK's £30 billion life sciences sector could be in jeopardy.

She added that without an increase in healthcare spending, firms will not be able to carry out clinical trials or develop new drugs against existing treatments and that the UK would become a "desert for healthcare innovation."

## **Products, Pricing & Innovations**

### **Cancer Treatment Costs Rise to \$113 Billion**

Global spending on oncology treatments and supportive care drugs hit \$113 billion in 2016, up from \$107 billion in 2015. And over the past five years, the total global cost of cancer medicine has grown at an annual growth rate of 8.7%, according to a report from the QuintilesIMS Institute.

The U.S. accounted for the largest growth. However, costs grew by 11% in Europe's five biggest markets—France, Germany, Italy, Spain and the U.K., while costs in emerging markets grew by 8.4%.

### **More Furor Over Orphan Pricing**

When Biogen's pricing of its spinal muscular atrophy drug, Spinraza, caused a furor and calls for legislators to step in, when its \$750,000 price tag was revealed, it reignited the debate sparked in the past by Alexion's \$500,000 per annum Soliris' price and more recently the backlash which Marathon Pharmaceuticals faced over its \$89,000 a year steroid drug Emflaza which insiders describe as "modestly priced".

Could it be "the straw that breaks the camel's back in terms of the U.S. market's tolerance for rare disease drug pricing," asks industry analyst Geoffrey Porges, given President Trump's statement that he is "working on a new system where there will be competition in the drug sector" and that pharma companies were "getting away with murder" on their pricing to Government.

### **Taxpayer Funded Zika Vaccine Pricing Row Rumbles On**

Sanofi's forthcoming Zika vaccine license whose R&D was partly funded by the U.S. Military and taxpayers through BARDA is causing a bit of a fuss, with some in political circles demanding assured affordable pricing.

It is adding fuel to the fire as to whether Sanofi's funding deal—worth up to \$43 million so far with a further \$130 million pending—should include product price caps, not just in this one instance but in all ongoing and future public-private development partnerships.

Big Pharma insists that deals such as these are essential for vaccine R&D because of the huge risks and costs involved in developing immunizations.

It is understood that Sanofi's license for Zika has yet to be finalized and that negotiations are ongoing, though Sanofi neither confirmed nor denied this status.

But Bernie Sanders told the *New York Times* back in March that it was asking Government to abandon the “bad deal,” calling a system where taxpayers fund vaccine development and then later pay for protection against the virus as, “insane.”

And last week, Senator Sanders called the process “unacceptable,” added that “American taxpayers have already spent more than \$1 billion on Zika research and prevention efforts, including millions to develop this vaccine. Americans should not be forced to pay the highest prices in the world for a critical vaccine we paid to help develop.”

## **J&J Unveils New Roadmap**

Though Johnson & Johnson delivered under-whelming Q1 results, things do look somewhat rosier on the back of its announcement this month that it will launch or file approval for 11 potential blockbuster remedies by 2021.

It says it will launch or file for approval for medicines to treat prostate cancer, depression, acute myeloid leukemia, myelofibrosis and others over the next few years whilst also continuing its market expansion with its current portfolio, with 50 label updates planned.

The news led J.P. Morgan analyst Michael Weinstein to raise his view of Johnson & Johnson, having stayed neutral for several years. He anticipates their Pharma to grow by 5% and 7% in the second half of 2017 and in 2018 especially so on the back of J&J's three big approvals for rheumatoid arthritis, psoriasis and prostate cancer due over the next 18 months.

## **UK: Pfizer to Provide Free Breast Cancer Drug While Awaiting NICE Decision**

Palbociclib—a drug described as one of the most important advances in treating breast cancer in the past 20 years—is to be given to UK women free of charge while the UK medicines regulator, NICE, decides whether it should be made available on the country's National Health Service (NHS).

Pfizer is to offer the drug free of charge to patients while regulators rule on whether it should be freely available via the NHS approved list.

The National Institute for Health and Care Excellence's provisional view earlier this year was criticized by patient groups and now its final decision has been put on-hold to allow its manufacturer, Pfizer, to present additional clinical data. The drug treats incurable metastatic breast cancer by delaying its progression. NICE initially said that a full course of treatment would cost £79,560 and that benefits were “still not enough to make palbociclib cost effective at its current price.”

The free program is expected to be open for a maximum of five but Pfizer said women who took up the offer would receive the full duration of treatment, regardless of NICE's final decision.

## **'Touche' Moment for Sanofi's Insulin Biosimilar**

Sanofi's biosimilar version of Eli Lilly's insulin product Humalog has been backed for approval in the EU, raising the prospect of further pressure on Lilly's top-selling product.

The Committee for Medicinal Products for Human Use (CHMP) gave the approval for Sanofi's version of insulin—lispro—as well as three other biosimilars this month.

The recommendation is a 'touche' moment for Sanofi, as Lilly recently secured approval in Europe and the U.S. for one of its own biosimilars—its long-acting insulin product Lantus.

The French drugmaker said it was its "first major regulatory milestone for a biosimilar diabetes treatment."

The importance of Humalog is significant as biosimilar competition is expected to increase between now and 2019. The drug delivered \$2.8 billion in revenue last year, a small decline on 2015 but it bounced back in Q1 2017 with sales of \$708 million.

Lilly had sought to protect its franchise by developing a new formulation of Humalog but it abandoned the project earlier this year.

## **Sanofi to Raze \$118M Plant It Never Used**

Sanofi is to level a plant it spent about \$118 million to build but never used.

The French drugmaker confirmed that it is preparing to demolish a plant at its R&D site in Montpellier, in the South of France. The facility was supposed to produce large batch APIs for clinical trials when the plan was incepted in the early 2000s, but was deemed redundant when it was finally completed in 2011 and it was never utilized from that point.

According to Sanofi, in the intervening period between concept and completion, the company's portfolio had evolved towards biologics rather than chemical products and therefore, the production requirements for chemical clinical batches had greatly decreased.

The company did look at leasing, selling or reusing the plant but none of those options would have been deemed satisfactory, so it decided to demolish the facility instead.

Meanwhile, however, it has been expanding its biologics manufacturing capabilities on a shared cost and risk partnership basis. In February, it announced it and Swiss partner Lonza would jointly build a €270 million (\$286.3 million) plant at Lonza's site in Visp, Switzerland.

## **Legal, Regulatory & Compliance**

### **Valium Recall in Australia After Tampering Discovery**

Roche has recalled all its 5-mg Valium blister packs across Australia following a drug-tampering scare at a distribution center in Sydney. The recall will result in a short-term nationwide supply of the product.

The recall followed evidence of a supply chain breach last week which Roche immediately reported to Australia's Therapeutics Goods Administration. So far, there have been no reports of adverse reactions.

The investigation began after Roche discovered nine Valium blister pack sheets had been substituted with those of other drugs. Roche said the nine blister packs were from a batch of 30,000 packs per month that the company distributes to pharmacies nationwide. The company says it is confident that the tampering occurred after the Valium left its own warehouse in Australia.

## **J&J Attempts to Block Samsung's Biosim Launch**

Johnson & Johnson is taking legal proceedings against Samsung Bioepis on the basis that it is violating patents and refusing to participate in a patent dispute resolution process established for biosimilars.

The focus is on Remicade, one of Janssen Biotech's leading products whose sales touched \$5 billion in the U.S. last year. In an action filed in the U.S. District Court in New Jersey, it is claimed that Bioepis is violating three patents with its biosimilar version. The J&J suit is asking the court to block the launch of the copy and compel Bioepis to follow the process. They are also seeking damages.

Bioepis however says it is "confident" that it is not infringing any of Janssen's patents, but J&J says Bioepis provided marketing notice too early and that by opting out of the patent dispute resolution process, it has "made it impossible" for Janssen to assess potential patent infringement.

## **Opioid Addiction: Another State Sues Drugmakers**

Since 2017, drug overdoses have been the leading cause of accidental deaths in Ohio.

Now, State officials have lawsuit filed a lawsuit against Teva, Allergan, Johnson & Johnson, Purdue and Endo for alleged "fraudulent marketing practices" on opioid painkillers.

It claims the pharma companies broke pharma marketing rules and "helped unleash" an opioid epidemic that has had "far-reaching financial, social, and deadly consequences" in the state. The companies did so, according to the suit, by marketing the medications' pain treatment upsides without adequately highlighting the risks.

The State is seeking restitution and punitive damages, plus an order requiring the companies to stop the "unlawful promotion."

Ohio has now joined rulers in Chicago, New York, Illinois and New Hampshire, who are pursuing opioid makers as addiction rates rise.

## **China's FDA to Speed Up Trials Process**

China's FDA is proposing to speed-up clinical trial approvals and remove restrictions placed on trial sites, with the aim of getting products to get to market more speedily.

Part of the initiative will see the agency lowering its certification system, which currently requires any facility wishing to conduct clinical trials to go through a lengthy certification process.

In addition, the agency is proposing a "no response = approval" mechanism thus cutting the lead time for researchers commencing new studies.

As part of a series outlined on May 11, the China FDA plans to change its clinical trial approval system to one similar to the U.S. FDA's Investigative New Drug (IND) process.

Under current rules, a company must wait for the CFDA's official go-ahead before beginning a clinical trial. The new proposal, however, would give the agency 60 working days to either reject or query an application. In the absence of both by day 60, the application would be assumed to be approved.

The agency is also encouraging private and public companies and hospitals to establish dedicated trial sites, rather than relying on healthcare treatment facilities at public hospitals.

In addition, foreign companies and research authorities will be allowed to conduct Phase 1 trials in China.



## **EU States Jostle to Lure EMA HQ**

Up to 20 individual EU countries are jostling for poll position to provide a post-Brexit H.Q. for the European Medical Agency. Although the EU decision makers have not yet announced any official criteria for the move, most EU countries are not holding back in making their case to lure the EMA, its 900 or so employees and the local economic benefits which re-homing the EMA would provide.

Ireland is playing on the EMA's concern over its loss of staff expertise by suggesting how a move to Dublin would greatly assist staff retention, by enabling many of its current employees to commute from its current London base where the EMA has resided for the past 20 years.

Denmark is utilizing the sector expertise of former Novo Nordisk CEO, Lars Rebién Sørensen, who is acting as a special envoy to promote the case for Copenhagen.

Spain is eager to see the authority move to Barcelona by promoting Barcelona's infrastructure, attractive lifestyle and culture.

Other aspirants are believed to be Germany, Italy, Romania, Czech Republic, Belgium, Croatia and Malta.

The new location will be decided by the EU's heads of state, whose next European Council Meeting is scheduled for June 22-23. Europe's drugmakers and the EMA's Executive Director Guido Rasi are pushing for a decision to be made then.

## **Teva to Shut Plant in Hungary**

Teva is abandoning its sterile injectables plant in Godollo, Hungary. The unit halted production last year after the FDA found manufacturing failings of "potentially significant sterility assurance." The closure will result in the loss of hundreds of jobs and the plant will sell or close next year.

Teva confirmed local media reports this month about its plans to close the facility on the fringe of Budapest but emphasized that its overall commitment in Hungary remains via its plants in Debrecen and Sajóbáony and its 2,000 employees.

The reason given for the closure of its injectables plant was to "align production capacity with market and patient demand globally."

The announcement comes on the heels of media reports in March that the company was planning cut up to 6,000 jobs globally. At the time, the company confirmed plans to reduce costs, but said Teva did not have a headcount target.

## **EU to Investigate Aspen's Cancer Drug Pricing**

Aspen Pharmacare is under investigation by the EU's competition authorities over its pricing of five cancer medicines.

The EU Commission said it was considering concerns that the South African pharma company had "engaged in excessive pricing" for five drugs—with reports that some drugs had their prices increases by several hundred per cent—and had "abused a dominant position" in the market.

The five generic medicines—chlorambucil, melphalan, mercaptopurine, tioguanine and busulfan—are used for treating a broad range of cancers, and the Commission is concerned that Aspen may have used the tactic of withdrawing or threatening to withdraw them from sale in some EU member states, leading to shortages.



This is the first time that the EU authorities have investigated a drugmaker for unjustified price increases, although in the US the Securities & Exchange Commission (SEC) has started an investigation into possible price-fixing among generic medicine drugs in the wake of some very high-profile pricing scandals.

Earlier this year, UK researchers told delegates at the European Cancer Congress (ECCO) in Amsterdam that the prices of 14 cancer drugs have increased by between 100% and nearly 1,000% over the past five years in the UK—adding £380m to the NHS bill.

Though Aspen's price rises were not acted on in the UK, in Italy the drugmaker was fined after threatening the Agenzia Italiana del Farmaco (AIFA) that it would stop supplying drugs if they were unable to introduce big hikes.

The EC said its investigation will cover all countries in the European Economic Area except Italy, which fined the company €5 million last September for "unfair prices with increases up to 1,500% for life-saving and irreplaceable drugs."

In April, the UK's Department of Health introduced the Health Services Medical Supplies Costs Bill to be able to regulate prices in the future.

Last December, Pfizer was fined £84 million by the UK's Competitions and Markets Authority (CMA) for conspiring with Flynn Pharma to raise the price of epilepsy drug phenytoin and CMA has since launched an investigation into the pricing of Actavis' hydrocortisone tablets.

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