

# The R&D Smokescreen

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## The Prioritization of Marketing & Sales in the Pharmaceutical Industry

**Ver.1.1**

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Prepared by the Institute for Health and Socio-Economic Policy

*The Institute for Health & Socio-Economic Policy (IHSP) is a non-profit policy and research group and is the exclusive research arm of the California Nurses Association/National Nurses United. The IHSP focus is current political/economic policy analysis in health care and other Industries and the constructive engagement of alternative policies with international, national, state and local bodies to enhance promote and defend the quality of life for all.*



## Summary

Marketing & Sales (M&S) expenses far exceed that of Research & Development (R&D) expenses in the pharmaceutical industry

- In 2015, out of the top 100 pharmaceutical companies by sales, 64 spent twice as much on M&S than on R&D, 58 spent three times, 43 spent five times as much and 27 spent 10 times the amount.
- Drug companies have not invested in R&D due to low return-on-investment
- Out of the top 100 pharmaceutical companies in 2015, 89 spent more on M&S than on R&D.
- In 2015, the top 100 pharmaceutical companies, on average, spent 8.32% of their revenues on R&D.

Research & Development funding has been cut and departments are closing.

- Drug companies have not invested in R&D due to low return-on-investment.
- Many executives have been rewarded for cutting R&D departments.
- Mergers & acquisitions have led to many R&D departments being consolidated, budgets slashed and researchers fired.
- Many pharmaceutical companies take advantage of government sponsored research and funding to help fill the void of their R&D departments.

Marketing & Sales is a much higher priority than Research & Development.

- Drug companies heavily target physicians finding this to be the most lucrative strategy to sell their products.
- In 2013, 68% of all marketing expenses were focused on targeting physicians, while 21% was spent on Direct-to-Consumer (DTC) advertising.
- Drug companies spend huge amounts on DTC. In 2015, AbbVie spent \$357 million on Humira, more than any other pharmaceutical company on a single drug.



## The R&D Smokescreen: The Prioritization of Marketing & Sales in the Pharmaceutical Industry.

We've often heard the stories of high drug prices in the U.S. causing many individuals to go into severe debt or forcing people to cut their pills in half to get by. One common excuse the pharmaceutical industry uses to justify their exorbitant drug prices is that this money is needed to cover high Research & Development (R&D) expenses.<sup>1</sup> Sadly, there is little truth to this statement. The industry claims that it costs about \$2.6 billion to release a new drug.<sup>2</sup> The Tufts Center for the Study of Drug Development that produces this and similar studies is funded by pharmaceutical companies primarily for the purpose of promoting these misleading and inflated claims. As we will see, the \$2.6 billion figure is just a smokescreen that is intended to make us believe that the industry is investing huge amounts in the development of innovative and new drugs.

The industry standard now is to invest more in Marketing & Sales (M&S) than in R&D. So, what are the actual intentions of these drug companies? Is it to help find cures to help the general public or is it to reap insanely high profits at the sake of the public good? Sadly, the industry has made a conscious choice to put profits over public health. In the past 20 years, the top 50 drug companies have made over \$1.6 trillion in profits.<sup>3</sup> Over the past few decades, pharmaceutical companies have turned into financial instruments while turning their backs on R&D.

The pharmaceutical industry appears to have found that the return-on-investment in R&D doesn't meet the short-term expectations of shareholders. As a result, they have created smokescreens around their funding of R&D and, instead, funneled massive amounts of resources into M&S to persuade doctors to prescribe their drugs and convince patients that they need the drugs – at whatever cost.

### The \$2.6 Billion Diversion

The drug industry wants us to believe that high drug prices are justified by the extensive amounts of R&D they are doing. A 2014 study conducted by the industry-bankrolled Tufts Center for the Study of Drug Development concluded that the cost of selling a drug was \$2.6 billion. By contrast, Doctors Without Borders calculated the cost of developing a new drug taking failure into account, at \$50 million to \$186 million.<sup>4</sup>

The Tufts study breaks down the costs into two main categories. One category is "actual costs", which constitute the companies "out-of-pocket" expenses. These are the costs that are reported on the Drug Company's financial statements. The second and very questionably category is "Opportunity costs" equated at \$1.16 billion, about 45% of the cost estimate. Opportunity costs are the amounts that could have been earned by drug companies had they decided to invest the money elsewhere while the drug

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<sup>1</sup> Frank, David. *Finally, A Pharma CEO takes the High Road on Pricing*. Forbes. September 6<sup>th</sup>, 2016.

<http://www.forbes.com/sites/frankdavid/2016/09/06/allergan/#38fbff6da206> (Accessed on 10/14/16)

<sup>2</sup> Caroll, Aaron E. *\$2.6 billion to Develop a Drug. New Estimate Makes Questionable Assumptions*. New York Times. Nov. 18<sup>th</sup>, 2014. [http://www.nytimes.com/2014/11/19/upshot/calculating-the-real-costs-of-developing-a-new-drug.html?\\_r=0](http://www.nytimes.com/2014/11/19/upshot/calculating-the-real-costs-of-developing-a-new-drug.html?_r=0) (Accessed on 10/14/16)

<sup>3</sup> IHSP Brief: *Global Pill-Age: Pharmaceuticals Making a Killing*. September 30<sup>th</sup>, 2016.

<sup>4</sup> Press Release. *R&D Cost Estimates: MSF Response to Tufts CSDD Study on Cost to Develop a New Drug*. Doctors Without Borders Website. November 18<sup>th</sup>, 2014. <http://www.doctorswithoutborders.org/article/rd-cost-estimates-msf-response-tufts-csdd-study-cost-develop-new-drug> (Accessed on 10/18/16)

was in development.<sup>5</sup> This amount should not even be considered because it is purely speculative. Compared to the calculations from Doctors Without Borders, even if you take the reduced amount of \$1.44 billion, this amount is still highly questionable.

Another major flaw was that the study only looked at drugs considered New Medical Entities (NMEs); these are drugs with new breakthrough biologics in them. However, NMEs only make a very small percentage of the drugs that are approved each year by the FDA. The vast majority of the drugs approved by the FDA are slightly modified versions of already existing drugs called “copycat drugs” or “me-too drugs”.<sup>6</sup> In addition, the study did not include any numbers that estimated the amount of publicly funded research utilized by drug companies nor did it mention that R&D costs come from gross profits and create a 100 percent immediate deduction from taxable profits. This notion of high drug development costs is a diversion from where companies are really spending their money, Marketing & Sales.

### Research & Development vs. Marketing & Sales – by the numbers...

Drug companies have made a conscious decision to prioritize their resources in M&S over R&D. Pharmaceutical companies are not required to report the exact amounts that they spend on M&S, but those numbers are reported as a portion of their “Selling, General and Administrative Expenses” (SG&A) in their financial reports. A recent GlobalData study looked at some of the biggest pharmaceutical companies and compared their spending on M&S and R&D<sup>7</sup>. On average, these 10 companies spent about 80% of their SG&A on M&S.<sup>8</sup> This served as the standard for this brief to determine the estimated amount spent on M&S across the country.<sup>9</sup> Shockingly, when looking at the top 100 pharmaceutical companies in 2015, only 11 companies spent more on R&D than M&S.

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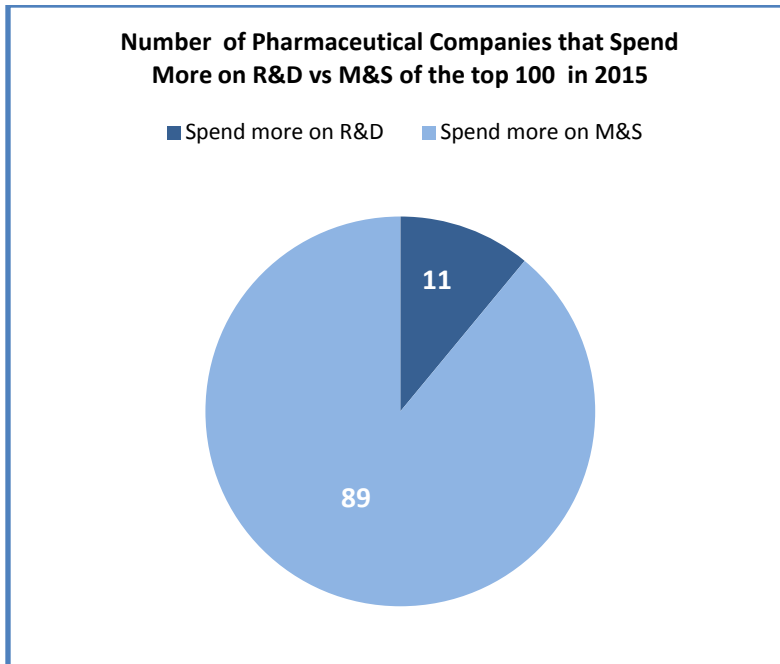
<sup>5</sup> Silverman, Ed. *Developing a Drug Costs \$2.6 Billion, but not Everyone Believes This*. The Wall Street Journal. Nov. 18<sup>th</sup>, 2014. <http://blogs.wsj.com/pharmalot/2014/11/18/developing-a-drug-costs-2-6-billion-but-not-everyone-believes-this/>. (Accessed on 10/18/16)

<sup>6</sup> Carroll, Aaron E. *\$2.6 Billion to Develop a Drug? New Estimate Makes Questionable Assumptions*. The New York Times. November 18<sup>th</sup>, 2014. <http://www.nytimes.com/2014/11/19/upshot/calculating-the-real-costs-of-developing-a-new-drug.html> (Accessed on 10/18/16)

<sup>7</sup> Swanson, Ana. *Big Pharmaceutical Companies are Spending far more on Marketing than Research*. Washington Post. Feb. 11, 2015. <https://www.washingtonpost.com/news/wonk/wp/2015/02/11/big-pharmaceutical-companies-are-spending-far-more-on-marketing-than-research/> (Accessed on 9/6/16)

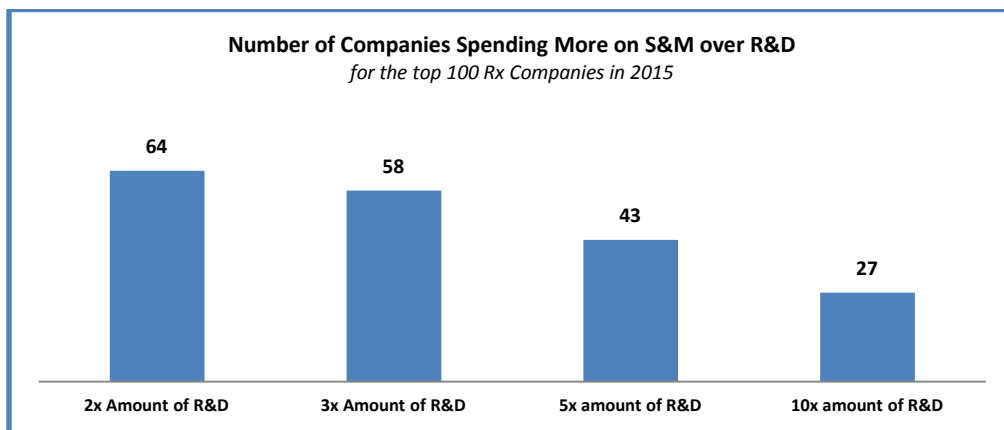
<sup>8</sup> There are also studies that have shown the SG&A was a sufficient estimate for M&S. Our 80% calculation is a conservative estimate. [Weiss, Dan. Et al. *The ‘Big Pharma’ dilemma: develop new drugs or promote existing ones?* Nature Reviews Drug Discovery. AOP. June 19<sup>th</sup>, 2009. <http://gsm.ucdavis.edu/sites/main/files/file-attachments/bigpharmadilemma.pdf> (Accessed on 10/20/16)][Gagnon, Marc-Andre. and Lexchin, Joel. *The Cost of Pushing Pills: A New Estimate of Pharmaceutical Promotion Expenditures in the United States*. PLoS Medicine. January 2008. Vol. 5, Issue 1.]

<sup>9</sup> The GlobalData study located M&S expenses for 10 out of the top 18 drug companies for 2013. We used the amounts reported in their 10k filings from the Selling General and Administrative (SGA) expenses to calculate what percent of their expenses were from S&M. Johnson and Johnson was 80.16%, Novartis, was 79.83%, Pfizer was 80.34%, GlaxoSmithKline was 75.34%, Merck was 81.41%, Sanofi was 77.32%, Roche was 79.16%, AstraZeneca was 75.26%, EliLilly was 79.94% and abbvie was 80.37%. We averaged the 10 of these and rounded up to 80% for an estimated amount spent on S&M.



Source: Thomson Reuters Financial Data & IHSP Calculations

The chart below breaks down the number of companies that spent: twice as much, three times as much, five times as much and 10 times as much on M&S as R&D in 2015.



Source: Thomson Reuters Financial Data

As shown in the chart above, over a quarter of the top 100 drug companies spent 10 times the amount on M&S than R&D. On average, in 2015, the top 100 drug companies spent a mere 8.32% on R&D while spending for M&S was 23.74%, almost 3 times the amount.

It is interesting to highlight some of the questionable things that are included in R&D accounting filed in their corporate documents. For example, in the corporate filings of Pfizer, the company claimed “a \$250 million payment to AstraZeneca in 2012 to obtain the exclusive, global, OTC rights to Nexium”.<sup>10</sup> The purchase of another company’s drug should not be allowed as an R&D expense. The

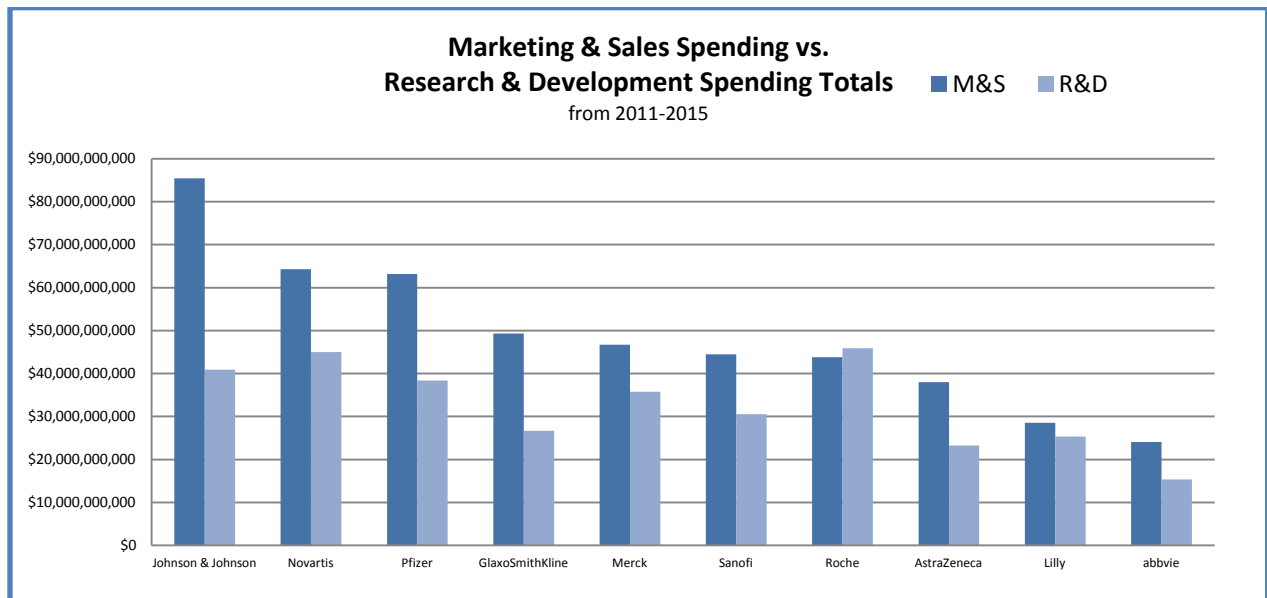
<sup>10</sup> Pfizer Inc. 2013 SEC Financial Report.

<https://www.sec.gov/Archives/edgar/data/78003/000007800314000018/pfe-12312013xex13.htm> (Accessed on 10/18/16)

pharmaceutical industry should be based on innovation, but instead, it is completely moving away from R&D to one purely motivated by high profits.

### The Top Performers

The top 10 drug companies, ranked by sales had average investments in R&D of only 12.5%, while their investments into M&S were 21.6%. Only one company spent more on R&D than M&S consistently, that was Roche and their amounts were almost the same. The chart below shows some of the top drug companies and the amounts spent on M&S and R&D. From 2011 to 2015, in 45 out of 50 instances M&S expenses were higher than R&D expenses.



Source: Thomson Reuters Financial Data

Since the mid 1990's, many drug companies have reduced their R&D spending. (See Appendix A for all companies' spending in the last 5 years). Johnson and Johnson spent \$85,460,220,960 on M&S, while only \$40,917,752,600 on R&D in that 5 year period, more than double. GlaxoSmithKline spent \$49,292,668,595 on M&S and only \$26,717,100,289 on R&D in the same period, almost double. The main reason R&D spending has taken a backseat to M&S is that M&S is far more profitable for the companies. The next few sections discuss the reasons why pharmaceutical companies have limited their resources on R&D while spending heavily on M&S.

### R&D is NOT the Priority

Drug companies make a conscious decision to reduce the funding and priority of R&D. This directly impacts innovation and is a threat to our public health. R&D productivity has been on a steady



decline for decades.<sup>11</sup> Pharmaceutical analysts note that this decline has occurred for multiple reasons, such as stricter FDA regulations, the competition of generics, technology advancement, and mergers and acquisitions.<sup>12</sup> However, one key reason has been that the return-on-investments from R&D has not given the returns that executives and shareholders have expected.

In 2015, returns from R&D hit their lowest level in five years. Deloitte consulting firm warned that although there has been a recent uptick in productivity, forecasted sales declines coupled with a major drop off in return-on-investment from R&D should have many drug companies worried.<sup>13</sup> “Faced with weak returns on R&D, drug companies have increased the amount of cash returned to shareholders through buybacks and dividends... signaling a possible ‘lack of confidence on the part of both investors and companies’ in R&D”<sup>14</sup> The severity of the decline of return-on-investment from R&D has led many companies to cut or downsize their R&D departments.

More and more pharmaceutical executives view R&D as risky, with even the slightest delay in drug development potentially causing a decline in shares. In a recent case with Catalyst Pharmaceuticals and their drug Firdapse, the FDA gave the company a “refusal to file” because they needed to show an additional “adequate and well-controlled” study with particular patients. This delayed study caused company shares to drop by 52%.<sup>15</sup> Financial markets have rewarded companies for cutting their R&D departments. In 2008, former consultant and past Chairman and CEO of Valeant, Michael Pearson stated, “Cutting R&D meant your stock would go up... If you wanted to make money... dump R&D and focus on lower-risk projects and aggressive financial engineering – like merging with a Canadian company.”<sup>16</sup> Shortly after making that statement, Valeant merged with Biovail.<sup>17</sup> This shift from innovation and discovery to maximizing profits through financial engineering has been a major setback for R&D.

Another reason for the decline in R&D has been the increase of mergers and acquisitions (M&A) within the pharmaceutical industry.<sup>18</sup> The former president of Pfizer Global Research and Development stated that “In major mergers today, not only are R&D cuts made, but entire research sites are eliminated”.<sup>19</sup> When Pfizer acquired Wyeth, the companies had combined research budgets of over \$12 billion. The year following the merger, Pfizer’s R&D budget was only \$6.5 billion, a huge cut which ultimately resulted in the closing of research programs, research sites and the firing of scientists.<sup>20,21</sup>

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<sup>11</sup> Thongs, Robert. *Root Causes of the Pharmaceutical R&D Productivity Crisis*. SciTech Strategy. May 31<sup>st</sup>, 2015. <http://scitechstrategy.com/2015/03/root-causes-of-the-pharmaceutical-rd-productivity-crisis/> (Accessed on 10/14/16)

<sup>12</sup> Ibid

<sup>13</sup> <https://www.ft.com/content/2217a2c8-a01f-11e5-8613-08e211ea5317> (Accessed on 10/14/16)

<sup>14</sup> Ibid

<sup>15</sup> Bandell, Brian. *Delay in Drug Approval Causes Sharp Decline in Shares of Pharma Firm*. South Florida Business Journal. April 26, 2016. <http://www.bizjournals.com/southflorida/news/2016/04/26/delay-in-drug-approval-causes-sharp-decline-in.html> (Accessed on 10/7/16)

<sup>16</sup> Herper, Matthew. *The Giant Drug Firm Won’t Invent Medicines. Investors are Cheering*. Forbes. January 21<sup>st</sup>, 2015. <http://www.forbes.com/sites/matthewherper/2015/01/21/wall-streets-drug-dealer-how-brent-saunderss-ma-binge-is-building-the-pharma-of-the-future/#1c4672a46a88> (Accessed on 10/7/16)

<sup>17</sup> Dealbook. *Biovail to Merge with Valeant*. NY Times. June 21<sup>st</sup>, 2010. <http://dealbook.nytimes.com/2010/06/21/biovail-to-merge-with-valeant/> (Accessed on 10/7/16)

<sup>18</sup> IHSP Brief. *Marching Toward Monopoly – Mergers and Acquisitions in the Pharmaceutical Industry*. Institute for Health and Socio-Economic Policy. October 17<sup>th</sup>, 2016.

<sup>19</sup> Stone, Kathlyn. *Who Funds Biomedical Research?* The Balance. August 15<sup>th</sup>, 2016. <https://www.thebalance.com/who-funds-biomedical-research-2663193> (Accessed on 10/7/16)

<sup>20</sup> Lo, Chris. *Pharma Mergers: Big Business, Bad Science?*. Pharmaceutical Technology.com. January 17<sup>th</sup>, 2015. <http://www.pharmaceutical-technology.com/features/featurepharma-mergers-big-business-bad-science-4467897/> (Accessed on 10/7/16)

Beyond the merging companies, M&A activity has been shown to significantly diminish the amount of research and innovation at the rivals of the merging firms as well, reducing their expenditures in patenting and R&D by more than 20%.<sup>22</sup> So, if companies are cutting their R&D departments, how are they filling the void? Drug companies are maximizing government funded research, government funding and subsidies.

## Government Funded Research

Drug companies have realized they don't need to spend their own money as they can rely on government funds instead. The National Institute of Health (NIH) has invested over \$900 billion in applied and basic research since the 1930s.<sup>23</sup> In 2014, the American Medical Association (AMA) released a study that showed the increased government funding to medical research in areas such as the National Institutes of Health (NIH), medical device firms, biotechnology firms, and pharmaceutical firms. Between 1994 to 2012, government funded research has grown significantly.<sup>24</sup> The NIH's budget almost doubled from \$17.6 billion to \$30.9 billion. Medical device firms funding almost tripled from \$3.8 billion to \$11.5 billion. Pharmaceutical firms saw a growth from \$20 billion to \$36.8 billion. The biggest increase came with biotechnology firms, their funding grew over five times, from \$3.7 billion to \$19.6 billion.<sup>25</sup> In an op-ed in the Los Angeles Times by economist Mariana Mazzucato she wrote:

*Big Pharma, while of course contributing to innovation, has increasingly decommitted itself from the high-risk side of research and development, often letting small biotech companies and the NIH do most of the hard work. Indeed, roughly 75% of so-called new molecular entities with priority rating (the most innovative drugs) trace their existence to NIH funding, while companies spend more on "me too" drugs (slight variations of existing ones.)<sup>26</sup>*

Taxpayers are not only paying for extremely high priced drugs, but are also funding a decent portion of the research conducted through tax dollars. In the recent development for a Zika vaccine, six different pharmaceutical companies are vying to create a vaccine and to potentially make a fortune. Three of these companies have partnered with the government. Sanofi has partnered with the Walter Reed Army Institute of Research (WRAIR), GlaxoSmithKline is using the National Institute of Health's (NIH) data and Takeda Pharmaceuticals is partnering with the US Public Health Emergency

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<sup>21</sup> Turmelle, Luther. *Mergers Hamper Innovation*. Ex Pfizer exec says. New Haven Register. September 10<sup>th</sup>, 2014. <http://www.nhregister.com/business/20140910/mergers-hamper-innovation-ex-pfizer-exec-says> (Accessed on 10/7/16)

<sup>22</sup> Haucap, Justus. And Stiebale, Joel. Research: Innovation Suffers When Drug Companies Merge. Harvard Business Review. August 3<sup>rd</sup>, 2016. <https://hbr.org/2016/08/research-innovation-suffers-when-drug-companies-merge> (Accessed on 10/20/16)

<sup>23</sup> Mazzucato, Mariana. *How taxpayers Prop Up Big Pharma, and how to cap that*. Los Angeles Times. October 27<sup>th</sup>, 2015. <http://www.latimes.com/opinion/op-ed/la-oe-1027-mazzucato-big-pharma-prices-20151027-story.html> (Accessed on 10/14/16)

<sup>24</sup> All amounts have been adjusted to compare to the amounts of 2012

<sup>25</sup> Moses III, Hamilton. Et al. *The Anatomy of Medical Research. US and International Comparisons*. American Medical Association. 2014.

<sup>26</sup> Mazzucato, Mariana. *How taxpayers Prop Up Big Pharma, and how to cap that*. Los Angeles Times. October 27<sup>th</sup>, 2015. <http://www.latimes.com/opinion/op-ed/la-oe-1027-mazzucato-big-pharma-prices-20151027-story.html> (Accessed on 10/14/16)

Department.<sup>27 28 29</sup> All three of these companies are utilizing tax payer funded research and have been given a jump start on vaccine creation at limited cost. The drug companies were only interested in developing a vaccine for Zika when it became clear that there would be a demand for it in the very lucrative U.S. market. In the eyes of investors, not only does this save the drug companies money, but also limits liability for the company.

## A Focus on Marketing & Sales...

Due to the minimal return-on-investment through R&D, the pharmaceutical industry has invested heavily in their Marketing & Sales (M&S) in an effort to get consumers to request particular drugs and doctors to prescribe these drugs – at whatever cost. M&S encompasses a number of strategies in the pharmaceutical industry. These include Direct-to-Consumer (DTC) strategies such as mailings, and commercials. Other strategies include professional meetings, journal advertising, eDetailing (online & social media advertising), and the most controversial, traditional professional detailing (marketing to physicians).

## Persuading the Prescriber... Doesn't take much...

Targeting physicians has proven to be extremely lucrative for drug companies. A 2013 marketing study conducted by CegeDim Strategic Data, found that Direct-to-Consumer only made up 21% of marketing expenses, while Total Professional Detailing (marketing to physicians) made up 68%.<sup>30</sup> A recent study by the Journal of the American Medical Association (JAMA) looked at 279,669 physicians and found that “doctors who received industry-sponsored meals, typically costing less than \$20 in 2013... doctors more frequently prescribed the four most common brand name drugs.”<sup>31</sup> Another study conducted by ProPublica found that “doctors who received industry payments were two to three times as likely to prescribe brand-name drugs at exceptionally high rates as others in their specialty.”<sup>32</sup> In 2014, U.S. doctors and teaching hospitals received \$6.49 billion from medical device and drug makers.<sup>33</sup> This is an inherent conflict of interest that exists in this industry. Strangely enough, although the American Medical Association (AMA) and the American Society of Health-System Pharmacists (ASHP)

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<sup>27</sup> McKay, Betsy and Bisslerbie, Noemie. *Sanofi Teams Up with US Army on Zika Vaccine*. Wall Street Journal. July 6<sup>th</sup>, 2016. <http://www.wsj.com/articles/sanofi-teams-up-with-u-s-army-on-zika-vaccine-1467781202> (Accessed on 8/10/16)

<sup>28</sup> Adams, Ben. *US Government in \$300 million-plus Zika Vaccine R&D deal with Takeda*. Fierce Biotech. September 2<sup>nd</sup>, 2016. <http://www.fiercebiotech.com/biotech/u-s-government-300m-plus-zika-vaccine-r-d-deal-takeda> (Accessed on 8/10/16)

<sup>29</sup> Sagaonowsky, Eric. *GSK Jumps into Zika Vax Hunt on the heels of Sanofi's deal* <http://www.fiercepharma.com/pharma/gsk-enters-zika-vaccine-scene-nih-collaboration> (Accessed on 8/10/16)

<sup>30</sup> Mack, John. *Pharma Promotional Spending, in 2013*. Pharma Marketing News. May 2014.

<http://www.news.pharma-mkting.com/pmn1305-article01.htm> (10/10/16)

<sup>31</sup> Hopkins, Jared S. *Doctors Getting Free Meals. Pick Branded Drugs More. Study Finds*. Bloomberg. June 20<sup>th</sup>, 2016. <http://www.bloomberg.com/news/articles/2016-06-20/doctors-getting-free-meals-pick-branded-drugs-more-study-finds> (Accessed on 10/10/16)

<sup>32</sup> Ornstein, Charles. Et al. *Now There's Proof, Docs Who Get Company Cash Tend to Prescribe More Brand-Name Meds*. ProPublica. March 17<sup>th</sup>, 2016. <https://www.propublica.org/article/doctors-who-take-company-cash-tend-to-prescribe-more-brand-name-drugs> (Accessed on 10/10/16)

<sup>33</sup> Ibid

have taken a strong stance against DTC marketing, they have yet to take a stance on the targeting of healthcare professionals.<sup>34</sup> The government has taken minimal actions, but one action that has been taken was through the passage of the Affordable Care Act (ACA).

Mandated through the ACA, the Centers for Medicare & Medicaid Services (CMS) requires the reporting of payments made to healthcare professionals through a program called Open Payments. Some of the payments made include things such as travel, research, gifts, speaking fees and meals. In the three years reported, the total amounts spent on doctors has already doubled from 2013 (\$3.91 billion) to 2015 (\$7.52 billion). Respectively, this came out to be \$8,145.83 per doctor in 2013 and \$12,168.28 per doctor in 2015.<sup>35</sup> Drug companies realize how critical it is to influence physicians, as they are the direct access point to increased prescriptions and sales.

## Direct-To-Consumer (DTC) Marketing

Direct-to-Consumer (DTC) marketing encompasses things such as commercials, magazine advertisements and billboards aimed toward the public. Only two countries have legalized advertising pharmaceuticals to consumers and patients, the US and New Zealand.<sup>36</sup> In the U.S., Kantar Media reported an 18% increase in pharmaceutical ads alone from 2013 to 2014 totaling at \$4.53 billion and a 19% increase from 2014 to 2015 totaling \$5.4 billion. A closer look shows that, Bristol-Myers and Pfizer pumped out \$221 million in ads in 2014 for their drug Eliquis. In 2015, Humira, a drug produced by AbbVie spent a shocking \$357 million, a 37% increase from the previous year.<sup>37</sup> Pfizer is responsible for over \$1.4 billion in ads. Pfizer is a notable case in that it ranked seventh out of all companies in all industries and rose their spending for M&S by 23% from the past year.<sup>38,39,40</sup> The chart below shows the top 10 most advertised drugs from 2015.

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<sup>34</sup> Llamas, Michelle. *Selling Side Effects. Big Pharma's Marketing Machine*. Drugwatch. <https://www.drugwatch.com/big-pharma-marketing/> (Accessed on 10/10/16)

<sup>35</sup> Center for Medicare and Medicaid Services. Open Payment Website. <https://openpaymentsdata.cms.gov/summary> (Accessed on 10/10/16)

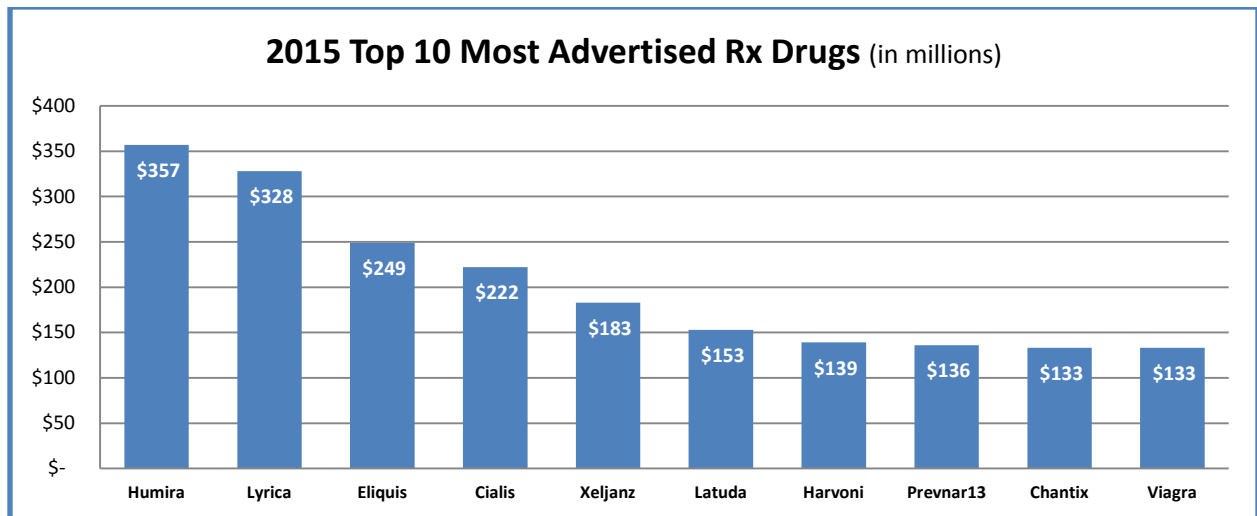
<sup>36</sup> Mercola, *So Inherently Dangerous that only two countries in the World have Legalized This and US is one of them*. July 16<sup>th</sup>, 2012 <http://articles.mercola.com/sites/articles/archive/2012/07/16/drug-companies-ads-dangers.aspx> (Accessed on 10/14/16)

<sup>37</sup> <http://www.fiercepharma.com/marketing/up-up-and-away-2015-pharma-ad-spending-ties-decade-old-record> (Accessed on 10/10/16)

<sup>38</sup> Bulik, Beth. *Up up and Away. 2015 Pharma Ad Spending Ties Decade Old Record*. Fierce Pharma. April 6<sup>th</sup>, 2016. <http://www.fiercepharma.com/dtc-advertising/pharma-s-ad-spend-vaults-to-4-5b-big-spender-pfizer-leading-way> (Accessed on 10/10/16)

<sup>39</sup> Kantar Media. *Key Sporting Events and Political Ads Increase US Full Year Advertising Expenditures*. March 18<sup>th</sup>, 2015. <http://www.kantarmedia.com/us/newsroom/press-releases/key-sporting-events-and-political-ads-increase-us-full-year-advertising-expenditures> (Accessed on 10/10/16)

<sup>40</sup> PharmaMarketingBlog. March 3<sup>rd</sup>, 2016. <http://pharmamktng.blogspot.com/2016/03/annual-spending-on-direct-to-consumer.html> (Accessed on 10/10/16)



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Humira takes the top spot, but it's interesting to note that their drug is about to go off patent in December of 2016.<sup>42</sup> AbbVie Inc, the owners of Humira are investing heavily into M&S so that they can develop drug loyalty before the generics begin to compete.

It's important to note that many in the health field believe that DTC is dangerous. The American Medical Association, the American Society of Health-System Pharmacists and Consumer Reports have all taken a stance to ban DTC. Too often DTC messaging (mostly focused on television ads) has misleading or false information, threatens public health, is not completely transparent on risks, and often promotes the most expensive treatments.<sup>43</sup> In 2015, the American Medical Association's House of Delegates called for a total ban on DTC advertising on drugs and medical devices.

*Today's vote in support of an advertising ban reflects concerns among physicians about the negative impact of commercially-driven promotions, and the role that marketing costs play in fueling escalating drug prices, said AMA Board Chair-elect Patrice A. Harris, M.D., M.A. Direct-to-consumer advertising also inflates demand for new and more expensive drugs, even when these drugs may not be appropriate.<sup>44</sup>*

However, as mentioned earlier, these are the same two organizations that also refused to take a stance on marketing to physicians – even though the World Health Organization (WHO) has stated that this method of influence is a direct conflict of interest.<sup>45</sup>

<sup>41</sup> Llamas, Michelle. *Selling Side Effects. Big Pharma's Marketing Machine.* Drugwatch. <https://www.drugwatch.com/big-pharma-marketing/> (Accessed on 10/10/16)

<sup>42</sup> Farooq, Rachel. Biosimilars Threaten AbbVie Inc Humira As It Approaches Patent Expiration. Business Finance News. February 9<sup>th</sup>, 2016. <http://www.businessfinancenews.com/27672-biosimilars-threaten-abbvie-inc-humira-as-it-approaches-patent-expiration/> (Accessed on 10/19/16)

<sup>43</sup> Ibid

<sup>44</sup> AMA. *AMA Calls on Ban on Direct to Consumer Advertising of Prescription Drugs and Medical Devices.* Nov. 17<sup>th</sup>, 2015. <http://www.ama-assn.org/ama/pub/news/news/2015/2015-11-17-ban-consumer-prescription-drug-advertising.page> (Accessed on 10/10/16)

<sup>45</sup> Procon.org. *Should Prescription Drugs be Advertised Directly to Consumers.* Procon.org. <http://prescriptiondrugs.procon.org/view.answers.php?questionID=001603> (Accessed on 10/16/16)

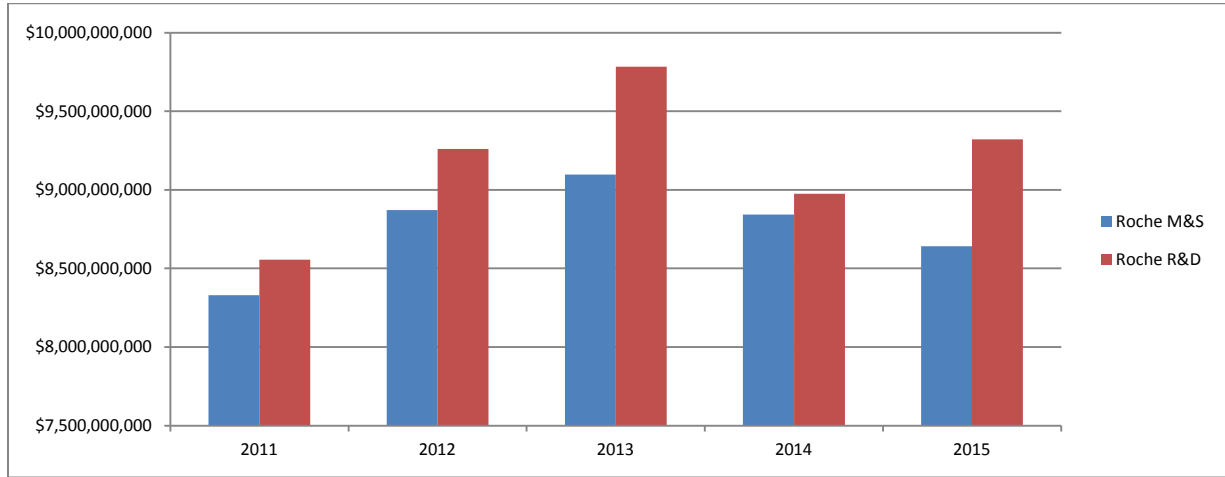
## **An Industry Focused on Buying Your Love... Not Curing Your Ailment**

The pharmaceutical industry has clearly prioritized Marketing & Sales over Research & Development. This has allowed companies to pursue profits while placing the public's health at risk. Pharmaceutical companies have a choice to make with regards to how they spend their revenue, and unfortunately, too many of them have decided to focus on the ability to sell their products rather than create new ones. With more diseases putting public health at risk, pharmaceutical companies only take time to develop a drug when they see an acceptable return-on-investment. The financial engineering in the pharmaceutical industry has created one of the most divisive, lucrative and dangerously powerful industries our world has ever seen. Without stricter legislation, like Prop. 61, the industry will continue to fleece the government, the public and our health.

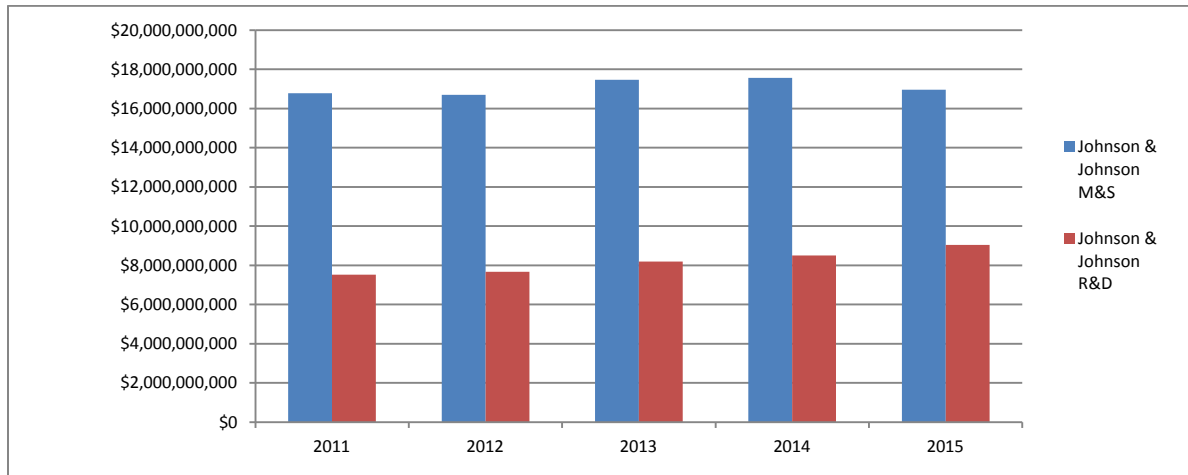
**Appendix A:**

**Individual Drug Company Spending of Market & Sales vs. Research & Development from 2011-2015**

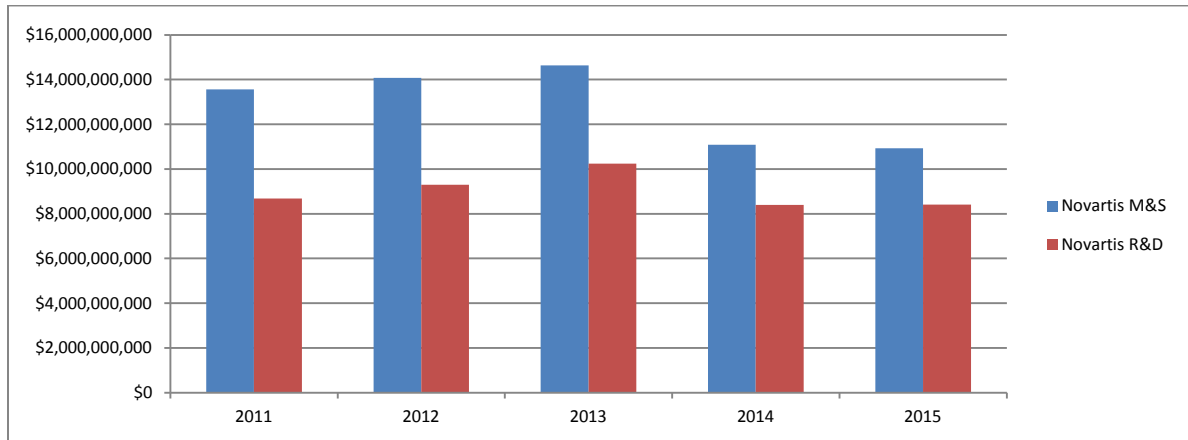
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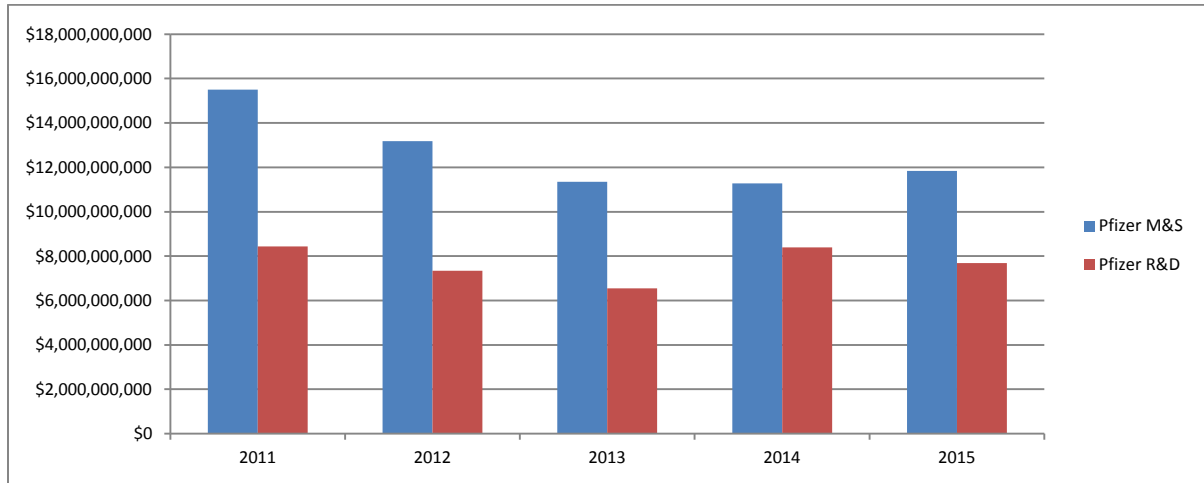
**Johnson & Johnson**



**Novartis**



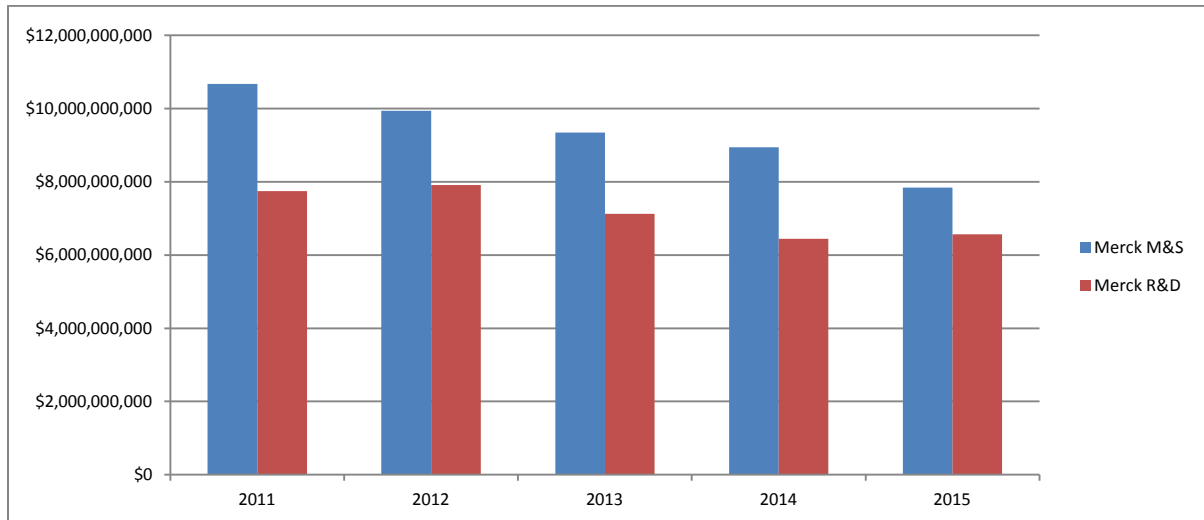
### Pfizer



### GlaxoSmithKline

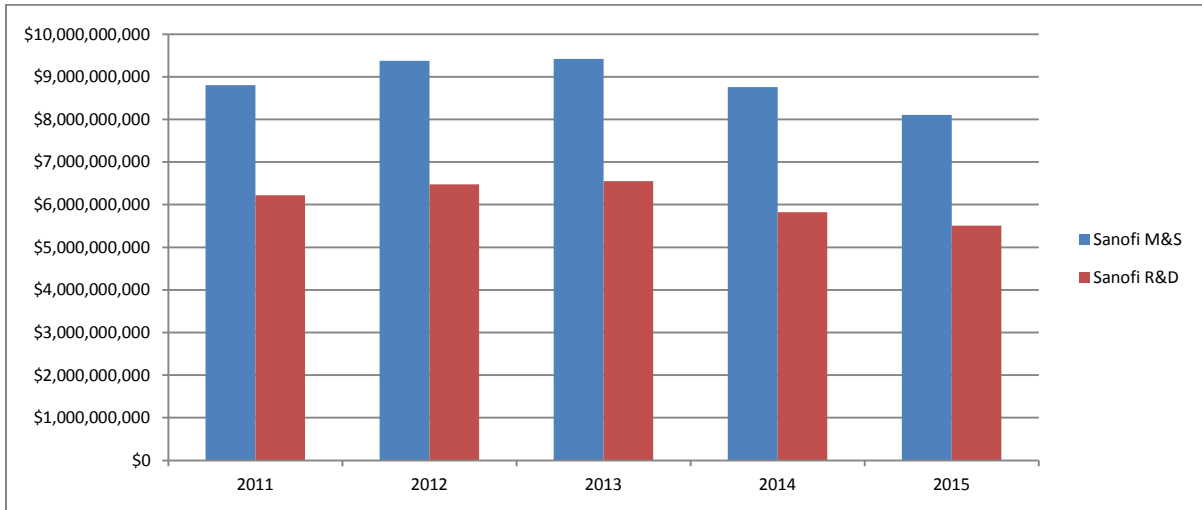


### Merck

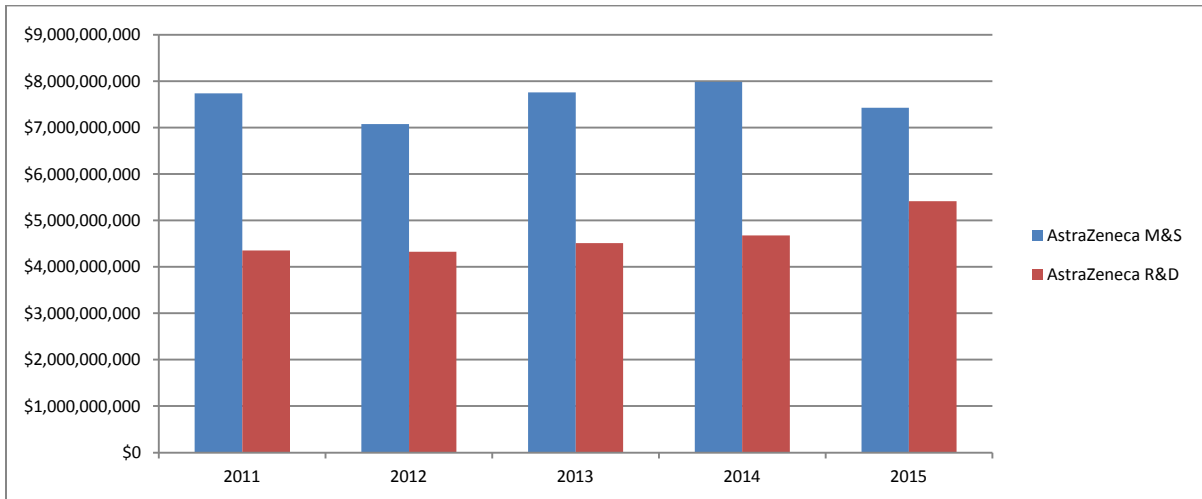




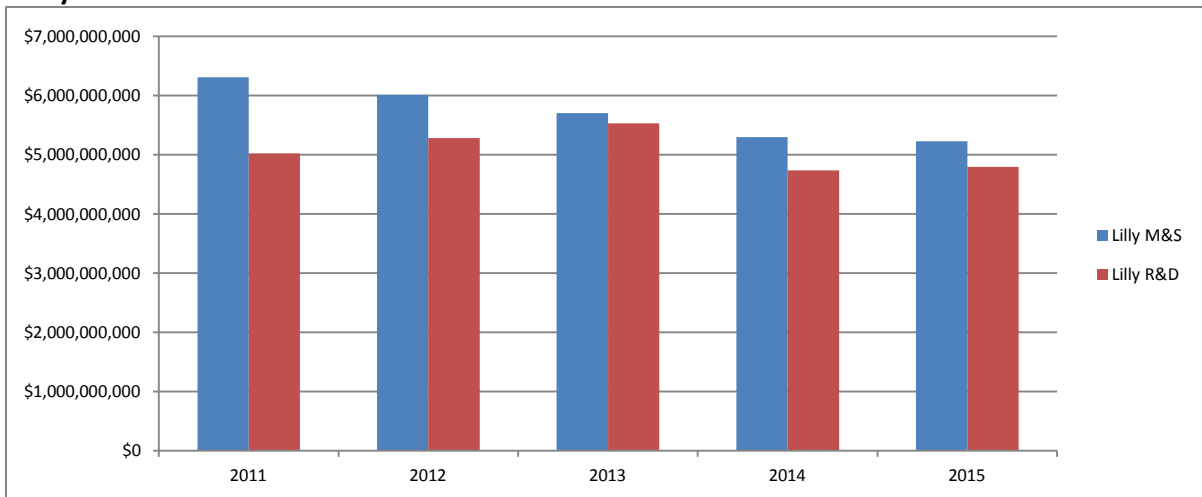
### Sanofi



### AstraZeneca



### EliLilly



**AbbVie**

