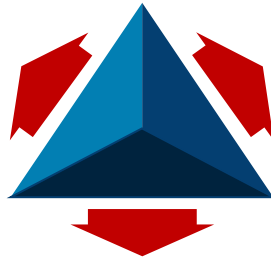


EXCERPT

***Jean-Michel Peny***

# **Pharma Market Insight & Strategy**



**2012 Edition**

 ***Smart Pharma Consulting***



Contents of the Book

Excerpt of the Book

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3. Baxter
4. Novo Nordisk
5. Astellas
6. Daiichi Sankyo
7. Merck KGaA HealthCare
8. Gilead
9. Eisai
10. Mylan
11. Allergan
12. Mitsubishi Tanabe
13. Biogen Idec
14. Celgene
15. Chugai

## Conclusions

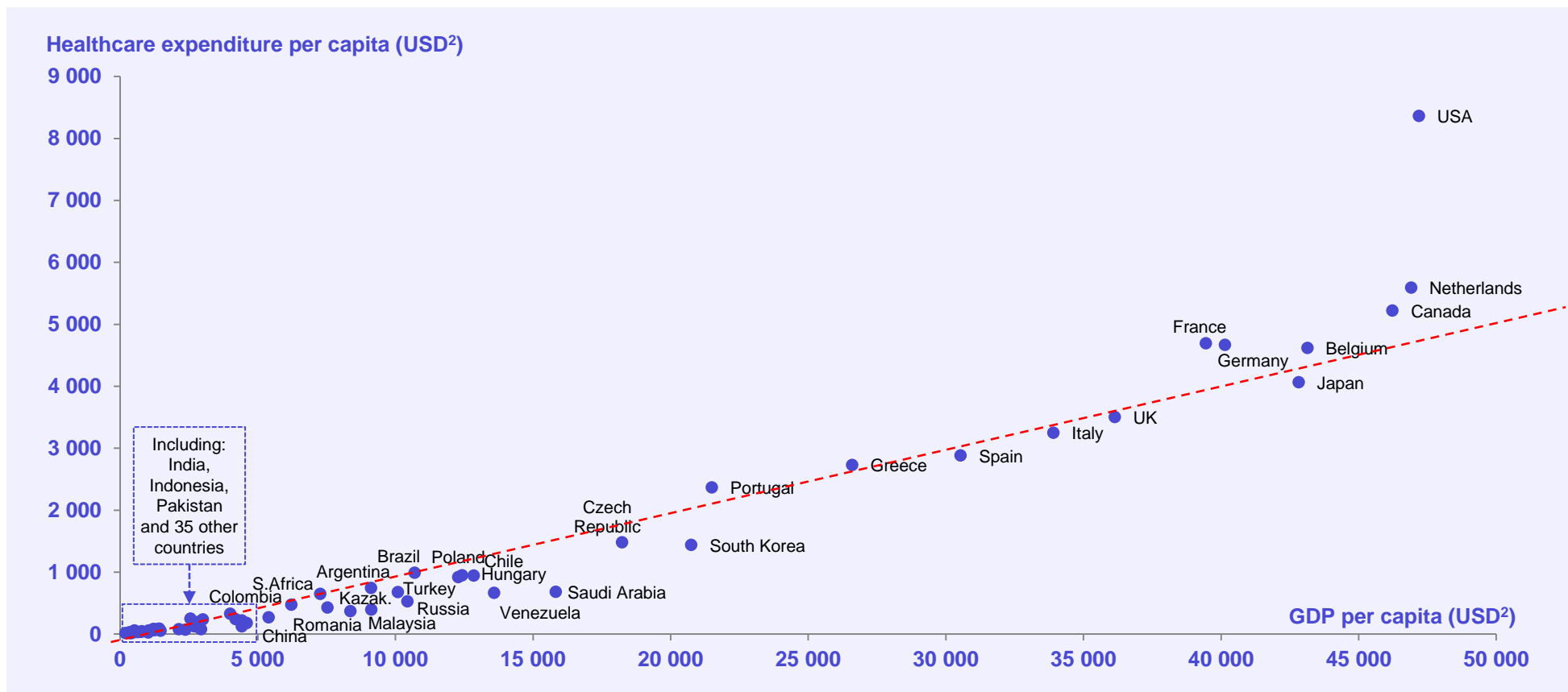
Contents of the Book



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The analysis of the 70 most populated countries (population > 10 M) shows that the higher the GDP<sup>1</sup> per capita, the higher the healthcare expenditure

Relation between GDP and healthcare expenditure (2010)

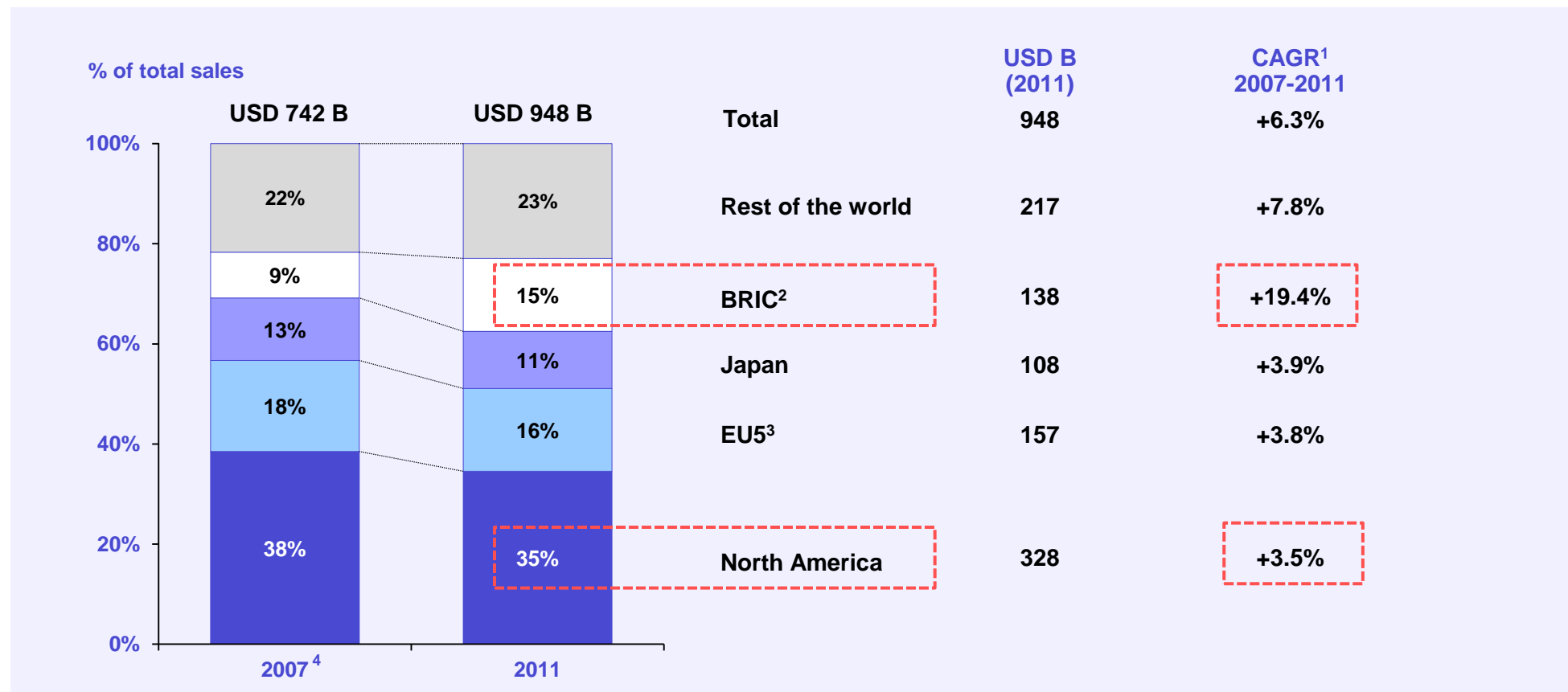


Source: World Bank's Open Data – WHO Global Health Expenditure Database

<sup>1</sup> Gross Domestic Product – <sup>2</sup> In 2010 USD at average exchange rate

North America is still the main market but its importance, together with that of other developed countries, is shrinking due to slower growth rates than emerging countries

Global pharmaceutical market size and growth



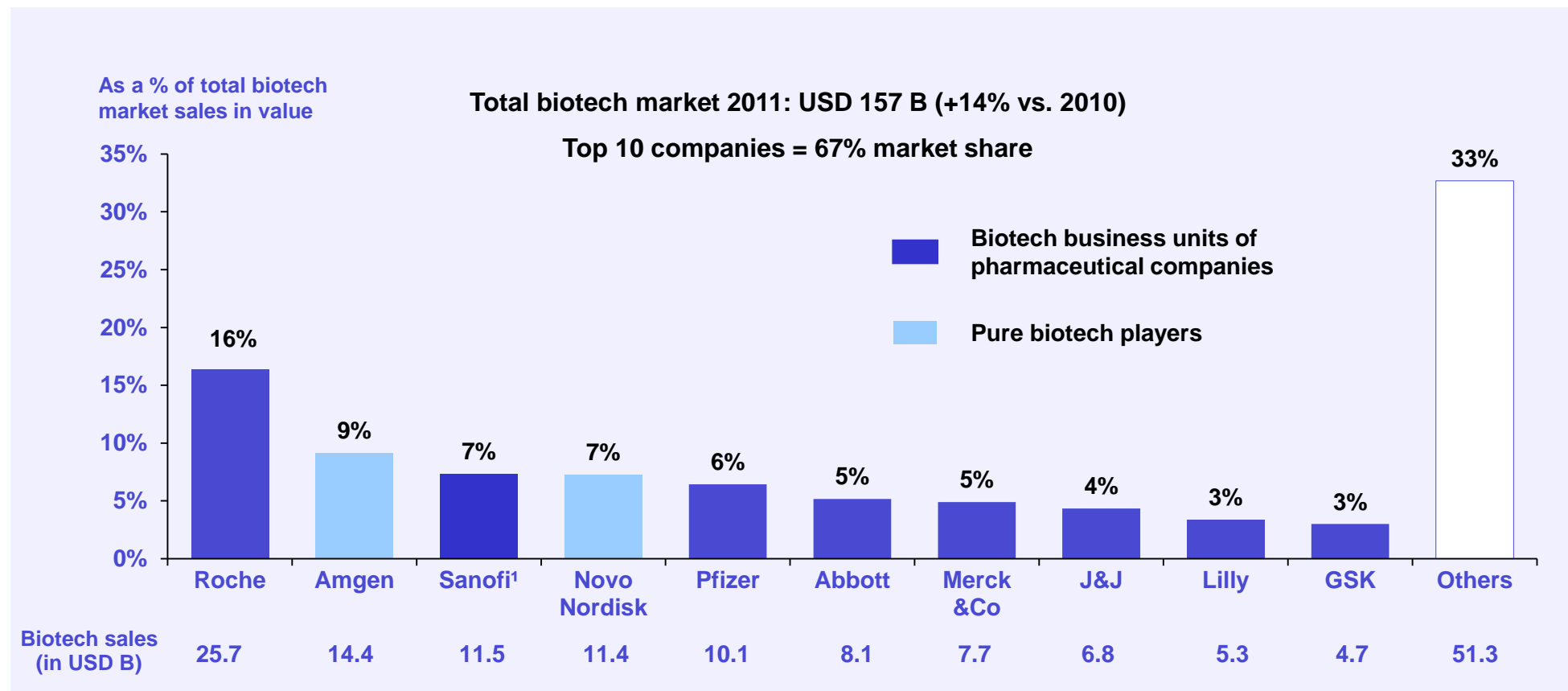
Source: IMS Medicines Outlook Through 2016 (July 2012) – Nicholas Hall's OTC Yearbook 2012 – Smart Pharma Consulting analyses

<sup>1</sup> Compound annual growth rate – <sup>2</sup> Brazil, Russia, India and China – <sup>3</sup> France, Germany, Italy, Spain, UK – <sup>4</sup> 2007 data are in constant USD (2011)



Roche is the leader of the biotech segment, which appears to be moderately concentrated with 10 companies representing two thirds of the market

Leading players in the biotech market (2011)



Source: IMS Medicines Outlook Through 2016 (July 2012) – Evaluate Pharma World Preview 2018 (June 2012) – Smart Pharma Consulting analyses

<sup>1</sup> Sanofi results are not pro-forma for the acquisition of Genzyme in April 2011 (i.e. Genzyme figures are not included for the January-April period)

Atorvastatin is expected to become the top-selling generic product following the increase in the number of countries where Lipitor loses its patent protection

Top 10 global prescription generics<sup>1</sup> (2011)

Molecule	Originator brand	Therapeutic Class	2011 Sales USD B <sup>2</sup>	Evolution 2010-2011		Ranking 2011	Ranking 2010
				Δ USD B	%		
Amoxicillin + Clavulanic acid	Amoxil / Augmentin	Anti-Infectives	4.0	0.2	4%	1	1
Omeprazole	Losec	Antiulcerants	2.6	-0.2	-8%	2	2
Amlodipine	Norvasc	Calcium antagonists	1.9	-0.0	-3%	3	3
Atorvastatin	Lipitor	Antihyperlipidemic	1.8	0.8	86%	4	21
Simvastatin	Zocor	Antihyperlipidemic	1.6	-0.1	-5%	5	5
Fentanyl	Duragesic	Narcotics	1.6	-0.0	-1%	6	7
Diclofenac	Voltaren	Anti-rheumatics, non-steroidal	1.6	0.2	12%	7	12
Metformin	Glucophage	Insulins	1.6	0.0	1%	8	10
Venlafaxine	Effexor	Anti-depressants	1.6	-0.1	-4%	9	6
Salbutamol	Ventoline	B2-stimulants	1.6	0.1	8%	10	11

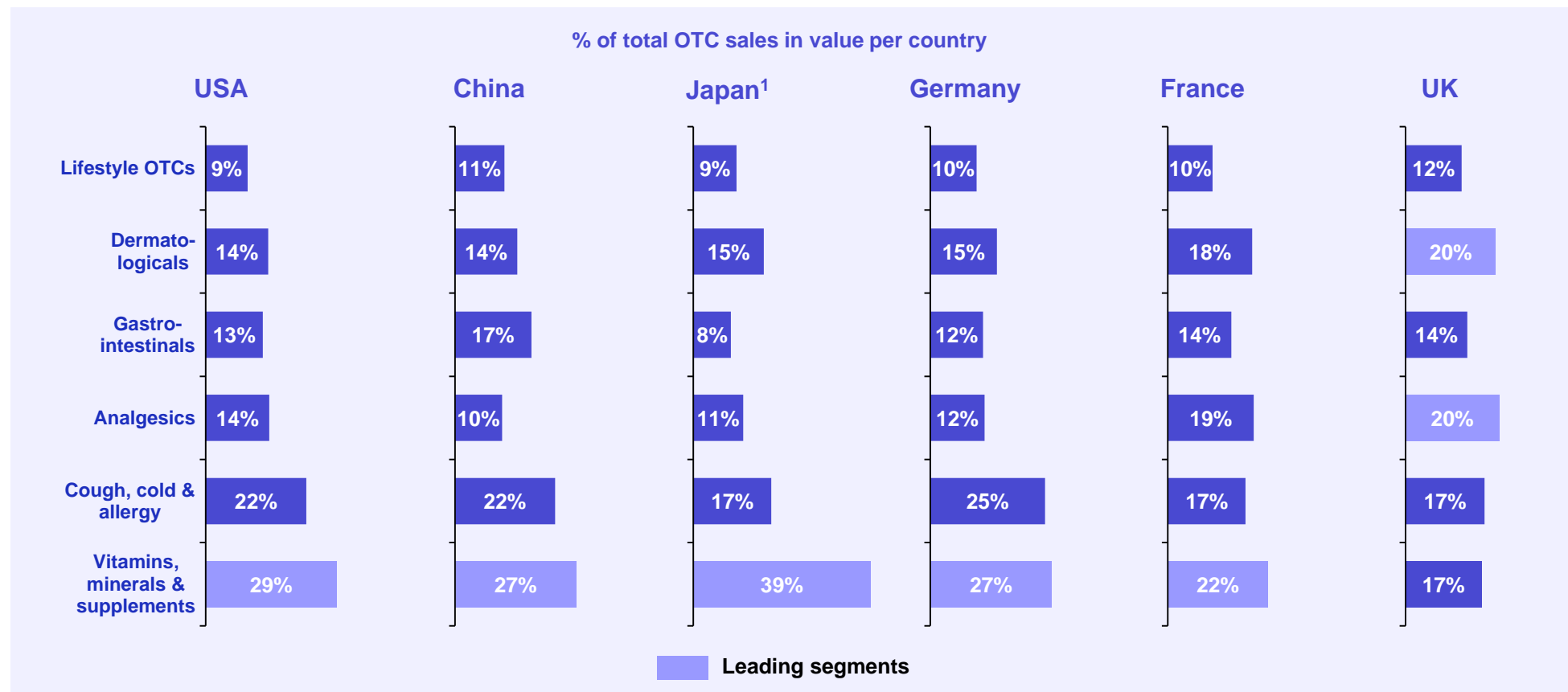
Source: Smart Pharma Consulting analyses based on IMS World Review Executive 2012 data

<sup>1</sup> Excluding drugs which are mainly OTC (i.e. paracetamol/acetaminophen) –

<sup>2</sup> Sales are in constant USD (2011 exchange rates)

The relative importance of OTC market segments may vary across countries due to different consumption habits, as illustrated by the V.M.S. segment in Japan<sup>1</sup>

Leading OTC market segments per country (2011)



Source: Nicholas Hall's OTC Yearbook 2012 – Smart Pharma Consulting analyses

<sup>1</sup> The importance of the V.M.S. (Vitamins, minerals & supplements) segment in Japan is mainly explained by the large consumption of tonic drinks

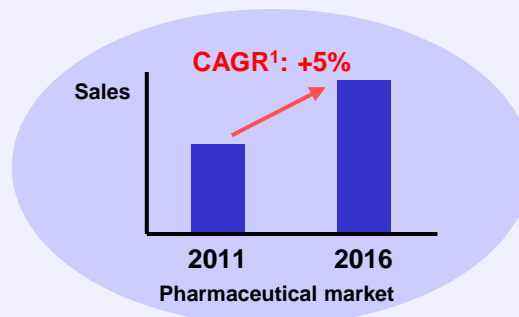
The key drivers and limiters of the pharmaceutical market are well identified, and so is their probable impact on sales trends

## Pharmaceutical market drivers and limiters (2011-2016)



- 1** Population increase and ageing
- 2** Strong development of generics market (but at the expense of R&D-based brands)
- 3** Stronger demand for new and better pharmaceuticals, including vaccines
- 4** Increasing weight of more expensive specialist-driven products, including biologicals
- 5** Increasing access of emerging markets to pharmaceuticals (e.g. BRIC<sup>2</sup> countries, Mexico, Turkey, etc.)

### Key forces (2011-2016)



- 1** Stagnation of the R&D productivity of big pharma companies and increasing barriers to market access
- 2** More intense competition from generics and biosimilars
- 3** Increasing price pressure from payers (governments, HMOs, patients, etc.), exacerbated in EU by the debt crisis
- 4** Growth of the OTC segment only in line with total market growth
- 5** Redistribution of bargaining power among actors, away from physicians and towards regulators, payers and patients, who are becoming more knowledgeable

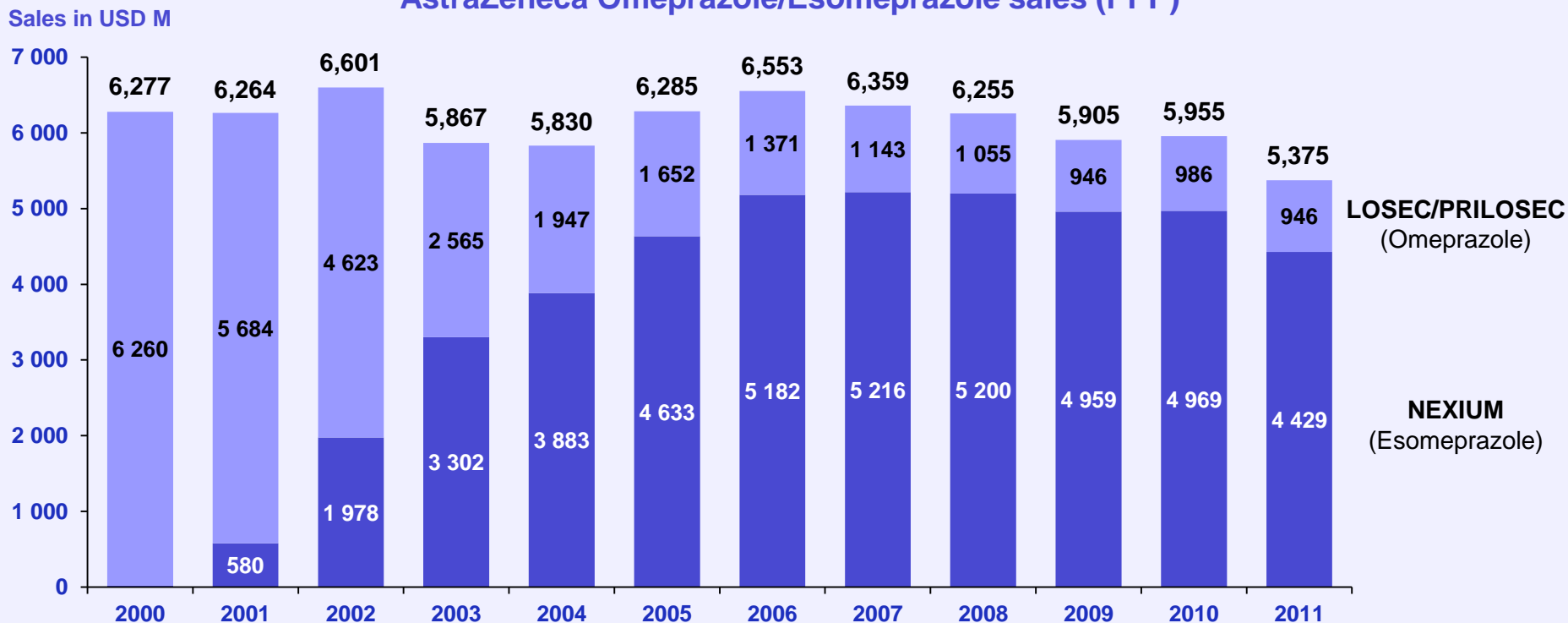
Source: Smart Pharma Consulting analyses

<sup>1</sup> Compound annual growth rate – <sup>2</sup> Brazil, Russia, India, China

AstraZeneca managed to preserve the performance of its gastro-intestinal franchise by launching Nexium, an isomer of Losec/Prilosec

Product life cycle management

AstraZeneca Omeprazole/Esomeprazole sales (PPI<sup>1</sup>)



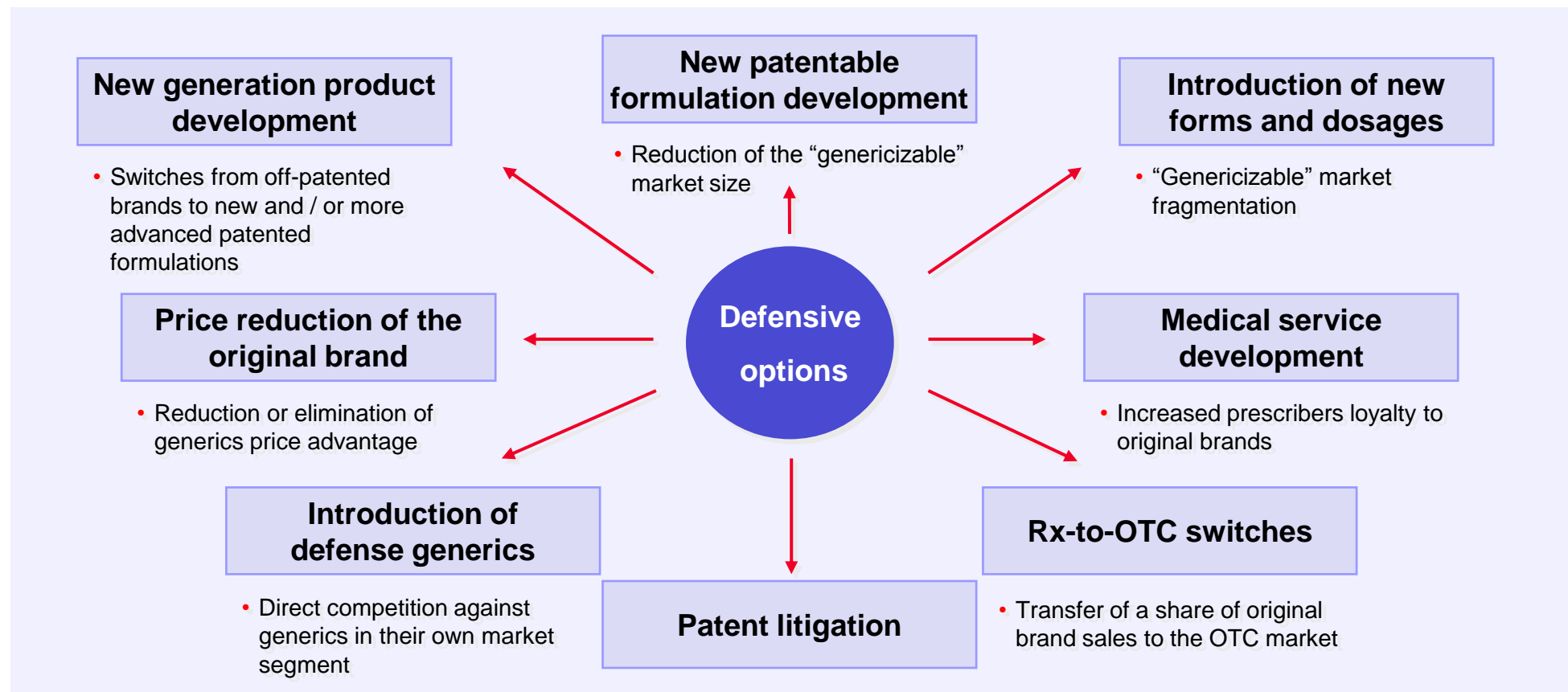
Note: LOSEC generics were launched in 2001 in many key European markets but availability in the U.S. was delayed to December 2002 because of patent infringement litigation

Source: AstraZeneca annual reports – Smart Pharma Consulting analyses

<sup>1</sup> Proton pump inhibitor

R&D-based companies can have several defense strategies in place to contain the impact of generics competition on their original brands

**Basic strategies against generics competition<sup>1</sup>**

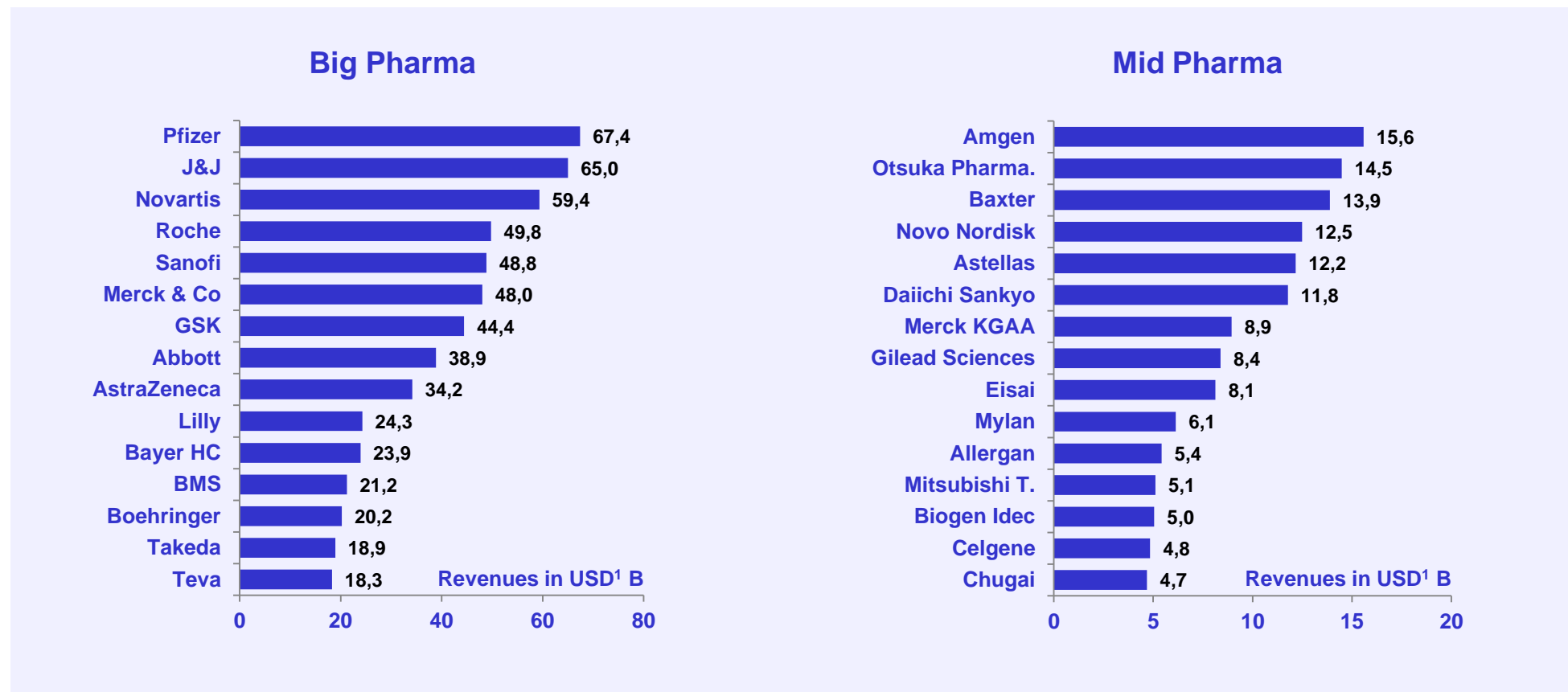


Source: Smart Pharma Consulting analyses

<sup>1</sup> Generics defense strategies should be carefully considered to avoid any infringement of trade regulations

**Mergers & Acquisitions have increased the gap between Big and Mid Pharma companies over the last few years**

**Revenue by company (2011)**



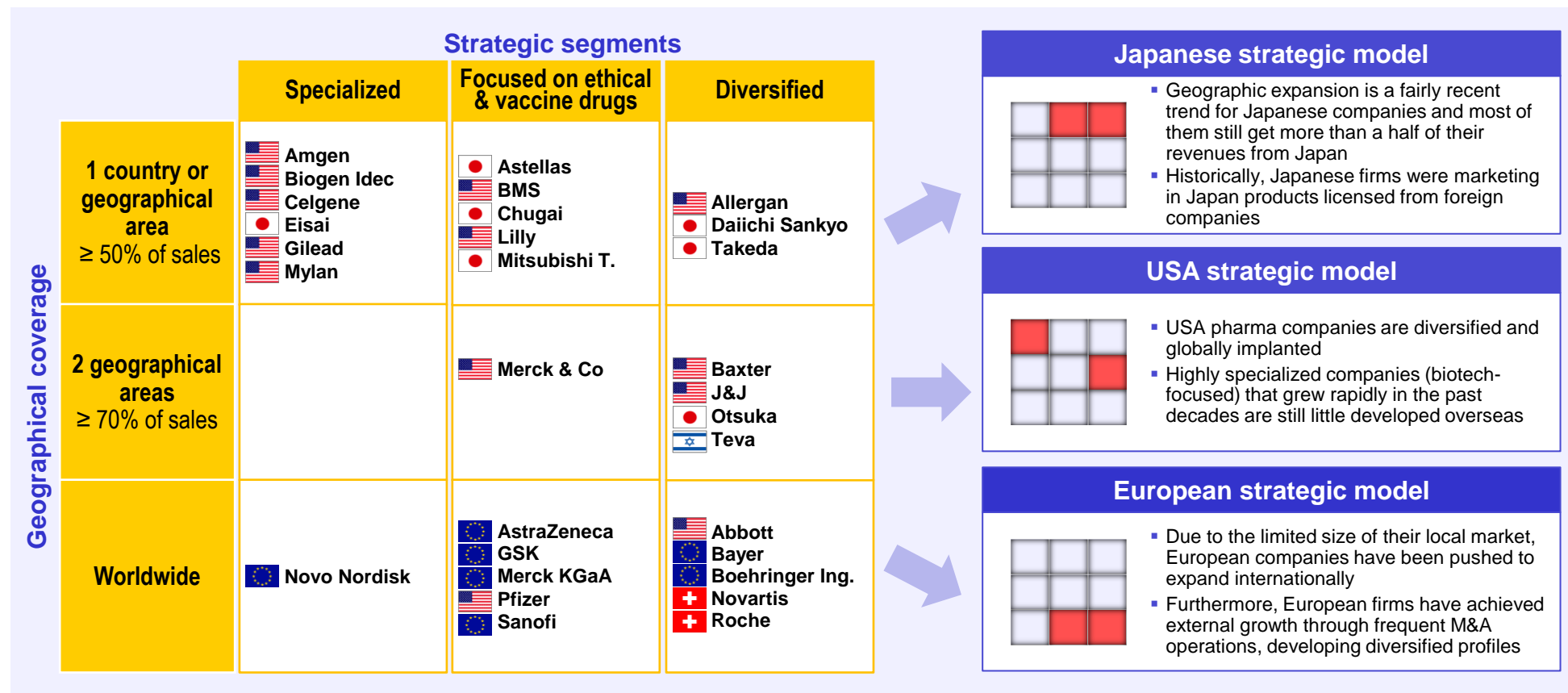
Note: reported numbers have been adjusted to make them comparable

Source: Companies annual reports (2011) – Smart Pharma Consulting analyses

<sup>1</sup> Average 2011 Federal Reserve exchange rate

Portfolio diversification is linked to the size and maturity of companies whereas country of origin and corporate culture seem to influence geographic diversification

## Pharma companies strategic models (2011)



Note: **Specialized**: active in one main segment or therapeutic area / **Focused on ethical & vaccine drugs**: active in multiple therapeutic areas / **Diversified**: Ethicals sales ≤ 75% of total product sales

Sources: Companies annual reports, press releases and financial information – Smart Pharma Consulting analyses



Name	Country	Key Financial Data																																														
<b>Pfizer</b>	<b>United States of America</b>																																															
Key Segments		Key Products																																														
<p>2011 Revenues: <b>67,425</b> USD million</p> <ul style="list-style-type: none"> <li>United States: 40%</li> <li>Developed Europe: 24%</li> <li>Emerging Markets: 19%</li> <li>Other Developed: 16%</li> </ul>		<table border="1"> <thead> <tr> <th></th> <th>Sales (USD million)</th> <th>YoY % Change</th> <th>Share of Net Sales</th> </tr> </thead> <tbody> <tr> <td><b>1.LIPITOR</b> <i>Antihyperlipidemic</i></td> <td>9,577</td> <td>(10.8)%</td> <td>14%</td> </tr> <tr> <td><b>2.LYRICA</b> <i>Neuropathic Pain Agent</i></td> <td>3,693</td> <td>20.6%</td> <td>6%</td> </tr> <tr> <td><b>3.ENBREL</b> <i>Immune Suppressant</i></td> <td>3,666</td> <td>12.0%</td> <td>5%</td> </tr> <tr> <td><b>4.PREVNAR/ PREVENAR 13</b> <i>Vaccine</i></td> <td>3,657</td> <td>51.4%</td> <td>5%</td> </tr> <tr> <td><b>5.CELEBREX</b> <i>Analgesic</i></td> <td>2,523</td> <td>6.3%</td> <td>4%</td> </tr> <tr> <td><b>6.VIAGRA</b> <i>Peripheral Vasodilator</i></td> <td>1,981</td> <td>2.7%</td> <td>3%</td> </tr> <tr> <td><b>7.NORVASC</b> <i>Hypertension</i></td> <td>1,445</td> <td>(4.1)%</td> <td>2%</td> </tr> <tr> <td><b>8.ZYVOX</b> <i>Bacterial Infections</i></td> <td>1,283</td> <td>9.1%</td> <td>2%</td> </tr> </tbody> </table>				Sales (USD million)	YoY % Change	Share of Net Sales	<b>1.LIPITOR</b> <i>Antihyperlipidemic</i>	9,577	(10.8)%	14%	<b>2.LYRICA</b> <i>Neuropathic Pain Agent</i>	3,693	20.6%	6%	<b>3.ENBREL</b> <i>Immune Suppressant</i>	3,666	12.0%	5%	<b>4.PREVNAR/ PREVENAR 13</b> <i>Vaccine</i>	3,657	51.4%	5%	<b>5.CELEBREX</b> <i>Analgesic</i>	2,523	6.3%	4%	<b>6.VIAGRA</b> <i>Peripheral Vasodilator</i>	1,981	2.7%	3%	<b>7.NORVASC</b> <i>Hypertension</i>	1,445	(4.1)%	2%	<b>8.ZYVOX</b> <i>Bacterial Infections</i>	1,283	9.1%	2%								
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<ul style="list-style-type: none"> <li>Rx branded drugs: 79%</li> <li>Generics</li> <li>Vaccines: 6%</li> <li>OTC &amp; Consumer Health: 8%</li> <li>Medical Devices &amp; Diagnostics</li> <li>Other (Healthcare): &lt;1%</li> <li>Animal Health: 6%</li> <li>Other Segments</li> </ul>																																																
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Strategic Priorities		Deal Strategy																																														
<ul style="list-style-type: none"> <li>Improve innovation and overall productivity by prioritizing areas with the greatest scientific and commercial promise (immunology and inflammation; oncology; cardiovascular, metabolic and endocrine diseases; neuroscience and pain; and vaccines)</li> <li>Organize the business to maximize research, development and commercial opportunities</li> <li>Improve the performance of Pfizer innovative core</li> <li>Expand the pipeline by entering into agreements with other companies to develop, license or acquire promising compounds, technologies or capabilities</li> <li>Protect Pfizer intellectual property</li> </ul>		<ul style="list-style-type: none"> <li>After Wyeth acquisition (2009), the focus has been on business development opportunities in the high-priority therapeutic areas. In 2011, Pfizer decided to explore strategic alternatives for the Animal Health and Nutrition businesses that may include a full or partial separation of each of these businesses</li> <li>In 2011/2012: <ul style="list-style-type: none"> <li>Acquisition of Alacer (vitamin supplements), of the consumer healthcare business of Ferrosan Holding A/S (dietary supplements), of Excaliard Pharmaceuticals (novel drugs for the treatment of skin fibrosis), of Icagen (small molecule drugs that modulate ion channel targets)</li> <li>Completion of King Pharmaceuticals acquisition (pain management and drug delivery technologies)</li> <li>Divestment of Pfizer Nutrition infant food business to Nestlé (USD 11.9B) and of Capsugel business</li> </ul> </li> </ul>																																														

Source: 2011 Annual Report – Pipeline as of 10 May 2012 – Evaluate Pharma World Preview 2018 (June 2012) – Deal Strategy as of 20 July 2012 – Smart Pharma Consulting analyses

# Pharma Market Insight & Strategy

*Jean-Michel Peny*

- Pharma Market Insight & Strategy - 2012 Edition, provides a fact-based analysis of the evolution of the pharmaceutical market by the end of 2016 and evaluates the performance and the strategy of 30 leading pharmaceutical companies.
- The author shares his strategic vision of where the pharmaceutical market is headed and the strategies that can be adopted by pharmaceutical companies – with a particular emphasis on the performance and corresponding strategic priorities of the Big Pharma Companies and the Mid Pharma Companies.
- The key facts and figures corresponding to each of the 30 analyzed pharmaceutical companies have been summarized on one-page identity cards, providing a concise, powerful snapshot of each firm for easy review and comparison.



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ISBN: 978-2-9531818-3-8

Price: 250 €