



Megamergers shook up the industry in 2009, shuffling the deck of pharma's top companies. Find out which companies emerged on top, who might be next, and how those best positioned to weather a challenging business environment are poised to rip the rankings apart over the next few years

By Patrick Clinton and Mark Mozeson

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The *Pharm Exec 50* ranks the world's largest pharmaceutical companies by global sales of prescription drugs. The most striking theme in this year's list is the continued pace of sector consolidation: many companies have disappeared from the list as a result of mergers over the course of 2009. And not just smaller companies: Wyeth, last year's number 10, is now part of Pfizer, providing our almost perennial number one company with a solid entrée into biologics and vaccines as well as a return to OTC medicines. Schering-Plough (last year's number 15) has been combined in a reverse merger with Merck, creating a company that should rise to the number-four slot next year, with Rx revenues of about \$40 billion. Genentech (19) was acquired by Roche, and Solvay (32) by Abbott, while Procter & Gamble's pharmaceutical unit (39) has become part of Warner-Chilcott, an Irish firm that has never appeared on the 50 before—but will jump to the middle of the list next year thanks to P&G's Avonex business.

Growth by acquisition is not always a sign of strength, of course, and it doesn't always feed into continued organic growth. The track record of the industry is mixed when it comes to mergers, but in the current climate, with new drug approvals slowing to a trickle, the merger wave is far from over. Where in recent years, Pharma M&A has been dominated by mid-size deals and "bolt-on" acquisitions, the transformational deals of the past year seem likely to inspire renewed interest in mega-mergers. "Big Pharma" is getting bigger, and the question is whether it makes sense to try to keep up.

Meanwhile, the next round of mergers has already begun, with Novartis prepared to take on ophthalmology specialist Alcon (this year's number 38), bringing the Swiss giant to the \$40 billion Rx revenue range, and giving the company additional reach into a growing field. And Teva (number 16) continues to merge its way up the list. This year's target was Germany's Ratiopharm (42, after an abysmal year). Look for the world's largest generics company to close in on a top-ten spot within the next year or two.

Look, too, for the largest pharma companies to hit a new revenue benchmark. It's not quite visible in this year's figures, but once the impact of mergers is taken into consideration, five of the top six pharma companies have revenues hovering around \$40 billion, with Pfizer leaping ahead to more than \$60 billion. Ten years ago, the smallest companies on the 50 had revenues in the \$500 million range. Today, all but four brought in \$2 billion or more. Revenue rankings will also be influenced by the success of some companies in large biologics, which appear set to replace small molecule drugs like Lipitor as top sellers within the next few years.

Finally, look for companies to respond aggressively to the most important piece of pharma news in recent years: Sales in emerging markets, which have been growing at a faster rate than sales in established markets, have finally caught up. According to IMS Health, over the next five years the "pharmerging" markets will generate as many new dollars in pharma sales as the traditional markets. Though there's considerable variation, pharma companies have been investing in emerging markets for several years—not just in the "BRIC" countries (Brazil, Russia, India, China), but in an expanded roster of countries including Saudi Arabia, Vietnam, Chile, Venezuela, Malaysia, Thailand, Turkey and Mexico. These countries present many challenges, including getting drugs approved, building distribution systems, protecting intellectual property, and pricing. But given the sharp trend toward further cost containment in the US, Japan and Europe, it is hard to turn away from such an opportunity, no matter what the difficulty.

The PHARM EXEC 50

1. Pfizer
2. Sanofi-Aventis
3. Novartis
4. GlaxoSmithKline
5. Roche
6. AstraZeneca
7. Merck
8. Johnson & Johnson
9. Eli Lilly
10. Bristol-Myers Squibb
11. Abbott
12. Bayer
13. Boehringer Ingelheim
14. Amgen
15. Takeda
16. Teva
17. Novo Nordisk
18. Astellas
19. Daiichi Sankyo
20. Otsuka
21. Eisai
22. Merck KGaA
23. Gilead Sciences
24. Baxter International
25. Mylan
26. Servier
27. Chugai
28. Genzyme
29. Mitsubishi Tanabe
30. UCB
31. CSL
32. Allergan
33. Forest
34. Menarini
35. Nycomed
36. Biogen Idec
37. Shire
38. Alcon
39. Apotex
40. Lundbeck
41. Celgene
42. Ratiopharm
43. Cephalon
44. Dainippon Sumitomo
45. Hospira
46. Watson
47. Actavis
48. Shionogi
49. Kyowa Hakko Kirin
50. Meda



The Pharm Exec 50

Rank [2009 Rank]	Company & Headquarters [website]	2009Rx Sales (Billions of USD) [change from 2008]	2009 R&D spend (Millions of USD)	2009 Top-Selling Drugs [Billions of USD]
1 [1]	Pfizer New York, New York [pfizer.com]	\$45.4 [2.7%]	\$7845	Lipitor [11.4] Lyrica [2.8] Celebrex [2.4]
2 [3]	Sanofi-Aventis Paris, France [sanofi-aventis.com]	\$42.0 [8.5%]	\$6567	Lantus [4.4] Lovenox [4.4] Plavix [3.8]
3 [4]	Novartis Basel, Switzerland [novartis.com]	\$38.4 [6.7%]	\$6308	Diovan/Co-Diovan [6.0] Gleevec/Glivec [3.9] Zometa [1.5]
4 [2]	GlaxoSmithKline Brentford, England [gsk.com]	\$37.8 [26.1%]	\$6286	Seretide/Advair [7.9] Valtrex [2.1] Pandemic flu vaccine [1.4]
5 [8]	Roche Basel, Switzerland [roche.com]	\$37.6 [78.9%]	\$8570	Avastin [6.0] MabThera/Rituxan [5.9] Herceptin [5.1]
6 [6]	AstraZeneca London, England [astrazeneca.com]	\$32.8 [3.8%]	\$4409	Nexium [5.0] Seroquel [4.9] Crestor [4.5]
7 [7]	Merck Whitehouse Station, New Jersey [merck.com]	\$25.2 [6.9%]	\$5845	Singulair [4.7] Corzaar/Hyzaar [3.6] Januvia [1.9]
8 [6]	Johnson & Johnson New Brunswick, New Jersey [jnj.com]	\$22.5 [-8.5%]	\$4591	Remicade [4.3] Procrit/Eprex [2.2] Levaquin/Floxin [1.6]
9 [9]	Eli Lilly Indianapolis, Indiana [lilly.com]	\$21.2 [9.7%]	\$4300	Zyprexa [4.9] Cymbalta [3.1] Humalog [2.0]
10 [11]	Bristol-Myers Squibb New York [bms.com]	\$18.8 [6.3%]	\$3647	Plavix [6.1] Abilify [2.6] Reyataz [1.4]

Note about the listings: Companies in the Pharm Exec 50 are ranked according to global human prescription drug sales. As far as company documentation allows, generics and vaccines are included; over-the-counter products, royalties, and contract manufacturing are not. In most cases, numbers are taken from annual reports or SEC filings for the fiscal year that end-

ed in 2009. For most American and European pharmaceutical companies, that means the year ending December 31, 2009; for most Japanese companies, it means the year ending March 31, 2009. In the case of private companies that do not report results, we have relied on outside estimates, including IMS reports. For companies that report revenue in currencies other than

US dollars, we have converted their numbers using the average interbank rate for the last day of the fiscal year. Some charts that appear in this article are based on numbers from IMS. These are calculated differently from our sales figures. Percentage growth figures should be treated with caution, as they can be affected by fluctuating exchange rates.

*Estimate

About the Authors: Patrick Clinton is marketing director, Health & Life Sciences, Oliver Wyman. He can be reached at patrick.clinton@oliverwyman.com. Mark Mozeson is partner, Health & Life Sciences, Oliver Wyman. He can be reached at mark.mozeson@oliverwyman.com

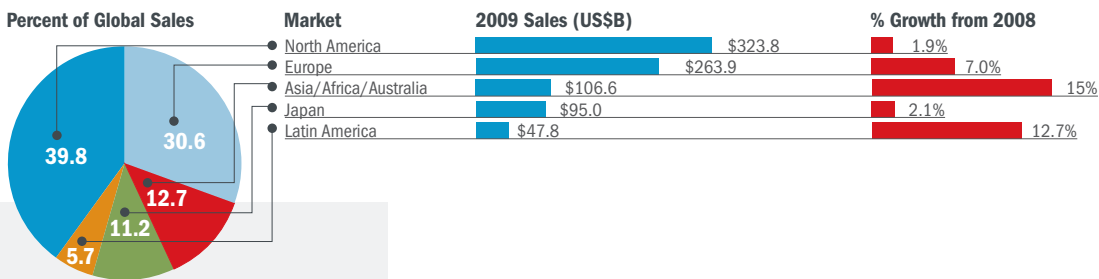


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11 [12]	Abbott Abbott Park, Illinois [abbott.com]	\$15.6 [-6.7%]	\$2744	Humira [5.5]
12 [13]	Bayer Leverkusen, Germany [bayer.com]	\$15.0 [-0.7%]	\$2253	Yaz/Yasmin/Yasminelle [1.8]
13 [16]	Boehringer Ingelheim Ingelheim, Germany [boehringer-ingelheim.com]	\$14.4 [12.3%]	\$3010	Spiriva [3.4]
14 [14]	Amgen Thousand Oaks, California [amgen.com]	\$14.4 [-2.4%]	\$2864	Neulasta/Neupogen [4.6]
15 [17]	Takeda Osaka, Japan [takeda.com]	\$14.2 [16.6%]	\$4657	Pioglitazone [4.0]

GLOBAL PHARMACEUTICAL SALES BY REGION, 2009



SOURCE: IMS Health

US Prescription sales
grew by
5.1 percent
to approximately
\$300 billion

TOP 15 U.S. PHARMACEUTICAL PRODUCTS BY SALES

Total US Prescription Market		US\$ in Billions
1	Lipitor	7.5
2	Nexium	6.3
3	Plavix	5.6
4	Advair Diskus	4.7
5	Seroquel	4.2
6	Abilify	4.0
7	Singulair	3.7
8	Actos	3.4
9	Enbrel	3.3
10	Epogen	3.2
11	Remicade	3.2
12	Crestor	3.0
13	Avastin	3.0
14	Neulasta	3.0
15	Oxycontin	2.9

SOURCE: IMS Health

16 [18]	Teva Petach Tikva, Israel [tevapharm.com]	\$13.9 [25.2%]	\$802	Copaxone [2.8]
17 [22]	Novo Nordisk Bagsvaerd, Norway [novonordisk.com]	\$9.8 [14.4%]	\$1521	Insulin analogs [4.1]
18 [20]	Astellas Tokyo, Japan [astellas.com]	\$9.8 [1.4%]	\$1635	Prograf [2.1]
19 [21]	Daiichi Sankyo Tokyo, Japan [daiichisankyo.com]	\$8.1 [-7.5%]	\$1897	Olmesartan [2.2]
20 [25]	Otsuka Tokyo, Japan [otsuka-global.com]	\$7.9 [21.1%]	N/A	N/A

21 [24]	Eisai Tokyo, Japan [eisai.co.jp]	\$7.8 [8.7%]	\$1605	Aricept [3.2]
22 [23]	Merck KGaA Darmstadt, Germany [merck.de]	\$7.7 [0.8%]	\$1724	Rebif [2.2]
23 [28]	Gilead Sciences Foster City, California [gilead.com]	\$6.5 [26.8%]	\$940	Truvada [2.5]
24 [26]	Baxter International Deerfield, Illinois [baxter.com]	\$5.6 [5.2%]	\$917	Advate [1.5]
25 [29]	Mylan Canonsburg, Pennsylvania [mylan.com]	\$4.8 [11.4%] *	\$275	Generics [N/A]

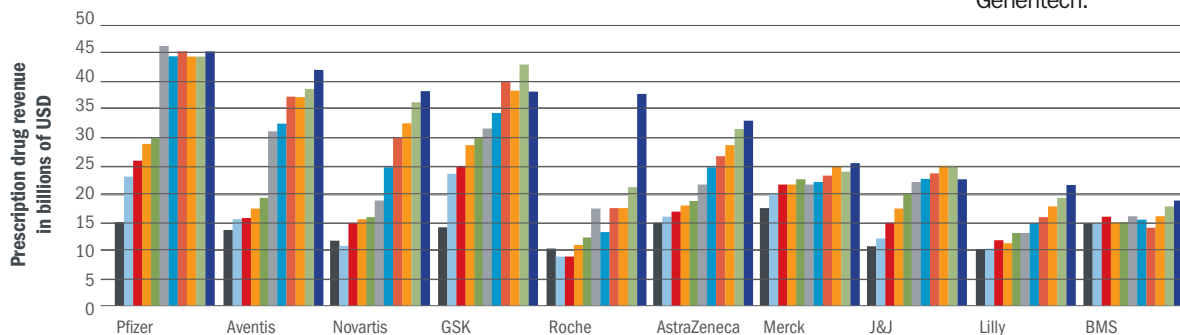
TOP GLOBAL THERAPEUTIC CLASSES, 2009

Therapeutic Class	2009 Sales (US\$M)	% Growth from 2008
Oncologics	\$52,372	8.8
Lipid Regulators	\$35,281	4.9
Respiratory Agents	\$33,596	11.0
Antidiabetics	\$30,406	13.4
Anti-ulcerants	\$29,610	0.6
Angiotensin II Antagonists	\$25,209	11.5
Antipsychotics	\$23,248	4.6
Antidepressants	\$19,416	-1.3
Autoimmune agents	\$17,961	18.0
Platelet Aggr. Inhibitors	\$14,604	9.0
HIV Antivirals	\$13,758	14.9
Anti-epileptics	\$12,995	-19.8
Narcotic analgesics	\$11,235	8.6
Non-narcotic analgesics	\$11,174	7.3
Erythropoietins	\$10,806	-4.1

Mergers have been a clear part of the growth strategy of the top ten pharmas. Easily visible in the chart below are Pfizer's mergers with Warner Lambert (completed in 2000, with results appearing in the 2001 *Pharm Exec* 50) and Pharmacia (with revenue jumping up in 2005). Other key mergers during the period include Sanofi Synthelabo with Aventis, Novartis with Chiron, Glaxo Wellcome with SmithKline Beecham, and Roche with Genentech.

SOURCE: IMS Health

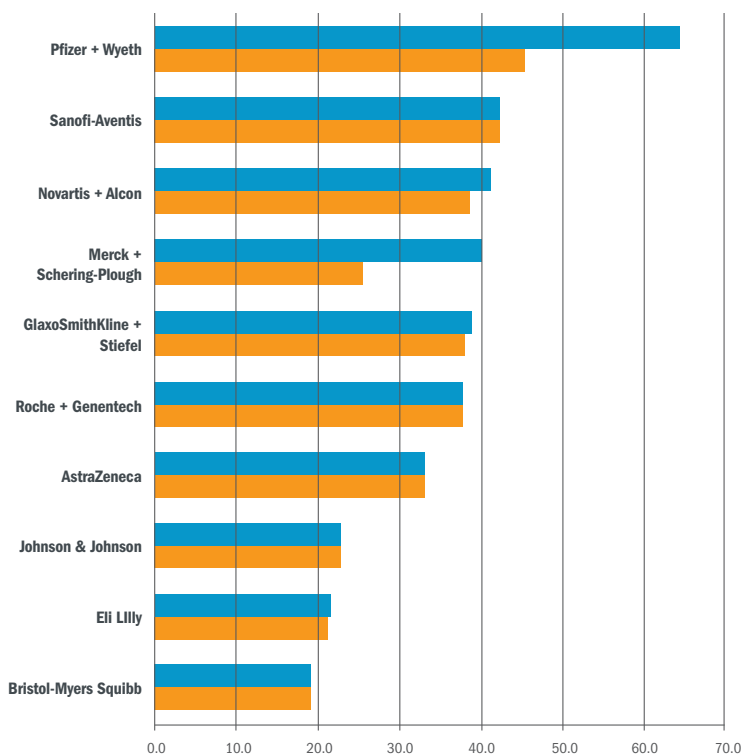
TEN YEARS OF THE 2010 TOP 10



26 [27]	Servier Neuilly-sur-Seine [servier.com]	\$4.6 [-10.9%] *	N/A	N/A
27 [35]	Chugai Tokyo, Japan [chugai-pharm.co.jp]	\$4.3 [23.1%]	\$599	Tamiflu [0.8]
28 [31]	Genzyme Cambridge, Massachusetts [genzyme.com]	\$4.1 [-2.9%]	\$856	Cerezyme [0.8]
29 [34]	Mitsubishi Tanabe Osaka, Japan [mt-pharma.co.jp]	\$3.9 [9.1%]	\$751	Remicade [0.4]
30 [30]	UCB Brussels, Belgium [ucb.com]	\$3.8 [-10.6%]	\$966	Keppra [1.3]

31 [38]	CSL Victoria, Australia [csl.com.au]	\$3.7 [9.4%]	\$251	Gardasil [0.1]
32 [36]	Allergan Irvine, California [allergan.com]	\$3.7 [5.3%]	\$706	Botox [1.3]
33 [37]	Forest New York, New York [frx.com]	\$3.6 [3.9%]	\$661	Lexapro [2.3]
34 [41]	Menarini Florence, Italy [menarini.com]	\$3.6 [16.1%] *	N/A	N/A
35 [40]	Nycomed Zurich, Switzerland	\$3.5 [0.9%]	\$285	Pantaprazole [N/A]

THE TOP TEN POST-MERGER



Major mergers are reshaping the top ten. This chart shows the impact recent and recently announced mergers would have had on the top ten if they'd taken place January 1, 2008. Pfizer leaps forward, Merck jumps from seventh place to fourth. Roche (which reported a full year of Genentech revenue) moves from eighth place in 2009 to sixth. (This chart omits several minor mergers.) Even without additional mergers, Pharma's Top Six should all have revenues of \$40 billion and up.

■ 2009 pro forma
■ 2009 actuals

SOURCE: Oliver Wyman

36 [42]	Biogen Idec Cambridge, Massachusetts [biogenidec.com]	\$3.2 [12.6%]	\$1283	Avonex [2.3]
37 [43]	Shire Dublin, Ireland [shire.com]	\$2.7 [-3.8%]	\$638	Adderall [0.6]
38 [44]	Alcon Hünenberg, Switzerland [alcon.com]	\$2.7 [3.0%]	\$665	Glaucoma products [1.1]
39	Apotex North York, Ontario [apotex.com]	\$2.6 [74.3%] *	N/A	Generics [N/A]
40 [45]	Lundbeck Copenhagen, Denmark [lundbeck.com]	\$2.6 [23.5%]	\$615	Ciprallex/Lexapro [1.5]

The Top 10: The Year In Review

Pfizer Acquired Wyeth in \$68 billion deal, giving company entrée to the vaccines and (again) consumer products markets. Launched Toviaz for overactive bladder in the US. Prevnar 13 approved in 40 countries. 133 R&D programs, Phase I through registration. Created regenerative medicine unit, and significantly boosted licensing partnerships.

Sanofi-Aventis Multiple acquisitions of generics companies including Medley (Brazil's largest), Kendricks (Mexico), and Zentiva (Czech republic). Announced purchase of Chattanooga-based OTC company Chattem for \$1.9 billion. Acquired Oenobrol, French maker of nutritional beauty supplements. Launched Multaq, anti-arrhythmia drug, in US, EU, and Canada.

Novartis Joe Jimenez appointed new CEO. Approvals include Afinitor (for renal cell cancer), Ilaris (cryopyrin-associated periodic syndromes), Onbrez Breezhaler (EU, for COPD), Valturna (hypertension). Acquired EBEWE Pharma's specialty generics business. 145 projects in clinical development. Launched biosimilars in Japan and Canada.

GlaxoSmithKline Product approvals include Votrient, an oral medication for renal cell cancer. Launched Arzerra (for refractory chronic leukocytic leukemia) in the US. Filings include Benlysta, potentially the first new drug for lupus in more than 60 years. Acquired Stiefel, a specialty dermatology company with revenues of \$900 million. With Pfizer created ViiV, specialty company dedicated to HIV.

Roche Completed \$47 billion acquisition of Genentech. Fifty-nine new molecular entities in clinical testing, including eight in Phase III/registration. Actemra/RoActemra for rheumatoid arthritis approved in EU (and in January 2010 in the US). Signed 51 new research/technology deals, including a partnership with Tekmira Pharmaceuticals to bring Roche's first RNA interference products into human testing.

AstraZeneca Launched Onglyza (for diabetes) in the US & EU. Launched Iressa for non-small cell lung cancer in the EU after having withdrawn its application in 2005. Divested portfolio of over-the-counter products. Submitted US NDA for ticagrelor (tentatively to be known as Brilinta) an oral antiplatelet treatment. Announced acquisition of infection-research company Novexel and expanded anti-infective partnership with Forest.

Merck Merged with Schering-Plough in \$41 billion deal. Announced acquisition of Avecia, a contract manufacturer of biologics. Divested itself of its stake in Merial, an animal health joint venture with Sanofi-Aventis. In April, struck ground-breaking, much-discussed deal with the health insurer Cigna over diabetes drugs Januvia and Janumet, providing bigger discounts to the plan for achieving better patient results.

Johnson & Johnson Acquired Elan's rights and assets in the Alzheimer's Immunotherapy Program, a joint venture with Wyeth. Completed acquisition of Cougar, a biotech with a Phase III drug for metastatic prostate cancer. Launched Nucynta, a novel oral drug for chronic pain, co-developed with Gruenenthal. Simponi, a monthly, injectable anti-TNF drug for rheumatoid arthritis, approved in the US, EU, and Canada.

Eli Lilly Launched translational medicine unit and opened new biotech center in San Diego. Adcirca (with the same active ingredient as Cialis—tadalafil) approved for pulmonary arterial hypertension in the US, EU, and Japan. Co-promotion deal with Kowa for the statin Livalo. Effient, an antiplatelet agent co-developed with Daiichi-Sankyo, approved in the US.

Bristol-Myers Squibb Acquired the shares it did not already own of Medarex, a biotech focused on fully human monoclonal antibody drugs for cancer, autoimmune diseases, inflammation, and infection. Divested holdings in Mead Johnson Nutrition, completing a transition toward pure-play pharma. Onglyza (a drug for Type II diabetes, developed and marketed with AstraZeneca) approved. Entered partnerships with ZymoGenetics, Nissan Chemical Industries, Teijin Pharma, Adler Biopharmaceuticals.



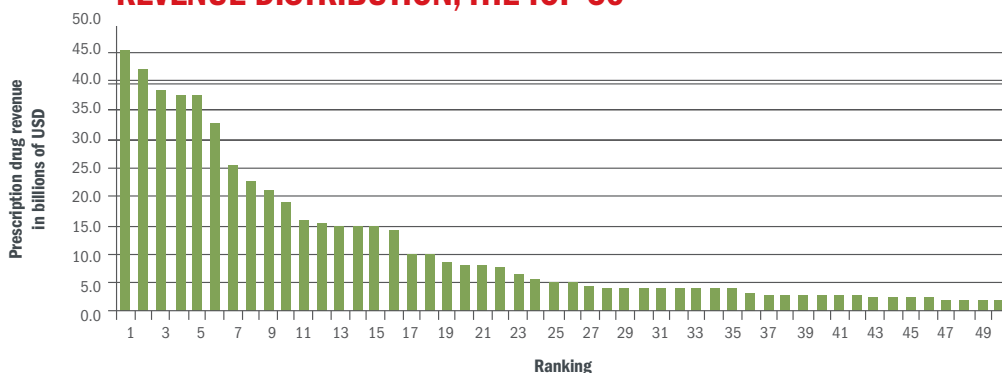
TOP 15 GLOBAL PRODUCTS, 2009

Product	2009 Sales (US\$M)
1 Lipitor	\$13,288
2 Plavix	\$9,100
3 Nexium	\$8,236
4 Seretide	\$8,099
5 Seroquel	\$6,012
6 Enbrel	\$5,863
7 Remicade	\$5,453
8 Crestor	\$5,383
9 Zyprexa	\$5,357
10 Humira	\$5,032
11 Avastin	\$5,015
12 Singulair	\$4,986
13 Mabithera	\$4,681
14 Abilify	\$4,673
15 Lovenox	\$4,572

SOURCE: IMS Health

In 2009, there were **29** mergers & acquisitions in the pharmaceutical industry worth **\$126.5 billion** That compares with **48** mergers & acquisitions worth **\$51.1 billion** in 2008

REVENUE DISTRIBUTION, THE TOP 50



Revenue continues to be concentrated in the largest companies. In this year's Top 50, the Top 10 accounted for just under 60 percent of revenue, while the top 20 were responsible for about 80 percent of sales.

SOURCE: Oliver Wyman

41	Celgene Summit, New Jersey [celgene.com]	\$2.6 [20.1%]	\$471	Revlimid [1.7]
42 [33]	Ratiopharm Ulm, Germany [ratiopharm.com]	\$2.4 [-35.4%]	N/A	Generics [N/A]
43 [47]	Cephalon Frazer, Pennsylvania [cephalon.com]	\$2.2 [13.2%]	\$395	Provigil [1.0]
44 [46]	Dainippon Sumitomo Osaka, Japan [ds-pharma.co.jp]	\$2.1 [1.2%]	\$543	Amlodin [0.6]
45 [48]	Hospira Lake Forest, Illinois [hospira.com]	\$2.1 [15.2%]	\$241	N/A
46 [49]	Watson Corona, California [watson.com]	\$2.0 [13.1%]	\$197	CNS generics [0.8]
47 [50]	Actavis Hafnarfjörður, Iceland [actavis.com]	\$1.8 [0.9%] *	N/A	Generics [N/A]
48	Shionogi Osaka, Japan [shionogi.co.jp]	\$1.8 [-0.7%]	\$543	Crestor [0.2]
49	Kyowa Hakko Kirin Tokyo, Japan [kyowa-kirin.com.jp]	\$1.7 [55.7%]	\$497	Espo/Nesp [0.4]
50	Meda Solna, Sweden [meda.se]	\$1.7 [34.3%]	N/A	Astelín [0.2]