THE PHARMACEUTICAL INDUSTRY IN FIGURES

2008 Edition

EFPIA (The European Federation of Pharmaceutical Industries and Associations) represents the research-based pharmaceutical industry operating in Europe.

Founded in 1978, its members comprise **32** national pharmaceutical industry associations and **43** leading pharmaceutical companies involved in the research, development and manufacturing of medicinal products in Europe for human use.

Its mission is to promote pharmaceutical research and development and the best conditions in Europe for companies to bring to market medicines that improve human health and the quality of life around the world.

Through its membership, EFPIA represents the common views of 2,200 large, medium and small companies including the entire European research-based pharmaceutical sector whose interests also include an important part of the generics segment. Two specialised groups have been created within EFPIA to address specific issues relating to vaccines (EVM – European Vaccine Manufacturers) and the needs of biopharmaceutical companies (EBE - European Biopharmaceutical Enterprises).

Further details about the Federation and its activities can be obtained from:

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SUMMARY

Europe has a great deal to gain in health and economic terms from a strong and competitive indigenous research-based pharmaceutical sector. The research-based pharmaceutical industry is one of the remaining leading high technology industries in Europe, amounting to about 19% of global business R&D investments and about 3.5% of the total EU manufacturing value added.

Since the early 1990s, the research-based pharmaceutical industry in Europe has been losing competitiveness with respect to its main competitors, in particular the US. Data for 2006 and preliminary figures for 2007 confirm the vulnerability of Europe's research-based pharmaceutical industry. Benchmarking and performance indicators show Europe's relative lack of attractiveness for pharmaceutical R&D investments.

- Between 1990 and 2007, R&D investment in United States grew 5.2 times whilst in Europe it only grew 3.3 times. The latest study released in 2007 estimated the average cost of researching and developing a new chemical or biological entity at € 1,059 million.

- There is rapid growth in the research environment in emerging economies such as China and India. The current tendency to close R&D sites in Europe and to open new sites in Asia will show dramatic effects in the next few years if nothing is done to maintain the pharmaceutical discovery expertise in the EU.

- The United States still dominates the biopharmaceutical field, accounting for the three quarters of the world's biotechnology revenues and R&D spending.

- In 2007 North America accounted for 45.9% of world pharmaceutical sales against 31.1% for Europe. According to IMS Health data, 65% of sales of new medicines launched during the period 2002-2007 were generated on the US market, compared with 24% on the European market.

- The fragmentation of the EU pharmaceutical market results in a lucrative parallel trade which benefits neither social security nor patients but deprives the industry from additional resources to fund R&D. Parallel trade was estimated to amount to € 4,300 million (value at ex-factory prices) in 2006.

Pharmaceutical R&D expenditure in Europe (€ million)

1980	2,331
1985	4,310
1990	7,766
1995	11,484

2000	17,849
2005	21,778
2006	24,759
2007	26,000 (e)

Source: EFPIA Member Associations (official figures) - (e): EFPIA estimate

Pharmaceutical R&D expenditure ***Graph)***
Annual growth rate (%)

	Europe	USA
1993-1997	8.5	10.7
1998-2002	7.5	10.7
2003-2007	5.1	6.7

Source : EFPIA, P*h*RMA

MAIN TRENDS

DETERIORATION OF EUROPE'S COMPETITIVE POSITION

The benchmarking competitiveness report released by the European Commission in November 2000* highlighted two main trends: 1) the European research-based pharmaceutical industry is losing competitiveness with respect to the US industry; and 2) there is a process of concentration of R&D into North America.

The United States has become the dominant player in the pharmaceutical sector. Whereas R&D investment in Europe grew by 3.3 times between 1990 and 2007, the corresponding increase in the U.S. was 5.2 times. According to the 2000 competitiveness report, "North America has become the main locus of innovation in pharmaceuticals, to which European companies turn to get knowledge". The report notes that the concentration of research and innovation in the U.S. is "worrying because Europe risks to be relegated into the fringe of the industry, surviving and even thriving through imitation, generics, marketing, but giving up a large share of the value added and becoming dependent on the USA for the development of new products."

* Global Competitiveness in Pharmaceuticals - A European Perspective, A. Gambardella, L. Orsenigo, F. Pammolli, Report prepared for the Directorate General Enterprise of the European Commission, November 2000

Pharmaceutical R&D expenditure in Europe, USA and Japan (million of national currency units*), 1990-2007
(Main graph)

	1990	1995	2000	2005	2006	2007
Europe	7,766	11,484	17,849	21,778	24,759	26,000 (e)
USA	6,803	11,874	21,364	30,969	34,468	35,394 (e)
Japan	5,161	6,422	7,462	10,477	11,735	n.a.

* Note: Europe: € million; USA: $ million; Japan: ¥ million x 100
(e): estimate
Source: EFPIA member associations, PhRMA, JPMA

Pharmaceutical R&D expenditure in Europe, USA and Japan (€ million, current exchange rates), 1990-2007
(Graph)

	1990	1995	2000	2005	2006	2007
Europe	7,766	11,484	17,849	21,778	24,759	26,000 (e)
USA	5,342	9,078	23,121	24,893	27,451	25,826 (e)
Japan	2,809	5,221	7,499	7,656	8,037	n.a.

Note: As these figures are converted into a common currency (€) they are significantly influenced by exchange rate movements.

(e): estimate

Source: EFPIA member associations, PhRMA, JPMA

CHANGING GLOBAL MARKET DYNAMICS

Over the past decade, the US pharmaceutical market has grown twice as fast as the European market in real terms. The year 2005 ended a decade of strong US market dominance, which led to a significant shift of economic and pharmaceutical research activity towards the US territory over the period.

In many respects the US pharmaceutical market has demonstrated that competitive market forces can drive research & development by providing the necessary rewards for innovation. According to IMS data, 65% of sales of new medicines marketed since 2002 are generated on the US market, compared to 24% on the European market.

Geographical breakdown (by main markets) of sales of new medicines launched during the period 2002-2007
(graph)

65.2%	USA
24.3%	Europe
3.7%	Japan
6.8%	Rest of the World

Note: New medicines cover all new active ingredients marketed for the first time on the world market during the period 2002-2007
Europe includes non-EU members and CIS markets
Source: IMS Health MIDAS MAT December 2007

The European pharmaceutical market is highly fragmented and remains driven by governments' forever-changing cost containment plans, resulting in a lack of predictability for companies' medium and long-term operational plans. Europe lacks a climate which favours and rewards innovation: cost-containment policies in Europe tend to focus at the beginning of the product life cycle rather than at the end of the product life cycle like in the US.

The fragmentation of the EU pharmaceutical market results in a lucrative parallel trade which benefits neither social security systems nor patients but deprives the industry from additional resources to fund R&D. Parallel trade was estimated to amount to € 4,300 million (value at ex-factory prices) in 2006.

Total pharmacy market (at ex-factory prices)
Average growth rate for the period 1996-2006 (%)
(graph)

At current prices	At constant prices (adjusted for inflation)

Europe (weighted average)	6.1	4.1
USA	10.8	8.2
Japan	4.4	4.5

Source: EFPIA member associations, PhRMA, JPMA, IMS Health

Share of parallel imports in pharmacy market sales (%) - 2006

Denmark	15.2
Finland	1.9
Germany	7.7
Netherlands	10.4
Norway	5.9
Sweden	13.3
United Kingdom	14.7

Source: EFPIA member associations

BIOPHARMACEUTICALS

Biotechnology is delivering significant advances in healthcare. Entirely new medicines are being created, notably for rare or previously untreated diseases. Approximately one-fifth of the new molecular entities launched on the world market each year are now derived from biotechnology.

Biotech production methods also provide safer versions of existing treatments in unlimited quantities. Biotechnology has revolutionised research and development of new medicines and allows better product targeting for specific diseases and patient groups.

Although Europe's biopharmaceutical sector is growing steadily, it remains dominated by its American competitor. As Europe practically missed out on the first wave of biotech start-ups in the 1980s, most European biotech companies are significantly smaller than their US counterparts.

Biopharmaceuticals - Europe versus USA (2006)

	Europe	**USA**
Revenues (€ million)	9,147	44,154
R&D expenditure (€ million)	2,891	18,205
Net loss (€ million)	896	2,760
Number of public and private companies (units)	1,621	1,452
Number of employees (units)	32,470	146,100

Source: Ernst & Young, 'Beyond Borders, Global Biotechnology Report 2007' (data relate only to publicly traded companies)

Number of new molecular entities (NMEs) first launched worldwide 1990-2006 *(Graph)*

	Total NMEs (including biologicals)	Biologicals
1990	36	1
1991	51	7
1992	43	6
1993	40	2
1994	40	5

1995	41	7
1996	36	6
1997	46	5
1998	37	10
1999	41	9
2000	32	4
2001	31	11
2002	28	2
2003	26	4
2004	24	6
2005	28	6
2006	25	7

Source: CMR International

THE ADDED VALUE OF MEDICINES IN HEALTHCARE

The research-based pharmaceutical industry in Europe plays a critical role in both the industrial and health fields. It invests billions of euros each year to develop innovative medicines that will meet patients' needs.

The mainstay of the European pharmaceutical industry's long-term competitiveness is its ability to pay for R&D. This ability largely depends on the success of products already on the market, and in particular on the attitude that Europe takes with respect to new products. Medicines remain the prime target of health cost containment policies, despite the fact that, on average, pharmaceutical spending accounts for only 16.6% of total health expenditure in Europe.

In most European countries, healthcare policies do not sufficiently take into account the therapeutic and economic value of medicines. However, there is growing evidence at macro and micro-economic level regarding the added value of medicines in the health care context, not only in terms of global cost savings but also in terms of increasing the quality of care. Medicines not only provide the best treatment for many diseases, but also generate savings by substantially reducing costs in other branches of health care (hospital stays, invalidity, etc.).

Breakdown of total health expenditure in Europe – 2005
(pie chart)

In-patient care (hospital)	35.6
Outpatient care & others	47.8
Pharmaceuticals & other medical non-durables	16.6

Source: OECD Health Data 2007, Statistics and Indicators for 30 countries, October 2007 – EFPIA calculations (non-weighted average for 17 EU & EFTA countries)

The annual impact of inadequate diabetes treatment in Germany

Diabetes is one of the most common diseases of Western civilisation affecting more than 19 million people in the European Union. At least thirty percent of the 4 million patients suffering from diabetes in Germany are not treated with medicines at all. The inadequate treatment of diabetes in Germany results in: 6,000 cases of blindness, 8,000 patients becoming dependent on dialysis, 27,000 heart attacks, almost 28,000 amputations of limbs and 44,000 strokes annually. Medicines account for 27% of all costs in diabetes treatment, whilst hospital stays represent almost 60%. A large part of the hospitalisation costs – as with most other serious illnesses - could be avoided with proper outpatient treatment (especially by regulation of the blood sugar level).

6,000 cases of blindness
8,000 dialysis patients
27,000 heart attacks
28,000 amputations of limbs
44,000 strokes

(graph)

Source: CODE 2 study (Costs of diabetes in Europe, type 2), 1999

VALUE OF MEDICINES

THE PHARMACEUTICAL INDUSTRY: A KEY ASSET TO SCIENTIFIC AND MEDICAL PROGRESS

Science today offers more promise for finding better treatments than ever before,, thanks to new knowledge and new technologies. Today European citizens can expect to live 30 years longer than a century ago. Huge reductions in mortality (e.g. in HIV/AIDS, many cancers or cardiovascular diseases) and a significant progress in the quality of life are the results of some big and many small steps in biopharmaceutical research. Contrary to common belief, higher life expectancy does not inevitably lead to degenerative diseases and ever longer stays in nursing homes. European citizens cannot only expect to live longer but to live longer and healthier. Higher blood pressure and cardiovascular diseases can be controlled with antihypertensive drugs and cholesterol-lowering drugs, knee or hip replacements prevent patients from wheelchairs, and some cancers can be controlled or even cured thanks to newer targeted medicines. Yet, there remain huge challenges in disease areas such as Alzheimer, multiple sclerosis, many cancers or orphan diseases.

The research-based pharmaceutical industry's key contribution to medical progress is to turn fundamental research findings into innovative treatments that are widely available and accessible. Since aspirin was invented a century ago, scientific and technological breakthroughs in the pharmaceutical industry have enabled researchers to target increasingly complex diseases more closely, first, by exploring the biochemistry of tissues, and then by analysis of individual cells. Through the mapping of the human genome, today's research will enable scientists to target the causes of diseases rooted in man's molecular structure.

Chronology of Drug Innovation
(Chart)

Source: Boston Consulting Group

Life expectancy (years)
Total population at birth, Europe
(Graph)

1960	69.3
1970	70.7
1980	72.8
1990	74.8
2000	77.1
2005	78.4

Source: OECD Health Data 2007, Statistics and Indicators for 30 countries, October 2007 – EFPIA calculations (non-weighted average for 23 EU & EFTA countries)

KEY FIGURES

THE PHARMACEUTICAL INDUSTRY: A KEY ASSET TO THE EUROPEAN ECONOMY

Besides driving medical progress and improving health within Europe and worldwide, the research-based pharmaceutical industry is a key asset to the European economy. The pharmaceutical industry is one of Europe's best performing high-technology sectors.

INDUSTRY (EFPIA total) (1)	**1990**	**1995**	**2000**	**2005**	**2006**	**2007**
Production	63,010	88,912	123,282	172,098	182,339	190,000 (e)
Exports (2)	23,180	44,188	90,935	181,575	202,316	210,000 (e)
Imports (2)	16,113	31,018	68,841	145,823	157,941	161,000 (e)
Trade balance	7,067	13,170	22,094	35,752	44,375	49,000 (e)
R&D expenditure	7,766	11,484	17,849	21,778	24,759	26,000 (e)
Employment (units)	500,879	506,052	538,438	635,937	643,138	645,000 (e)
R&D employment (units)	75,760	82,282	88,524	100,013	106,974	107,000 (e)
Pharmaceutical market value at ex-factory prices	41,147	59,871	86,812	129,462	133,350	140,500 (e)
Pharmaceutical market value at retail prices	64,626	93,032	136,627	188,109	194,524	205,000 (e)
Payment for pharmaceuticals by statutory health insurance systems (3)	40,807	58,128	74,743	104,370	107,844	111,000 (e)

Values in € million unless otherwise stated
(1) Data relate to EU-27, Norway and Switzerland since 2005 (EU-15 before 2005)
(2) Data relating to total exports and total imports include EU-27 intra-trade (double counting in some cases)
(3) Since 1998 data relate to ambulatory care only
Source: EFPIA member associations (official figures) - (e): EFPIA estimate; Eurostat (EU-27 trade data 1995-2007)

The research-based pharmaceutical industry accounts for approximately 3.5% of the total EU manufacturing value added and for 19% of the global business R&D expenditure. The pharmaceutical industry performs well on most standard indicators, such as:

- employment: more than 643,100 jobs in Europe, including 107,000 in R&D units;
- R&D investment: € 24,800 million in 2006 (up from € 7,800 in 1990);

- trade surplus: € 44,400 million in 2006 (up from € 7,100 in 1990).

MEMBERSHIP

EFPIA represents the pharmaceutical industry operating in Europe. EFPIA brings together 32 European national pharmaceutical industry associations as well as 43 leading companies undertaking research, development and manufacturing of medicinal products for human use in Europe.

MEMBER ASSOCIATIONS

Austria
Fachverband der Chemischen Industrie Österreichs (FCIO)

Belgium
Association Générale de l'Industrie du Médicament (pharma.be)

Denmark
Laegemiddelindustriforeningen
The Danish Association of the Pharmaceutical Industry (Lif)

Finland
Lääketeollisuus ry
Pharma Industry Finland (PIF)

France
Les Entreprises du Médicament (LEEM)

Germany
Verband Forschender Arzneimittelhersteller (VFA)

Greece
Hellenic Association of Pharmaceutical Companies (SFEE)

Ireland
Irish Pharmaceutical Healthcare Association (IPHA)

Italy
Associazione delle Imprese del Farmaco (Farmindustria)

Netherlands
Vereniging Innovatieve Geneesmiddelen Nederland (Nefarma)

Norway
Legemiddelindustriforeningen
Norwegian Association of Pharmaceutical Manufacturers (LMI)

Poland
Employers Union of Innovative Pharmaceutical Companies (Infarma)

Portugal
Associação Portuguesa da Indústria Farmacêutica (Apifarma)

Spain
Asociación Nacional Empresarial de la Industria Farmacéutica (Farmaindustria)

Sweden
Läkemedelsindustriföreningen
The Swedish Association of the Pharmaceutical Industry (LIF)

Switzerland
Société Suisse des Industries Chimiques (SSIC)

Turkey
Arastirmaci Ilac Firmalari Dernegi (AIFD)

United Kingdom
The Association of the British Pharmaceutical Industry (ABPI)

Founder member (Germany)
Bundesverband der Pharmazeutischen Industrie (BPI)

ASSOCIATIONS WITH LIAISON STATUS

Bulgaria Association of Research-based Pharmaceutical Manufacturers in Bulgaria (ARPharM)
Croatia Croatian Pharmaceutical Association (CARP)
Cyprus Association of Pharmaceutical Companies (KEFEA)
Czech Republic Mezinárodní Asociace Farmaceutických Spolecností (MAFS)
Estonia Association of International Pharmaceutical Manufacturers in Estonia (AIPME)

Hungary	Association of Innovative Pharmaceutical Manufacturers (AIPM)
Iceland	Icelandic Pharmaceutical Association (Frumtök)
Latvia	Association of International Research-based Pharmaceutical Manufacturers (AFA)
Lithuania	Association of Representative Offices of Ethical Pharmaceutical Manufacturers **(**EFA)
Malta	Maltese Pharmaceutical Association (PRIMA)
Romania	Association of International Medicines Manufacturers (ARPIM)
Slovakia	Slovak Association of Research Based Pharmaceutical Companies (SAFS)
Slovenia	Forum of International Research and Development Pharmaceutical Industries (EIG)

MEMBER COMPANIES

Full Members

Abbott Laboratories	USA
Almirall S.A.	Spain
Amgen	USA
AstraZeneca	United Kingdom / Sweden
Baxter	USA
Bayer Healthcare AG	Germany
Biogen Idec	USA
Boehringer Ingelheim	Germany
Bristol Myers Squibb	USA
Chiesi Farmaceutici	Italy
Eisai	Japan
Eli Lilly & Co	USA
Esteve	Spain
Genzyme	USA
Gilead Sciences	USA
GlaxoSmithKline	United Kingdom
Grünenthal	Germany
Ipsen	France
Johnson & Johnson	USA
H. Lundbeck A/S	Denmark
Menarini	Italy
Merck Serono	Germany
Merck & Co	USA
Novartis	Switzerland
Novo Nordisk	Denmark
Orion Pharma	Finland
Pfizer	USA
Pierre Fabre	France
Procter & Gamble Pharmaceuticals	USA
Roche	Switzerland
Sanofi Aventis	France
Schering-Plough	USA
Servier	France
Sigma-Tau	Italy
Solvay	Belgium
Takeda	Japan
UCB	Belgium
Wyeth	USA

Affiliate Members

Bial	Portugal
Bracco	Italy
Elan Pharmaceuticals Plc	Ireland
Otsuka Pharmaceuticals	Japan
Recordati	Italy

NUMBER OF COMPANIES REPRESENTED BY EFPIA MEMBER ASSOCIATIONS

EFPIA 2007	Units
Austria	64
Belgium	142
Bulgaria	22
Cyprus	47
Czech Republic	29
Denmark	38
Estonia	22
Finland	64
France	262
Germany	310
Greece	64
Hungary	26
Iceland	18
Ireland	52
Italy	218
Latvia	21
Lithuania	16
Malta	n.a.
Netherlands	43
Norway	44
Poland	42
Portugal	137
Romania	23
Slovakia	21
Slovenia	20
Spain	218
Sweden	62
Switzerland	67
Turkey	36
United Kingdom	74
Total	**2,202**

Note: Number of members as of 1 January 2007
Germany: VFA (45 members); BPI (265 members)

Source: EFPIA member associations

STRUCTURE OF THE PHARMACEUTICAL INDUSTRY

More than 2,200 companies (separate legal entities) are represented by EFPIA and its member associations. These companies' activities range from groundbreaking R&D to top-quality manufacturing and marketing (information and sales). The industry's structure varies from country to country, reflecting differing national medical traditions, intellectual property protection standards and industrial policies.

From an international perspective, Europe's research-based pharmaceutical companies have performed well historically. European companies are well represented among the top firms in the world measured by sales, research investment and new product launches.

Since the mid-90's, US research-based companies have significantly increased their share in the world's top selling medicines. They launched 45.8% of the new chemical and biological entities over the period 2003-2007 against 33.3% for the European companies. Of the top 10 worldwide products in 2007, 6 originate from the US against 4 from Europe.

As shown by the report released by the European Commission on the competitiveness of the European pharmaceutical industry*, European-based firms have faced a comparative disadvantage in selling their new medicines over the past decade. The difference in sales growth between European and American companies resulted mainly from the difference in demand growth between the two continents, rather than the inherent ability to develop new breakthrough medicines. American companies have better exploited the growing demand in their own country and have been more successful than European and Japanese companies in disseminating their new medicines at international level.

* Global Competitiveness in Pharmaceuticals - A European Perspective, A. Gambardella, L. Orsenigo, F. Pammolli, Report prepared for the Directorate General Enterprise of the European Commission, November 2000

Origin of the top 20 companies by worldwide sales, 2007

Europe	8	***(graph)***
USA	9	
Japan	2	
Others	1	

Note: American companies (Pfizer; Johnson & Johnson; Merck & Co; Abbott; Eli Lilly & Co; Amgen; Wyeth; Bristol Myers Squibb; Schering-Plough); European companies (GlaxoSmithKline; Novartis; Sanofi Aventis; AstraZeneca; Roche; Bayer; Boehringer Ingelheim; Novo Nordisk); Japanese companies (Takeda; Eisai); Others (Teva)
Source: IMS Health, MIDAS, MAT December 2007

Origin of the top 40 companies by R&D investment, 2006

Europe	13	***(graph)***
USA	19	
Japan	7	
Others	1	

Source: UK Department of Trade and Industry, The 2007 R&D Scoreboard - EFPIA calculations

New chemical and biological entities launched during the period 2003-2007

Europe	48	***(graph)***
USA	66	
Japan	15	
Others	15	

Source: SCRIP (2002-2005); CMR (2006) - EFPIA calculations

Origin of the top 10 medicines by worldwide sales, 2007

Europe	4
USA	6

Source: IMS Health, MIDAS, December 2007

PHARMACEUTICAL PRODUCTION

EFPIA 2006	€ million
Austria	1,874
Belgium	5,261
Bulgaria	n.a.
Cyprus	n.a.
Czech Republic	n.a.
Denmark	5,278
Estonia	n.a.
Finland	857
France	34,444
Germany	23,699
Greece	666
Hungary	n.a.
Iceland	n.a.
Ireland	14,900
Italy	22,317
Latvia	95
Lithuania	n.a.
Malta	34
Netherlands	5,664
Norway	709
Poland	1,367
Portugal	1,829
Romania	223
Slovakia	n.a.
Slovenia	n.a.
Spain	12,459
Sweden	7,196
Switzerland	18,618
United Kingdom	24,849
Total	**182,339**

Note: All data based on SITC 54
Malta, Poland: 2004 data
Netherlands: 2005 data
Greece: 2006 provisional data
Denmark, France, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland: estimate
Germany, Ireland, Norway, Switzerland: veterinary products excluded

Source: EFPIA member associations (official figures)

PHARMACEUTICAL OUTPUT

With an estimated share of 39.3% of the world pharmaceutical output, the US remains the primary manufacturing centre for medicines in the world, just ahead of Europe and Japan. Together, these three regions account for the bulk (approximately 84%) of the world pharmaceutical production. In 2006, EFPIA countries' pharmaceutical production was worth an estimated total of € 182,300 million.

According to EUROSTAT data, the pharmaceutical industry is the high technology sector with the highest value added per person employed, well above the average value for high-tech and manufacturing industries. The pharmaceutical industry is also the sector with the highest ratio of R&D investment to net sales. It amounts to approximately 3.5% of the total EU manufacturing value added and 19.3% of the total worldwide business R&D expenditure.

Ranking of industrial sectors by aggregate R&D from the world top 1,400 companies in the 2007 EU Scoreboard - 2006

Sector (according to the ICB)	**R&D Investment (€ million)**	**Share in R&D investment (%)**	**R&D/Sales ratio (%)**
Pharmaceuticals & biotechnology	70,523.5	19.3	15.9
Technology hardware & equipment	64,531.5	17.6	8.6
Automobiles & parts	60,807.1	16.6	4.1
Electronic & electrical Equipment	27,138.9	7.4	4.4
Software & computer services	26,522.8	7.3	9.8
Chemicals	17,186.0	4.7	3.1
Aerospace & Defence	15,991.3	4.4	4.8
Leisure goods	14,208.6	3.9	6.5
Industrial engineering	9,319.3	2.5	2.7
General industrials	8,867.6	2.4	2.1
Fixed line telecommunications	7,283.1	2.0	1.6
Health care equipment & services	6,446.1	1.8	6.8
Oil & gas producers	4,923.7	1.3	0.3
Food producers	3,918.5	1.1	2.2
Household goods	3,911.9	1.1	1.6
Others (22 sectors)	24,243.9	6.6	0.9
Grand Total (37 sectors)*	**365,823.9**	**100.0**	**3.4**

* Totals do not add due to rounding

Note: ICB: Industrial Classification Benchmark set up by FTSE (Financial Times Stock Exchange) & Dow Jones
Data relate to the top 1,400 companies with registered offices in the EU, Japan, the USA and the Rest of the World, ranked by the size of their R&D investment (over € 23 million)

Source: The 2007 EU Industrial R&D Investment Scoreboard, Joint Research Centre, Directorate General Research, European Commission

(pie chart)

Breakdown of the world pharmaceutical production (at ex-factory prices), 2006

35.2%	Europe
39.3%	USA
9.5%	Japan
16.0%	Rest of the World

Source: EFPIA member associations, PhRMA, JPMA, OECD, IMS Health – Estimate (EFPIA calculations)

(Graph)

European pharmaceutical production, 1980-2007 (€ million)

1985	39,821
1990	63,010
1995	88,912
2000	123,282
2005	172,098
2006	182,339
2007	190,000 (e)

Note: As these figures have been converted into a common currency, they are to some extent influenced by exchange rate movements.
Source: EFPIA member associations (official figures) – (e): EFPIA estimate

PHARMACEUTICAL MARKET VALUE (at ex-factory prices)

EFPIA 2006	€ million
Austria	2,544
Belgium	3,684
Bulgaria	538
Cyprus	177
Czech Republic	1,467
Denmark	1,685
Estonia	189
Finland	1,740
France	24,353
Germany	24,353
Greece	4,244
Hungary	1,954
Iceland	n.a.
Ireland	1,706
Italy	16,472
Latvia	213
Lithuania	411
Malta	80
Netherlands	4,230
Norway	1,312
Poland	4,009
Portugal	3,321
Romania	1,352
Slovakia	671
Slovenia	468
Spain	12,154
Sweden	2,802
Switzerland	2,673
United Kingdom	14,548
Total	**133,350**

Note: Medicinal products as defined by Directive 2001/83/EEC
Denmark, Finland, Latvia, Norway, Slovenia, Sweden: pharmaceutical market value at pharmacy purchasing prices
Greece: including parallel exports
Belgium, France, Germany, Ireland, Italy, Norway, Spain: estimate

Source: EFPIA member associations (official figures) – Bulgaria, Cyprus, Hungary, Lithuania, Malta, Poland: IMS Health

The figures above are for pharmaceutical sales, at ex-factory prices, through all distribution channels (pharmacies, hospitals, dispensing doctors, supermarkets, etc.), whether dispensed on prescription or at the patient's request. Samples and sales of veterinary medicines are excluded.

PHARMACEUTICAL SALES

The world pharmaceutical market was worth an estimated € 484,130 million ($ 663,500 million) at ex-factory prices in 2007. The North American market (USA & Canada) remained the world's largest market with a 45.9% share, well ahead of Europe and Japan. In 2007 the European market outpaced the US market in terms of growth but the Asian region is by far the fastest growing market (the growth of the North American market was estimated at 4.2 % in 2007, compared with an estimated market growth of 6.7% for Europe and 13.1% for Asia).

(pie chart)

Breakdown of the world pharmaceutical market – 2007 sales

North America (USA, Canada)	: 45.9%
Europe	: 31.1%
Japan	: 9.4%
Africa, Asia (excluding Japan) & Australia	: 8.8%
Latin America	: 4.8%

Note: Europe includes non-EU members and CIS markets
Source: IMS Health, February 2008 (data relate to the 2007 audited market at ex-factory prices)

Breakdown of the total pharmaceutical market value (at ex-factory prices) by main distribution channels (in € million), 2006

	Total	Pharmacy	Hospital	Other channels
Austria	2,544	1,753	791	0
Belgium	3,684	3,176	508	0
Bulgaria	538	n.a.	n.a.	n.a.
Cyprus	177	n.a.	n.a.	n.a.
Czech Republic	1,467	1,042	425	n.a.
Denmark	1,685	1,066	600	19
Estonia	189	166	23	0
Finland	1,740	1,309	418	13
France	24,353	19,762	4,591	0
Germany	24,353	20,848	3,295	210
Greece	4,244	3,231	1,013	0
Hungary	1,954	n.a.	n.a.	n.a.
Iceland	n.a.	n.a.	n.a.	n.a.
Ireland	1,706	1,395	291	20
Italy	16,472	11,859	4,613	0
Latvia	213	169	44	0
Lithuania	411	n.a.	n.a.	n.a.
Malta	80	n.a.	n.a.	n.a.

Netherlands	4,230	3,109	756	365
Norway	1,312	1,017	279	16
Poland	4,009	n.a.	n.a.	n.a.
Portugal	3,321	2,416	902	3
Romania	1,352	1.053	299	0
Slovakia	671	597	74	0
Slovenia	468	384	84	0
Spain	12,154	9,259	2,895	0
Sweden	2,802	2,400	402	0
Switzerland	2,673	1,450	511	712
United Kingdom	14,548	10,215	3,613	720
EFPIA total	126,181*	97,676	26,427	2,078

* Total excluding Bulgaria, Cyprus, Hungary, Lithuania, Malta and Poland (breakdown not available)

Note: Other channels include dispensing doctors, supermarkets, drugstores and other retail outlets
Denmark, Finland, Latvia, Norway, Slovenia, Sweden: pharmaceutical market value at pharmacy purchasing prices
Belgium, France, Germany, Ireland, Italy, Norway, Spain: estimate
Greece: including parallel exports

Source: EFPIA member associations (official figures) – Bulgaria, Cyprus, Hungary, Lithuania, Malta, Poland: IMS Health

GENERICS

The term 'generics' is widely used but its definition is not always consistent between countries. Generics are usually produced by a manufacturer who is not the inventor of the original product and are marketed when intellectual property protection rights are exhausted.

The market share of generics cannot be analysed without taking market access conditions for new medicines in each country into consideration. In general there is a link between low levels of generic penetration and poor pricing conditions for innovative medicines on European markets. The market share of generics is significantly lower in price-controlled environments than in unrestricted ones, except in new EU Member States with historically low levels of intellectual property protection.

Share (estimate - in %) accounted for by generics in pharmaceutical market sales value (at ex-factory prices), 2006
Graph

Austria	17.1
Belgium	10.0
Denmark	21.1
Finland	20.6
France	8.7
Germany	30.5
Greece	11.6
Ireland	8.0
Italy	13.7
Netherlands	18.4
Norway	13.5
Portugal	14.6
Romania	30.8
Slovakia	45.6
Slovenia	32.9
Spain	6.4
Sweden	14.0
Switzerland	11.6
United Kingdom	23.8

Note:
Denmark, Finland, Greece, Portugal, Romania, U.K.: share of generics in pharmacy market sales
Austria, Belgium, France, Germany, Ireland, Italy, Netherlands, Spain: share of generics in reimbursable pharmacy market sales
Switzerland: share of generics in total reimbursable market sales

Norway, Slovakia, Slovenia, Sweden: share of generics in total market sales
France: data relate only to those active substances listed on the official list of medicines
U.K.: pharmacy market sales at NHS reimbursement prices
Definition: 'generic' means a medicine based on an active substance that is out of patent and which is marketed under a different name from that of the original branded medicine (generics data do not include those generics marketed by the originator).
Source: EFPIA member associations

VAT RATES APPLICABLE TO MEDICINES

Distribution margins, which are generally fixed by governments, and VAT rates differ significantly from country to country in Europe. On average, approximately 35.0% of the retail price of a medicine does not revert to the manufacturer but rather to distributors (pharmacists and wholesalers) and the State.

Price structure - Breakdown of the retail price of a medicine, 2006 (%)

Manufacturer	64.98
Wholesaler	6.35
Pharmacist	19.79
State (VAT and other taxes)	8.88

(pie chart)

Note: non-weighted average for Europe (estimate)
Source: EFPIA member associations

As referred to in Directive 2006/112/EC the basic VAT rules require Member States to apply a standard VAT rate of at least 15% and two optional reduced rates of minimum 5% to a limited list of goods and services. The reduced rates apply to an exhaustive list of products and services, most of which are basic necessities or goods and services used for social or cultural purposes, provided they could be supplied with little or no risk of distorting competition. Pharmaceutical products are on this list. Reduced VAT rates are currently applied to pharmaceutical products in all EU-27 Member States except Austria, Bulgaria, Denmark and Germany. The table below shows the VAT rates applied to medicines in European countries on 1 January 2008.

Country	Standard VAT rate (%)	VAT rates applied to medicines	
		Prescription (%)	OTC (%)
Austria	20.0	20.0	20.0
Belgium	21.0	6.0	6.0
Bulgaria	20.0	20.0	20.0
Cyprus	15.0	0.0	0.0
Czech Republic (1)	19.0	9.0	9.0
Denmark	25.0	25.0	25.0
Estonia	18.0	5.0	5.0
Finland	22.0	8.0	8.0
France (2)	19.6	2.1 - 5.5	2.1 – 5.5
Germany	19.0	19.0	19.0

Greece	19.0	9.0	9.0
Hungary	20.0	5.0	5.0
Ireland (3)	21.0	0.0 - 21.0	0.0 – 21.0
Italy	20.0	10.0	10.0
Latvia	18.0	5.0	5.0
Lithuania	18.0	5.0	5.0
Luxembourg	15.0	3.0	3.0
Malta	18.0	0.0	0.0
Netherlands	19.0	6.0	6.0
Norway	25.0	25.0	25.0
Poland	22.0	7.0	7.0
Portugal	21.0	5.0	5.0
Romania	19.0	9.0	9.0
Slovakia	19.0	10.0	10.0
Slovenia	20.0	8.5	8.5
Spain	16.0	4.0	4.0
Sweden	25.0	0.0	25.0
Switzerland	7.6	2.4	2.4
United Kingdom (4)	17.5	0.0	17.5

(1) Czech Republic: VAT increase from 5% to 9% for all medicines on 01/01/2008
(2) France: reimbursable medicines 2.1%; non-reimbursable medicines 5.5%
(3) Ireland: oral medication 0%; other medication 21%
(4) United Kingdom: 17.5% on medicines purchased by hospitals

PHARMACEUTICAL INDUSTRY RESEARCH & DEVELOPMENT IN EUROPE

EFPIA 2006	€ million
Austria	311
Belgium	1,559
Bulgaria	n.a.
Cyprus	n.a.
Czech Republic	n.a.
Denmark	958
Estonia	n.a.
Finland	180
France	3,997
Germany	5,393
Greece	36
Hungary	n.a.
Iceland	n.a.
Ireland	150
Italy	1,115
Latvia	n.a.
Lithuania	n.a.
Malta	n.a.
Netherlands	505
Norway	122
Poland	n.a.
Portugal	n.a.
Romania	25
Slovakia	n.a.
Slovenia	100
Spain	850
Sweden	859
Switzerland	2,806
United Kingdom	5,793
Total	**24,759**

Note: The figures relate to the R&D carried out in each country.
Greece: 2003 data
Austria, France, Netherlands: 2004 data
Ireland: 2005 data
Belgium, Denmark, France, Greece, Ireland, Italy, Netherlands, Norway, Romania, Sweden (LIF members), Switzerland (Interpharma members): estimate

Source: EFPIA member associations (official figures)

PHARMACEUTICAL RESEARCH & DEVELOPMENT (R&D)

PHARMACEUTICAL DEVELOPMENT COSTS

All new medicines introduced on the market are the result of lengthy, costly and risky research and development (R&D) conducted by pharmaceutical companies. The rate at which R&D costs have risen over the last decade is illustrated by several recent studies. The latest study released in 2007 estimated the average cost of researching and developing a new chemical or biological entity at € 1,059 million ($ 1,318 million in year 2005 dollars). Meeting these costs demands ever-increasing investment efforts, which in the pharmaceutical industry's case, are almost entirely financed from its own resources.

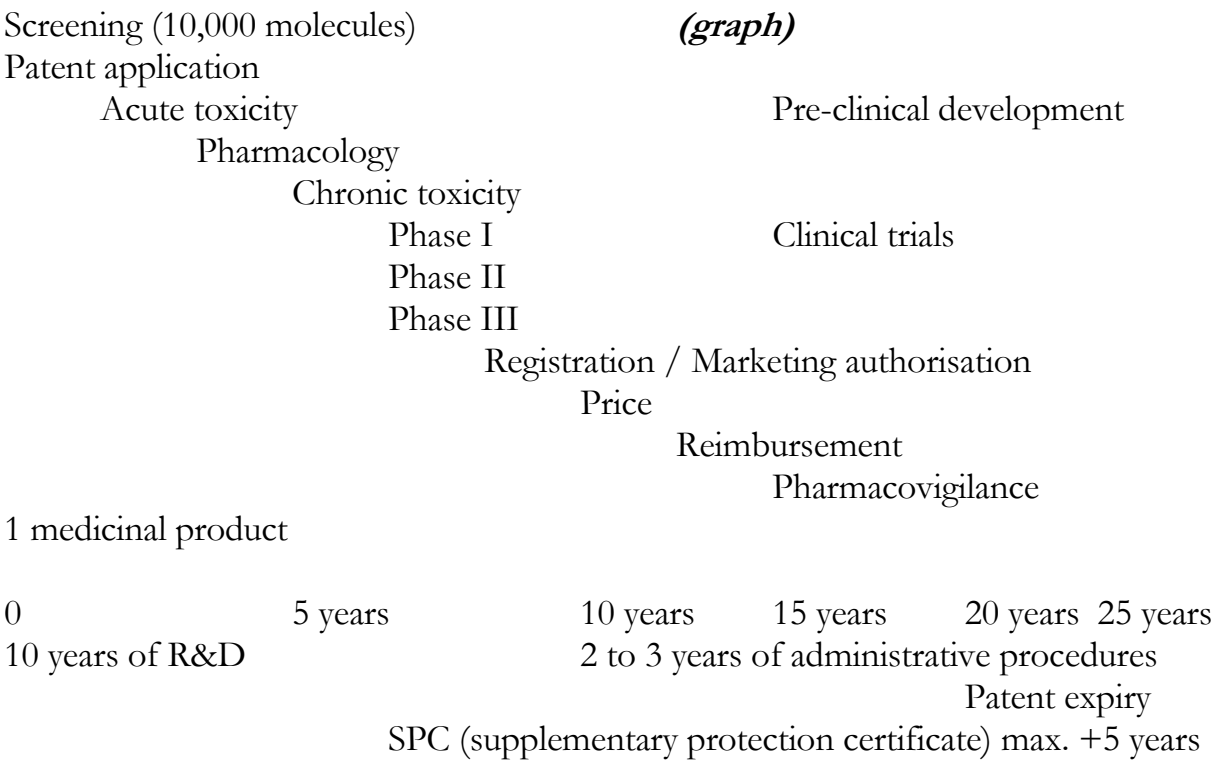
High failure rates, the significant cost of clinical trials and the amount of resources needed to get approval by regulatory authorities are the primary reasons for this exponential increase of R&D costs. Promising new substances frequently reach an advanced stage of clinical research before results demonstrate that they must be abandoned. The chances of new substances becoming a marketable medicine remain relatively small: several studies have produced figures ranging from 1 in 5,000 to 1 in 10,000. The financing of such R&D costs requires a sustained and substantial cash flow that the company is only able to generate if it launches new medicines on the various national markets as quickly as possible.

Estimated full cost of bringing a new chemical or biological entity to market ($ million - year 2005 $)

1975	138
1987	318
2001	802
2006	1,318

Source: J.A. DiMasi and H.G. Grabowski, 'The Cost of Biopharmaceutical R&D: Is Biotech Different?, Managerial and Decision Economics 28 (2007): 469-479

Phases of the research and development process



IMPORTANCE OF PHARMACEUTICAL R&D

In 2006 the pharmaceutical industry invested about € 24,800 million in R&D on the European territory. Compared to the US, Europe is seen as a less attractive R&D investment location in terms of market size and incentives for the creation of new innovative biotech companies. Over the past ten years, Europe's research and development base has been gradually eroded, with new leading-edge technology research units being transferred out of Europe and mainly to the United States. Whereas R&D investments in Europe grew by 3.3 times between 1990 and 2007, the corresponding increase in the U.S. was 5.2 times.

There is rapid growth in the research environment in emerging economies such as China and India. The current tendency to close R&D sites in Europe and to open new sites in Asia will show dramatic effects in the next few years if nothing is done to maintain the pharmaceutical discovery expertise in the EU.

R&D as percentage of sales, 1985-2007 (%)

1985	15.6
1990	18.9
1995	19.2
2000	20.6

2005	16.8
2006	18.6
2007	18.5 (e)

Source: EFPIA Member Associations (official figures) - (e): EFPIA estimate

As a whole, the research-based pharmaceutical industry invests about 18.5% of its sales into R&D in Europe. In terms of allocation of R&D investment, companies spend on average 27.2% of their R&D budgets on pre-clinical functions (synthesis and extraction, biological screening and pharmacological testing, toxicology and safety testing, pharmaceutical dosage/formulation and stability). Clinical trials (Phase I, II and III) required for medicine approval account for 47.8% of R&D budgets while an additional 12.9% of R&D is spent on additional trials (pharmacovigilance) once the medicine has been approved by the regulatory authorities. In addition, 6.1% of R&D is allocated to the approval process.

Allocation of R&D investments by function (%)

Pre-human/Pre-clinical	27.2
Clinical trials	47.8
Phase I	*6.7*
Phase II	*13.1*
Phase III	*28.0*
Approval	6.1
Pharmacovigilance (Phase IV)	12.9
Uncategorized	6.0

Source: PhRMA, Annual Membership Survey 2008 (percentages calculated from 2006 data)

Changes in Research Sites (2001 – 2006) ***Graph***

	New research Sites	Closed Research Sites
Europe	2	18
USA	6	5
Asia	14	1

Note: data collected from 22 global companies
Source: IMI (EFPIA Research Directors Group & IFPMA)

Pharmaceutical R&D expenditure ***Graph)***
Value & Annual growth rate (%)

	Europe		USA	
	Value (€ million)	Annual percentage change (%)	Value ($ million)	Annual percentage change (%)
1990	7,766	9.0	6,803	13.0
1991	8,361	7.7	7,929	16.5
1992	9,459	13.1	9,312	17.4
1993	10,404	10.0	10,477	12.5
1994	11,082	6.5	11,102	6.0
1995	11,484	3.6	11,874	7.0
1996	12,465	8.5	13,627	14.8
1997	14,203	13.9	15,466	13.9
1998	15,032	5.8	17,128	11.0
1999	16,827	11.9	18,471	7.4
2000	17,849	6.1	21,364	15.7
2001	18,976	6.3	23,502	10.0
2002	20,334	7.2	25,655	9.2
2003	20,448	0.6	27,065	5.5
2004	21,205	3.7	29,556	9.2
2005	21,778	2.7	30,969	4.8
2006	24,759	13.7	34,468	11.3
2007	26,000	5.0	35,394	2.7

2007: estimate
Source: EFPIA, PhRMA

DEVELOPING NEW CHEMICAL OR BIOLOGICAL ENTITIES (NCEs/NBEs) - The European pharmaceutical industry has for many years been the world's leading inventor of new medicines. However, over the past decade, the United States has become the dominant player in the pharmaceutical sector, including R&D where Europe is under-represented in some crucial research fields such as biotechnology.

Between 1960 and 1965, European companies invented 65% of new chemical entities (NCEs) placed on the world market. Forty years later their share had fallen to 33%. The latest data available (period 2003-2007) show the predominance of the United States which has now become the leading inventor of new molecules in the world.

Twenty-five new molecular (chemical and biological) entities reached the world market for the first time in 2007. According to Adis R&D Insight Database, the overall number of medicines in active development at the end of 2007 amounted to 6,400.

New chemical or biological entities (1988-2007) ***Graph***

	Europe	USA	Japan	Others
1988-1992	97	52	63	5
1993-1997	90	66	61	6
1998-2002	68	77	29	4
2003-2007	48	66	15	15

Source: SCRIP – EFPIA calculations (according to nationality of mother company)

Number of new active substances launched on the world market over the last five years (2003-2007)

Graph

2003	31
2004	23
2005	30
2006	35
2007	25

Source: SCRIP

Origin of the 25 new molecular (chemical and biological) entities launched on the world market in 2007

Graph

Europe	10
USA	12
Japan	1
Others	2

Source: SCRIP - EFPIA calculations (according to nationality of mother company)

RESEARCH & DEVELOPMENT AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT

According to the latest Eurostat data, Research and Development expenditure represented 1.84% of the European Union's Gross Domestic Product (GDP) in 2006 against 1.86% in 2000. The EU goal in R&D expenditure, as set by the Lisbon summit strategy, is to achieve by 2010 a R&D intensity of at least 3% for the EU as a whole.

The gap with regard to R&D expenditure in the United States and Japan remains significant since these countries spent respectively 2.62% and 3.33% of their GDP on R&D. Among European countries, the lowest R&D ratios were registered in the southern countries and the new Member States, whilst Sweden and Finland, with respective shares of their GDP of 3.82% and 3.45%, made the greatest research effort.

Graph
R&D expenditure as a percentage of GDP (2006)

Austria	2.45
Belgium	1.83
Bulgaria	0.48
Cyprus	0.42
Czech Republic	1.54
Denmark	2.43
Estonia	1.14
Finland	3.45
France	2.12
Germany	2.51
Greece	0.57
Hungary	1.00
Iceland	2.83
Ireland	1.32
Italy	1.10
Latvia	0.69
Lithuania	0.80
Luxembourg	1.47
Malta	0.55
Netherlands	1.72
Norway	1.51
Poland	0.56
Portugal	0.81
Romania	0.46
Slovakia	0.49
Slovenia	1.59
Spain	1.16

Sweden	3.82
Switzerland	2.93
United Kingdom	1.76
EU – 27	**1.84**
China	1,34
Japan	3,33
USA	2,62

Note: Iceland, Switzerland: 2004 data
China, Italy, Japan, Portugal, United Kingdom, USA: 2005 data
Austria, Cyprus, Denmark, Estonia, France, Germany, Greece, Luxembourg, Malta, Netherlands, Slovenia, Spain: provisional data
EU-27: estimate

Source: EUROSTAT News release, 34/2008, 10 March 2008; 'Science, technology and innovation in Europe', 2008 edition, EUROSTAT

BIOPHARMACEUTICALS

The major health challenges facing Europe require new technologies. The application of human genomics knowledge to clinical practice and drug development will allow us to predict a patient's response to treatment and create new "personalised" medicines according to genetic variations. The introduction of these new medicines will not only affect the global burden of disease but also the pattern of care and patient management, with an operational shift from acute treatment to prevention and cure.

Approximately one-fifth of the new molecular entities launched on the world market each year are now derived from biotechnology. Europe's biotechnology sector is growing fast, although still not as fast as its US counterpart.

In this context, competitive research is the key. The development of a strong and viable biomedical industry in Europe goes hand in hand with the maintenance of a competitive and innovative research-based industry in Europe. Accounting for 19% of the global business R&D expenditure, the research-based pharmaceutical industry can make a major contribution to the strategic goal set by the March 2000 Lisbon Council of turning Europe into *"the most competitive and dynamic knowledge-based economy in the world by 2010"*.

Biopharmaceuticals (2006)

Year 2006	**Global**	**USA**	**Europe**	**Canada**	**Asia-Pacific**
Revenues (€ million)	58,501	44,154	9,147	2,581	2,619
R&D expenditure (€ million)	22,119	18,205	2,891	705	319
Net loss (€ million)	4,336	2,760	896	417	264
Number of employees (units)	195,820	146,100	32,470	7,440	9,810
Number of public and private companies (units)	4,275	1,452	1,621	465	737

Source: Ernst & Young, 'Beyond Borders, Global Biotechnology Report 2007' (data relate only to publicly traded companies)

About EBE
European Biopharmaceutical Enterprises (EBE) is the European trade association that represents biopharmaceutical companies of all sizes operating in Europe. EBE was established in 2000 as a specialised group of EFPIA and is headquartered in Brussels. EBE actively promotes a favourable economic, business, scientific and regulatory environment for biopharmaceuticals in Europe and also provides a wide

range of value-added services to its 66 member companies. Membership in EBE is open to all companies using biotechnology to discover, develop and bring new medicinal products to market. Further details about EBE and its activities are available on www.ebe-biopharma.org

Share of global biotechnology revenues, public companies (2006)

USA	75.5%
Europe	15.6%
Canada	4.4%
Asia/Pacific	4.5%

Source: Ernst & Young, 'Beyond Borders, Global Biotechnology Report 2007' (data relate only to publicly traded companies)

Share of global biotechnology R&D expenses, public companies (2006)

USA	82.3%
Europe	13.1%
Canada	3.2%
Asia/Pacific	1.4%

Source: Ernst & Young, 'Beyond Borders, Global Biotechnology Report 2007' (data relate only to publicly traded companies)

VACCINES

Europe is the main manufacturing and research location for human-use vaccines. About 88.8% of the total production of the worldwide vaccine manufacturers originated from Europe in 2006. In terms of market sales, North America is the leading market accounting for nearly half of the value of worldwide vaccine sales (which was estimated to amount to € 9,722 million in 2006).

Worldwide major vaccine manufacturers market value (€ million – 2006)

North America	4,852.7	(49.9%)
Europe	3,081.2	(31.7%)
Specific/Humanitarian groups	338.0	(3.5%)
Rest of the world	1,450.3	(14.9%)

Source: European Vaccine Manufacturers (EVM), 2008

The number of R&D projects (from pre-clinical stage to Phase III development) by major international vaccine manufacturers amounted to a total of 137 as of 31 December 2006. More than two thirds of the total number of R&D projects were located in Europe in 2006 (Europe: 97 projects; North America: 39 projects; Other countries: 1 project). Major international vaccine manufacturers altogether had 20 manufacturing sites and 22 R&D sites based in Europe in 2006.

(Graph)
Total number of R&D projects by international vaccine manufacturers

Pre-clinical: 49
Phase I: 22
Phase II: 21
Phase III: 45

Source: European Vaccine Manufacturers (EVM), 2008

Number and location of manufacturing and R&D sites by international vaccine manufacturers in Europe (2006)

	Manufacturing	R&D
Austria	2	2
Belgium	4	5
Czech Republic	1	
France	2	3
Germany	2	2
Hungary	1	1

Ireland	1	
Italy	1	2
Netherlands	1	3
Spain	1	
Sweden	1	1
Switzerland	2	2
U.K.	1	1
Total	**20**	**22**

Source: European Vaccine Manufacturers (EVM), 2008

About EVM

The European Vaccine Manufacturers (EVM) were established within EFPIA in 1991 in order to promote a favourable climate for expanded vaccine protection and improved vaccine coverage in Europe. EVM members companies are actively engaged in research and development of new vaccines. Among the illnesses targeted by vaccines which recently received a marketing authorization are rotavirus diarrhoea, pneumococcal disease and cervical cancer caused by the human papilloma virus. EVM companies are also engaged in pre-clinical and clinical research against major infections such as HIV and malaria, and other diseases including cancers. Further details about EVM and its activities are available on www.evm-vaccines.org

PHARMACEUTICAL EXPORTS

EFPIA 2006	€ million
Austria	4,252
Belgium	30,448
Bulgaria	119
Cyprus	117
Czech Republic	660
Denmark	5,203
Estonia	24
Finland	764
France	20,059
Germany	35,784
Greece	909
Hungary	1,496
Ireland	14,175
Italy	11,159
Latvia	154
Lithuania	76
Luxembourg	43
Malta	98
Netherlands	10,912
Norway	417
Poland	598
Portugal	346
Romania	43
Slovakia	225
Slovenia	1,172
Spain	6,076
Sweden	6,933
Switzerland	29,639
United Kingdom	20,415
Total	**202,316**

Note: All data based on SITC 54
Norway, Switzerland: veterinary products excluded

Source: Eurostat (COMEXT database – December 2007)
Norway, Switzerland: EFPIA member associations (official figures)

PHARMACEUTICAL TRADE

PHARMACEUTICAL EXPORTS

The pharmaceutical trade data reflect changes occurring in the manufacturing and distribution pattern of medicines within Europe since 2000. Over the last years several companies have reorganised their manufacturing and distribution services, which resulted in a significant increase of trade exchanges between some European countries, e.g. Belgium, Germany and Ireland.

In 2006 EFPIA countries' pharmaceutical exports totalled € 202,300 million. This amount also includes the trade flows between the EFPIA countries, which were estimated to € 123,600 million in 2006. Exports to non-EFPIA countries amounted to € 78,700 million, i.e. 38.9% of total exports. The European Union's main trading partners are the USA and Switzerland.

Exports, imports and trade balance with respect to non-EU countries (2006 - € million)

	Exports	Imports	Trade balance
Austria	2,278	1,391	887
Belgium	10,993	3,529	7,464
Bulgaria	89	84	5
Cyprus	72	30	42
Czech Republic	154	218	- 64
Denmark	2,481	310	2,171
Estonia	2	5	- 3
Finland	542	107	435
France	9,267	4,102	5,165
Germany	12,049	6,848	5,201
Greece	59	504	- 445
Hungary	681	278	403
Ireland	4,055	746	3,309
Italy	4,333	4,101	232
Latvia	77	85	- 8
Lithuania	23	13	10
Luxembourg	0	2	- 2
Malta	10	19	- 9
Netherlands	3,547	4,776	- 1,229
Norway	75	219	- 144
Poland	222	407	-185
Portugal	104	242	- 138
Romania	17	281	- 264
Slovakia	70	108	- 38

Slovenia	682	103	579
Spain	2,368	1,584	784
Sweden	3,513	433	3,080
Switzerland	11,582	2,233	9,349
United Kingdom	9,372	4,874	4,498
EFPIA total	78,717	37,632	41,085

Note: All data based on SITC 54
Norway, Switzerland: veterinary products excluded

Source: Eurostat (COMEXT database – December 2007)
Norway, Switzerland: EFPIA member associations (official figures)

(pie charts)

The European Union's top 5 pharmaceutical trading partners - 2006

EU exports

USA	34.4%
Switzerland	13.7%
Russia	5.3%
Canada	4.8%
Japan	4.5%
Others	37.3%

EU imports

USA	43.7%
Switzerland	38.8%
Japan	3.5%
China	2.5%
Singapore	2.2%
Others	9.3%

Source: Eurostat, SITC 54

PHARMACEUTICAL IMPORTS

EFPIA 2006	€ million
Austria	3,914
Belgium	28,102
Bulgaria	405
Cyprus	161
Czech Republic	1,753
Denmark	2,086
Estonia	171
Finland	1,580
France	14,867
Germany	27,591
Greece	2,939
Hungary	1,645
Ireland	2,229
Italy	12,419
Latvia	310
Lithuania	372
Luxembourg	257
Malta	77
Netherlands	10,673
Norway	1,134
Poland	3,035
Portugal	1,836
Romania	1,254
Slovakia	850
Slovenia	499
Spain	7,667
Sweden	2,539
Switzerland	13,695
United Kingdom	13,881
Total	**157,941**

Note: All data based on SITC 54
Norway, Switzerland: veterinary products excluded

Source: Eurostat (COMEXT database – December 2007)
Norway, Switzerland: EFPIA member associations (official figures)

PHARMACEUTICAL IMPORTS

In 2006 pharmaceutical imports of EFPIA countries totalled € 157,900 million, of which 23.8% originate from non-EU countries. The European Union's major trading partners are the USA, Switzerland, and Japan. In 2006 these three countries supplied 86.0% of the EU-27 imports, and purchased 53.4% of its exports.

Pharmaceuticals contribute significantly to reducing the European Union's trade deficit in high-tech products. Pharmaceuticals represented 5.8% of total EU manufacturing exports in 2006 against 2.1% in 1990.

EU trade in high-tech products (2006 - € million)

	EU exports	EU imports	EU trade balance
Pharmaceutical products (SITC 54)	67,028	35,177	31,851
Power generating machinery and equipment (SITC 71)	45,837	28,837	17,000
Office machines and computers (SITC 75)	29,122	80,396	-51,274
Telecommunication, sound, TV, video (SITC 76)	40,843	71,040	-30,197
Electrical machinery (SITC 77)	78,366	79,382	-1,016
Professional, scientific, controlling material (SITC 87)	32,821	27,224	5,597
Total high tech sectors	294,017	322,056	28,039
Total manufacturing sectors	1,159,211	1,351,445	192,234

Source: Eurostat, External and intra-European Union trade, Monthly statistics, Issue number 4/2008

EU trade in high-tech products (1990 - € million)

	EU exports	EU imports	EU trade balance
Pharmaceutical products (SITC 54)	7,728	4,121	3,607
Power generating machinery and equipment (SITC 71)	13,644	9,522	4,122
Office machines and computers (SITC 75)	7,789	22,080	-14,291
Telecommunication, sound, TV, video (SITC 76)	5,969	14,044	-8,075
Electrical machinery (SITC 77)	17,690	17,933	-243
Professional, scientific, controlling material (SITC 87)	8,647	8,159	488
Total high tech sectors	61,467	75,859	-14,392
Total manufacturing sectors	355,164	404,351	-49,187

Source: Eurostat

(pie chart)

Share of pharmaceuticals in high-tech products exports (2007)

Pharmaceutical products (SITC 54)	23.7%
Power generating machinery and equipment (SITC 71)	16.9%
Office machines and computers (SITC 75)	8.9%
Telecommunication, sound, TV, video (SITC 76)	12.6%
Electrical machinery (SITC 77)	26.7%
Professional, scientific, controlling material (SITC 87)	11.2%

Source: Eurostat, External and intra-European Union trade, Monthly statistics, Issue number 4/2008

(pie chart)

Share of pharmaceuticals in high-tech products imports (2007)

Pharmaceutical products (SITC 54)	11.1%
Power generating machinery and equipment (SITC 71)	9.9%
Office machines and computers (SITC 75)	21.3%
Telecommunication, sound, TV, video (SITC 76)	24.7%
Electrical machinery (SITC 77)	24.7%
Professional, scientific, controlling material (SITC 87)	8.3%

Source: Eurostat, External and intra-European Union trade, Monthly statistics, Issue number 4/2008

PHARMACEUTICAL TRADE BALANCE

EFPIA 2006	€ million
Austria	338
Belgium	2,346
Bulgaria	- 286
Cyprus	- 44
Czech Republic	- 1,093
Denmark	3,117
Estonia	- 147
Finland	- 816
France	5,192
Germany	8,193
Greece	- 2,030
Hungary	- 149
Ireland	11,946
Italy	- 1,260
Latvia	- 156
Lithuania	- 296
Luxembourg	- 214
Malta	21
Netherlands	239
Norway	- 717
Poland	- 2,437
Portugal	- 1,490
Romania	- 1,211
Slovakia	- 625
Slovenia	673
Spain	- 1,591
Sweden	4,394
Switzerland	15,944
United Kingdom	6,534
Total	**44,375**

Note: All data based on SITC 54
Norway, Switzerland: veterinary products excluded

Source: Eurostat (COMEXT database – December 2007)
Norway, Switzerland: EFPIA member associations (official figures)

PHARMACEUTICAL TRADE BALANCE

Europe is a net exporter of medicines. The European pharmaceutical industry generates a substantial trade surplus, which amounted to € 44,400 million in 2006. Over the period 1990-2006 the total pharmaceutical trade surplus grew by 6.3 times, from € 7,100 million in 1990 to € 44,400 million in 2006.

In several European countries, the pharmaceutical industry ranks among the top five net exporters in the manufacturing sector. At European level, the pharmaceutical industry is the leading high-technology sector in terms of trade surplus.

European total pharmaceutical exports, imports, and trade balance for 1990-2007 (€ million)

Year	Total exports	Total imports	Trade surplus
1990	23,180	16,113	7,067
1995	44,188	31,018	13,170
2000	90,935	68,841	22,094
2005	181,575	145,823	35,752
2006	202,316	157,941	44,375
2007	210,000 (e)	161,000 (e)	49,000 (e)

Note: (e): EFPIA estimate
All data based on SITC 54
Norway, Switzerland: veterinary products excluded

Source: Eurostat
Norway, Switzerland: EFPIA member associations (official figures)

EU-27 trade balance - High technology sectors (€ million) - 2007

SITC 54	Pharmaceutical products	37,483
SITC 71	Power generating machinery and equipment	20,144
SITC 75	Office machines and computers	-41,003
SITC 76	Telecommunication, sound, TV, video	-40,212
SITC 77	Electrical machinery	3,204
SITC 87	Professional, scientific, controlling material	8,233

Source: Eurostat, External and intra-European Union trade, Monthly statistics, Issue number 4/2008

EMPLOYMENT IN THE PHARMACEUTICAL INDUSTRY

EFPIA 2006	Units
Austria	9,593
Belgium	29,155
Bulgaria	n.a.
Cyprus	n.a.
Czech Republic	n.a.
Denmark	17,286
Estonia	n.a.
Finland	6,110
France	103,350
Germany	113,200
Greece	11,450
Hungary	n.a.
Iceland	n.a.
Ireland	24,500
Italy	74,726
Latvia	n.a.
Lithuania	n.a.
Malta	445
Netherlands	16,200
Norway	4,691
Poland	30,000
Portugal	10,581
Romania	20,000
Slovakia	1,800
Slovenia	6,500
Spain	39,117
Sweden	18,434
Switzerland	34,000
United Kingdom	72,000
Total	**643,138**

Note: Malta, Poland: 2004 data
Austria, Netherlands: 2005 data
Belgium, France, Greece, Ireland, Italy, Netherlands, Norway, Poland, Romania, Slovenia, Sweden, United Kingdom: estimate

Source: EFPIA member associations (official figures)

PHARMACEUTICAL EMPLOYMENT

The research-based pharmaceutical industry is one of Europe's major high-technology industrial employers. Recent studies carried out in some countries showed that the research-based pharmaceutical industry generates three to four times more employment indirectly - upstream and downstream - than it does directly, a significant proportion being high value added jobs (e.g. clinical science, universities, etc).

The industry directly employs about 643,100 people, of which 107,000 work in R&D. Through R&D activities carried out in close co-operation with universities and hospitals, the pharmaceutical industry funds the work of thousands of researchers in universities and healthcare centres.

Employment in pharmaceutical R&D (1985-2007) *(Main graph)*

1985	63,000
1990	75,760
1995	82,282
2000	88,524
2001	93,572
2002	101,663
2003	100,062
2004	103,815
2005	100,013
2006	106,974
2007	107,000 (e)

Note: Data include Slovenia (since 2004) and Romania (since 2005)
Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Hungary, Iceland, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia: data not available

Source: EFPIA member associations - (e): EFPIA estimate

Employment in the pharmaceutical industry (1985-2007) *(graph)*

1985	439,090
1990	500,879
1995	506,052
2000	538,438
2005	635,937
2006	643,138
2007	645,000 (e)

Note: As of 2005 data include Malta, Poland, Romania, Slovakia and Slovenia

Source: EFPIA member associations (official figures) - (e): EFPIA estimate

PAYMENT FOR PHARMACEUTICALS BY COMPULSORY HEALTH INSURANCE SYSTEMS AND NATIONAL HEALTH SERVICES (ambulatory care only)

EFPIA 2006	**€ million**
Austria	1,809
Belgium	2,633
Bulgaria	n.a.
Cyprus	n.a.
Czech Republic	1,196
Denmark	933
Estonia	62
Finland	1,100
France	20,340
Germany	25,874
Greece	3,193
Hungary	1,147
Iceland	n.a.
Ireland	1,547
Italy	12,327
Latvia	62
Lithuania	n.a.
Malta	n.a.
Netherlands	4,353
Norway	1,101
Poland	1,351
Portugal	1,425
Romania	477
Slovakia	709
Slovenia	211
Spain	10,504
Sweden	1,870
Switzerland	2,733
United Kingdom	10,887
Total	**107,844**

Note: France, Greece, Ireland, Netherlands, Norway, Sweden, United Kingdom: estimate
Hungary, Poland: 2004 data

Source : EFPIA member associations (official figures)

PHARMACEUTICAL REIMBURSEMENT

Pharmaceutical reimbursement refers to the share of medicine costs paid by the state through a compulsory social security system or by health insurance funds, according to the statutory national system.

In most European countries only prescribed products are reimbursed, although arrangements differ widely from country to country. Not all medicines are reimbursed, and few are reimbursed in full (except, in most countries, when they are dispensed in hospitals). Some countries limit reimbursement to a proportion of the price of the prescribed medicine whilst others reimburse a flat-rate amount according to packaging or prescription. Most countries operate a co-payment system, which requires patients to meet part of the cost of their prescribed treatment. There are also over-the-counter (OTC) products, which are bought by patients at their own initiative and expense.

Estimated costs paid by the patient in the total reimbursed pharmacy market value at retail prices (in %) – 2006 ***(graph)***

	Costs paid by the patient (%)	Costs paid by compulsory health insurance systems (%)
Austria	17.0	83.0
Belgium	15.9	84.1
Denmark	40.4	59.6
Estonia	36.7	63.3
Finland	30.7	69.3
France	1.0	99.0
Germany	7.1	92.9
Greece	13.6	86.4
Hungary	19.9	80.1
Ireland	9.4	90.6
Italy	3.2	96.8
Netherlands	0.5	99.5
Norway	10.7	89.3
Portugal	33.3	66.7
Romania	39.4	60.6
Slovakia	13.4	86.6
Slovenia	38.3	61.7
Spain	7.0	93.0
Sweden	22.4	77.6
Switzerland	10.0	90.0
United Kingdom	6.7	93.3
EFPIA (non-weighted average)	**17.9**	**82.1**

Note: France: costs paid by compulsory health insurance system include costs paid by supplementary insurance (mutual or private), which amount to about 20.1% of total costs.

Hungary: 2004 data
Greece: 2005 data
EFPIA calculations – Estimate

Source: EFPIA member associations

PERCENTAGE OF ELDERLY PEOPLE (65 AND OVER) IN TOTAL POPULATION

Country	1960	1970	1980	1990	2000	2010	2020
Austria	12.0	14.1	15.4	14.9	15.5	17.5	19.8
Belgium	12.0	13.3	14.4	14.9	16.9	17.6	20.5
Bulgaria	7.5	9.6	11.9	13.1	16.6	17.7	20.6
Cyprus	5.9	10.1	10.3	10.9	11.3	13.0	15.5
Czech Republic	9.3	12.1	13.4	12.5	13.8	15.6	20.5
Denmark	10.6	12.3	14.4	15.6	14.8	16.7	20.2
Estonia	10.5	11.7	12.5	11.4	15.0	16.7	18.3
Finland	7.2	9.2	12.0	13.4	14.9	17.1	22.2
France	11.6	12.9	14.0	14.0	16.3	16.5	20.2
Germany	11.5	13.7	15.6	15.0	16.4	20.5	22.4
Greece	8.3	11.1	13.1	13.7	16.7	18.8	21.1
Hungary	9.0	11.6	13.4	13.3	14.7	16.1	19.5
Iceland	8.0	8.8	10.1	10.6	11.7	12.7	16.1
Ireland	11.2	11.2	10.7	11.4	11.2	11.3	13.6
Italy	9.3	10.9	13.1	15.3	18.2	20.6	23.2
Latvia	10.5	11.9	13.0	11.6	15.3	17.6	18.7
Lithuania	7.7	10.0	11.3	10.9	13.9	16.2	17.7
Luxembourg	10.8	12.7	13.7	13.5	14.2	14.1	15.2
Malta	7.4	8.9	9.9	10.6	12.3	14.8	19.7
Netherlands	9.0	10.2	11.5	12.8	13.6	15.4	20.0
Norway	11.1	12.9	14.8	16.3	15.2	15.3	18.4
Poland	5.8	8.2	10.1	10.1	12.2	13.6	18.5
Portugal	8.0	9.2	10.5	13.4	16.1	17.5	19.8
Romania	6.7	8.6	10.3	10.4	13.5	14.9	17.5
Slovakia	6.7	9.2	10.4	10.3	11.4	12.3	16.4
Slovenia	7.8	9.9	11.4	11.1	14.1	16.5	20.8
Spain	8.2	9.8	11.2	13.5	16.8	17.3	19.5
Sweden	12.0	13.7	16.3	17.8	17.2	18.4	21.1
Switzerland	10.1	11.3	13.8	14.4	14.6	17.0	20.0
Turkey	3.4	4.3	4.6	4.0	5.2	5.9	7.6
United Kingdom	11.9	13.2	15.1	15.9	15.8	16.6	18.9
EU-27*	**9.9**	**11.6**	**13.3**	**13.9**	**15.7**	**17.5**	**20.3**
USA	9.2	9.8	11.2	12.2	12.3	12.8	15.8
Japan	5.7	7.1	9.0	12.0	17.2	22.5	28.4
World**	**5.3**	**5.4**	**5.9**	**6.1**	**6.9**	**7.7**	**9.4**

* weighted average for EU-27 countries

** weighted average

Note: Figures for the years 2010 and 2020 are United Nations projections.

Source: World Population Prospects (United Nations), OHE

PHARMACEUTICAL SPENDING

On average, total pharmaceutical spending accounts for 16.6% of total health expenditure in Europe. According to OECD figures, the share of pharmaceutical spending in total health expenditure shrank by one fourth between 1970 and 1980. Since then, pharmaceutical spending has grown at a slightly higher rate than that of health spending as a whole.

Share of total pharmaceutical spending in total health spending (%)

	1970	1980	1990	1995	2000	2005
Europe	**17.3**	**13.4**	**13.2**	**15.0**	**16.1**	**16.6**
United States	12.3	9.0	9.2	8.9	11.7	12.4
Japan	-	21.2	21.4	22.3	18.7	19.0*

* 2004 data

Source: OECD Health Data 2007, Statistics and Indicators for 30 Countries, October 2007 – EFPIA calculations (non-weighted average for 17 EU & EFTA countries)

Factors related to both supply and demand explain the growth in pharmaceutical spending. On the supply side, the industry has added to, and substantially improved, its range of treatments. On the demand side, a combination of socio-economic factors, in particular population ageing, has fuelled a steady increase in this spending.

Medicines remain a prime target of Member States' healthcare cost-containment policies. Most of these policies take little account of the structural factors underlying the growth in health care and pharmaceutical spending. For example, several European countries fix an overall budget or seek to impose percentage limits on growth in pharmaceutical spending. These budgets or growth targets for medicines spending are at levels which do not take into consideration the ageing population and the desire of patients to have access to new innovative treatments.

Percentage of very elderly people (75 and over) in total population

	1960	1970	1980	1990	2000	2010	2020
EU-27*	**3.3**	**3.9**	**5.0**	**6.1**	**6.8**	**8.3**	**9.4**
USA	3.1	3.8	4.5	5.0	5.8	6.0	6.5
Japan	1.8	2.1	3.1	4.8	7.0	10.8	14.6
World**	**1.6**	**1.7**	**1.9**	**2.2**	**2.4**	**3.0**	**3.5**

* weighted average for EU-27 countries
** weighted average

Note: Figures for the years 2010 and 2020 are United Nations projections.

Source: World Population Prospects (United Nations), OHE

TOTAL SPENDING (PUBLIC AND PRIVATE) ON HEALTH CARE AS A PERCENTAGE OF GDP AT MARKET PRICES

	1960	1970	1980	1990	2000	2005
Austria	4.3	5.2	7.5	7.0	10.0	10.2
Belgium	-	3.9	6.3	7.2	8.6	10.3*
Czech Republic	-	-	-	4.7	6.5	7.2
Denmark	-	-	8.9	8.3	8.3	9.1*
Finland	3.8	5.5	6.3	7.7	6.6	7.5
France	3.8	5.4	7.0	8.4	9.6	11.1
Germany	-	6.0	8.4	8.3	10.3	10.7
Greece	-	4.7	5.1	5.8	9.3	10.1
Hungary	-	-	-	-	6.9	8.1*
Iceland	3.0	4.7	6.3	7.8	9.3	9.3
Ireland	3.7	5.1	8.3	6.1	6.3	7.5
Italy	-	-	-	7.7	8.1	9.0
Luxembourg	-	3.1	5.2	5.4	5.8	7.4*
Netherlands	-	-	7.5	8.0	8.0	9.2
Norway	2.9	4.4	7.0	7.6	8.4	8.7
Poland	-	-	-	4.8	5.5	6.2*
Portugal	-	2.5	5.3	5.9	8.8	10.2
Slovakia	-	-	-	-	5.5	7.1
Spain	1.5	3.5	5.3	6.5	7.2	8.3
Sweden	-	6.8	9.0	8.3	8.4	9.1
Switzerland	4.9	5.5	7.4	8.3	10.4	11.3*
United Kingdom	3.9	4.5	5.6	6.0	7.3	8.3
Europe	**3.5**	**4.7**	**6.8**	**7.0**	**8.0**	**8.9**
USA	5.1	7.0	8.8	11.9	13.2	15.3
Japan	3.0	4.6	6.5	6.0	7.7	8.0

* estimate

Note: Iceland, Italy, Luxembourg, Norway, Switzerland: 2006 data
Hungary, Netherlands, Japan: 2004 data
Europe: non-weighted average (22 countries) – EFPIA calculations

Source: OECD Health Data 2007 Statistics and Indicators for 30 Countries, October 2007

HEALTH CARE EXPENDITURE

Over the last 40 years the growth in health care spending has outstripped that of gross domestic product in all industrialised countries. After accelerating sharply in the 1960s and 1970s, the rate of growth in health spending declined substantially at the end of the 1980s. Public health spending grew faster than total health spending until the end of the 1970s. By the beginning of the 1980s, health cost containment policies had begun to stabilize the share of public spending in total health spending.

The latest available OECD data show that European countries spent on average 8.9% of their gross domestic product on health care in 2005. The US continues to top the OECD ranking for overall healthcare spending at $ 6,401 (€ 5,145) per capita in 2005, more than twice the European average. Although more than half of this spending is financed through private spending, public spending per capita in the US is quite high and amounts to levels equivalent to those of most European countries.

Chart

	Total expenditure (public and private) on health per capita ($ PPP)			Public expenditure on health per capita ($ PPP)		
	Europe	USA	Japan	Europe	USA	Japan
1970	181	347	150	128	127	105
1980	671	1,055	583	524	439	416
1990	1,241	2,738	1,121	908	1,080	870
2000	2,031	4,539	1,967	1,529	1,995	1,599
2005	2,857	6,401	2,358*	2,157	2,884	1,927*

* 2004 data
Note: Europe: non-weighted average – EFPIA calculations
Source: OECD Health Data 2007, Statistics and Indicators for 30 Countries, October 2007

In any industrialized country, the share of income spent on health care generally rises with income itself. However, increased incomes and living standards do not by themselves explain the growth in health care spending. This growth is in fact due to several factors, including:

- population ageing;
- population increase;
- growing proportion of health care dispensed in hospitals and psychiatric institutions;
- widening range of treatments available and technological progress;
- widening social security cover, which is now available to almost the entire population in European countries.

CAUSES OF MORTALITY
NUMBER OF DEATHS (per 100,000 population), 2004

	All causes of death	Malignant neoplasms	Cerebro-vascular diseases	Diseases respiratory systems	Diabetes Mellitus	Infectuous, parasitic diseases
Europe	**693.1**	**187.3**	**66.7**	**50.5**	**14.3**	**8.0**
Austria	571.5	157.0	38.3	33.3	27.1	5.5
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Czech Republic	806.0	218.0	106.5	35.4	10.0	2.6
Denmark	713.0	209.3	56.9	65.1	17.1	5.1
Finland	598.8	137.8	53.7	34.7	7.0	4.3
France	572.0	170.2	34.5	32.9	11.9	11.5
Germany	592.6	161.2	45.4	36.1	16.2	8.3
Greece	621.0	153.7	98.5	43.5	5.8	4.0
Hungary	982.3	244.8	129.5	39.3	18.4	3.7
Iceland	510.8	154.8	41.1	36.4	6.0	4.1
Ireland	588.9	173.8	40.9	79.4	10.0	3.6
Italy	541.4	167.3	55.4	31.3	16.4	4.6
Luxembourg	578.0	156.8	53.4	45.6	7.1	11.9
Netherlands	598.2	182.2	45.2	52.7	16.3	8.3
Norway	553.0	161.2	45.4	42.6	8.1	7.1
Poland	819.6	201.4	88.1	37.8	11.3	5.2
Portugal	686.8	151.3	111.2	55.9	27.8	17.4
Slovakia	915.6	200.0	84.9	52.2	12.8	3.6
Spain	533.4	155.3	44.0	50.5	13.2	11.3
Sweden	566.2	148.8	53.1	36.2	11.6	7.1
Switzerland	489.5	142.3	29.2	28.8	12.0	5.3
United Kingdom	610.4	175.6	55.9	74.1	7.1	6.3
Japan	439.0	145.1	50.7	55.0	5.5	9.5
USA	666.7	166.3	39.9	61.5	20.9	18.0

Note: Europe: non-weighted average – EFPIA calculations
Austria, Ireland: 2005 data; France, Hungary, Portugal: 2003 data; Italy, Slovakia, Sweden, USA: 2002 data; Denmark: 2001 data

Source: OECD Health Data 2007, Statistics and Indicators for 30 Countries, October 2007

HEALTH STATUS & VALUE OF MEDICINES

Medicine has played a central role in health care and therapeutic practice since the earliest times. Medicines have greatly contributed to the increase in life expectancy, to the improvement of quality of life and to the eradication of diseases which were previously life threatening. In the debate on the future of the health care system in various European countries, and the funding pressures health systems face in meeting the needs and expectations of the population, medicines have a key role to play. There is strong evidence in health outcomes research literature of the added value of medicines in the health care context, not only in terms of global cost savings but also in terms of contribution to the quality of care.

Major advances in scientific knowledge and, particularly, in modern medicines offer entirely new opportunities to treat diseases and ill health. Spending on medicines actually reduces the overall cost of disease treatment by cutting or eliminating the burden in other sectors of state expenditure and speeding up the delivery of health care. On the eve of major health care reform discussions in Europe, governments must look beyond the short term and invest in medicines for the future. The rewards – and savings – by increased spending on medicines might not be immediate but will be far higher than short-term cost cutting.

Average length of stay for acute care (days), 2005 ***Graph***

Austria	5.9
Belgium	7.1
Czech Republic	8.0
Denmark	3.5
Finland	4.8
France	5.4
Germany	8.6
Greece	6.2
Hungary	6.3
Iceland	5.4
Ireland	6.6
Italy	6.8
Luxembourg	7.3
Netherlands	6.8
Norway	5.2
Poland	6.5
Portugal	7.1
Slovakia	7.3
Spain	6.7
Sweden	4.6
Switzerland	8.5

United Kingdom	6.1
Europe	**6.4**
United States	5.6

Note: Belgium, Italy, Spain: 2004 data
Europe: non-weighted average – EFPIA calculations

Source: OECD Health Data 2007, Statistics and Indicators for 30 Countries, October 2007

(pie chart)

Rheumatoid Arthritis – Distribution of costs on different resources in Europe

Medical costs	21%
Drug	14%
Non-medical costs	14%
Informal care costs	19%
Indirect costs	32%

Source: The Burden of Rheumatoid Arthritis and Patient Access to Treatment, J. Lundkvist, F. Kastäng & G. Kobelt, The European Journal of Health Economics, Volume 8, Supplement 2, January 2008

BURDEN OF RHEUMATOID ARTHRITIS (RA) - ANNUAL COST

	Number of RA patients Thousands	Total cost Million euros	Medical cost excluding drugs Million euros	Drugs Million euros	Non-medical costs Million euros	Informal care Million euros	Indirect cost Million euros
Australia	136	2,164	409	288	257	744	143
Austria	55	862	136	167	67	189	303
Belgium	69	1,208	154	94	103	415	442
Bulgaria	51	144	49	34	31	19	17
Canada	215	2,249	701	562	155	209	119
Cyprus	3	42	11	7	6	7	11
Czech Republic	68	401	88	62	81	65	105
Denmark	36	619	115	0	102	155	248
Estonia	9	49	13	9	11	6	10
Finland	35	662	147	104	85	126	201
France	283	6,200	2,101	1,259	420	968	1,451
Germany	544	12,219	1,649	1,051	1,213	2,090	6,216
Greece	50	585	128	90	88	107	172
Hungary	67	379	102	72	85	47	75
Iceland	2	49	10	7	6	10	15
Ireland	28	544	110	77	70	110	176
Italy	264	4,347	526	301	307	1,616	1,597
Latvia	15	64	18	13	16	7	11
Lithuania	22	101	26	19	24	13	20
Luxembourg	3	63	12	8	7	14	22
Malta	2	16	4	3	3	3	4
Netherlands	108	1,354	265	64	288	177	560
Norway	31	705	148	104	84	142	226
Poland	252	1,419	343	241	292	209	334
Portugal	70	745	196	138	124	110	176
Romania	143	619	207	146	130	83	72
Russian Federation	950	5,941	735	517	462	2,600	257
Slovakia	36	179	43	30	40	25	40
Slovenia	13	126	29	21	20	22	34
Spain	197	3,036	493	159	1,275	427	682
Sweden	60	770	125	137	88	18	402
Switzerland	49	1,181	228	160	137	252	403
Turkey	482	2,665	722	507	454	604	252
UK	399	6,577	1,953	140	280	1,646	2,558
USA	1,976	41,631	8,755	14,275	4,009	5,876	8,716

Europe	2,962	45,263	9,429	4,717	5,481	9,078	16,584
Western Europe	2,302	41,846	8,529	4,084	4,768	8,589	15,875
Eastern Europe	660	3,417	900	633	713	489	708

Source: The Burden of Rheumatoid Arthritis and Patient Access to Treatment, J. Lundkvist, F. Kastäng & G. Kobelt, The European Journal of Health Economics, Volume 8, Supplement 2, January 2008

HEALTH CARE SYSTEMS & BURDEN OF DISEASE

Since the early 1950s, Europe's social history has been marked by the progressive establishment of social security systems which cover more and more people and offer an ever-wider range of services. Health care systems have achieved extraordinary results in terms of longer-living, healthier people, a reduction in disability, and a more productive workforce. However, health care systems, as a whole, are facing serious challenges. In particular, the ageing of our population is about to create a large burden of chronic disease for individuals and society.

Much of this growing burden of chronic disease can be prevented. Medicines can also help reduce morbidity, mortality and disability, and improve patients' quality of life by controlling disease when it does arise, allowing patients to be healthier for a longer time. Medicines also help control costs by reducing the need for expensive care, such as hospitalization, nursing home admission, and surgery.

Overview of health care systems

Characteristic properties	Tax-financed system (Beveridge type)*	Premium financed system (Bismarck type)**	Private insurance system
Type	National Health Service	Social insurance	Pluralistic (Medicare /Medicaid - Managed Care)
General definition	Government-regulated care with health services	Health care as guaranteed basic right	Health goods are largely consumer goods
Finances	Taxes. Every tax-payer contributes	Contributions from employees/employers	Largely private finance
Service organisation	Public	Private/public	Largely private
Service package	More supply-oriented	More demand-oriented	Demand-oriented
State intervention	Strong/direct	Mostly direct	Weak/indirect
Payment transfer	Indirect	Largely indirect	Direct and indirect
Role of professional associations	Not very strong	Strong	Very strong
Opinion-forming	Top-down	Bottom-up	Bottom-up
Examples	Scandinavian countries, U.K., Italy, Spain, Greece, Canada	Japan, Germany, France, Belgium, Netherlands, Austria	USA, Switzerland

* Sir William Henry Beveridge (1879-1963), founder of British National Health Service (NHS) in 1948.

** Fürst Otto Eduard Leopold von Bismarck (1815-1898) established the first national health insurance system in Germany in the 1880s.

Source: F. Schmidt, M. Egler & R. Geursen, Aventis Pharma AG, Drugs made in Germany 44, n°3 (2001)

GDP, POPULATION, INFLATION AND EURO RATE

Country	GDP 2006 € million	Population 01/01/2007 (1,000)	Inflation 2006	€ rate 2006
Austria	257,897	8,265	1.7	13.760
Belgium	316,622	10,511	2.3	40.340
Bulgaria	25,238	7,718	7.4	1.956
Cyprus	14,631	749	2.2	0.576
Czech Republic	114,021	10,251	2.1	28.342
Denmark	220,069	5,427	1.9	7.459
Estonia	13,234	1,344	4.4	15.647
Finland	167,041	5,255	1.3	5.946
France	1,791,953	62,998	1.9	6.560
Germany	2,322,200	82,437	1.8	1.956
Greece	213,984	11,125	3.3	340.750
Hungary	89,901	10,076	4.0	264.26
Iceland	13,305	299	4.6	87.76
Ireland	174,705	4,209	2.7	0.788
Italy	1,479,981	58,751	2.2	1,936.270
Latvia	16,180	2,294	6.6	0.696
Lithuania	23,721	3,403	3.8	3.453
Luxembourg	33,852	469	3.0	40.340
Malta	5,066	405	2.6	0.429
Netherlands	534,324	16,334	1.7	2.204
Norway	267,892	4,640	2.5	8.047
Poland	272,131	38,125	1.3	3.896
Portugal	155,277	10,569	3.0	200.482
Romania	97,718	21,610	6.6	3.526
Slovakia	44,571	5,389	4.3	37.234
Slovenia	30,454	2,003	2.5	239.60
Spain	980,954	43,758	3.6	166.386
Sweden	313,327	9,047	1.5	9.254
Switzerland	309,096	7,459	1.0	1.573
Turkey	419,232	72,519	9.3	1.809
UK	1,912,656	60,393	2.3	0.682
EU-27	**11,621,708**	**492,915**	**2.2**	
USA	10,508,681	299,399	3.3	1.256
Japan	3,485,310	127,770	0.3	146.0

Note: € rate: yearly average value in national currency units
Eurozone: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Spain
GDP: Gross Domestic Product at market prices

Source: Eurostat (GDP, population, inflation); European Central Bank (€ rate); OECD (Population: USA, Japan)

NOTES

This booklet provides some general statistical data on the pharmaceutical industry's activities and on the context in which it operates. The statistics have been compiled mainly on the basis of information supplied by EFPIA's member associations, supplemented with data from various other sources, such as the OECD and Eurostat.

Every effort has been made to compile these statistics on a common basis. For several years, EFPIA has based its work in this area on the OECD Standard International Trade Classification (SITC) heading 54, which covers the entire chapter on medicinal products and some sections on specific active substances produced by the pharmaceutical industry.

It should also be noted that:

- Differences between these statistics and those published by EFPIA's member associations are almost certainly due to the choice of classification (SITC 54) and the need to establish common definitions for all countries represented by EFPIA. As it does not include certain basic substances, SITC 54 may in some cases be too restrictive to provide an accurate picture of pharmaceutical industry activity in some countries;

- Some data have been updated and revised, and concepts clarified. As a result, the data in this edition may not be strictly comparable with those in preceding ones;

- All data have been converted into a single currency, the EURO (€). Any proper analysis should therefore take the impact of exchange rate movements on the figures in this booklet into account;

- Since 2005 EFPIA aggregate figures include Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia (although data are not always available in several of these countries).

Composition of OECD SITC heading 54

OECD SITC heading 54 covers Chapter 30 and several sections of Chapter 29 of the Combined Nomenclature:

Composition of SITC heading 54	Combined Nomenclature (CN)
Provitamins	29.36
Hormones	29.37
Heterosides	29.38
Alkaloids	29.39

Antibiotics	29.41
Pharmaceutical products	30.01-30.06

Since the 1988 revision of SITC, heading 54 no longer covers sulphonamides; these are now included in heading 51.

Definition of a medicinal product

Any survey of the pharmaceutical sector requires a definition of what is meant by medicinal products. Within the European Union, Article 1 of Directive 2001/83/EEC defines medicinal products as follows:

1. Proprietary medicinal product:
   Any ready-prepared medicinal product placed on the market under a special name and in a special pack.

2. Medicinal Product:
   Any substance or combination of substances presented for treating or preventing diseases in human beings. Any substance or combination of substances which may be administered to human beings with a view to making a medical diagnosis or to restoring, correcting or modifying physiological functions in human beings is likewise considered a medicinal product.

3. Substance:
   Any matter, irrespective of origin, which may be:
   - human, e.g. human blood and human blood products;
   - animal, e.g. micro-organisms, whole animals, parts or organs, animal secretions, toxins, extracts, blood products;
   - vegetable, e.g. micro-organisms, plants, parts of plants, vegetable secretions, extracts;
   - chemical, e.g. elements, naturally occurring chemical materials and chemical products obtained by chemical change or synthesis.