ANIMAL HEALTH DRUGS

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- **Section 4** – provides a general overview of the major animal health

- **Section 5** – provides a world market overview, which analyses trends in the animal health market at global, regional and major market level, as well as by product sector.

- **Section 6** – provides a corporate overview of the strategies adopted by leading animal health manufacturers, including analysis of their involvement in this market.

- **Section 7** – reviews the R&D and marketing strategies they implement, product Innovation, research & development – Investment Levels and challenges.

- **Section 8** – examines future prospects for the world animal health market, limits to grow, and forecast strategies that should be followed.
1. INTRODUCTION:

**Chosen topic, focus & particular aspects, link to the health sector.**
Animal health industry, focused on pharma companies, giving a global perspective.

**Link to the human health sector:**
In pharma companies although animal health products provide no more than 4 to 5 percent of their sales, their contribution to corporate profits can be quite substantial because human treatments, though expensive to develop, can be applied to animal care at a relatively low cost.

**Why did you choose this? Why do you think it is interesting?**

- The animal health industry will grow steadily over the next several years, providing solid if unspectacular profits for the pharma companies that own most of the businesses in it—but may now wish to divest them.
- The worldwide market for animal health products is already substantial and growing fast.
- Pet owners show little price sensitivity for animal medications. A combination of increasingly wealthy consumers and aging pets, plus new drugs for animals to treat conditions such as arthritis and heart failure, is adding to the market’s attractions.
- Of the top ten animal health companies, no fewer than eight are subsidiaries of large pharmaceutical corporations.
- Big pharmaceutical companies considering whether to divest their animal health subsidiaries may want to take a second look at the potential of pet health care.

**Research Programme:**

The report is based on extensive research, including the following elements:

**Desk Research**
All published information available on pharmaceuticals was collated and analysed. This included statistical information published by trade associations and manufacturers, as well as information published in trade and financial journals.

**Company Analysis**
The main source of the company analysis is the companies themselves, from whom information was obtained through accessing company reports or through published information in the internet.

**Market and Strategic Analysis**
Extensive evaluation of the information and a considerable amount of statistical manipulation, in order to calculate the tables in the report.

**Market Size Measurement**
Within the report, as has been annotated, market sizes and sales data on animal health products is recorded at the level of manufacturer selling prices. Comparable data for OTC pet healthcare products is usually recorded at the level of retail selling prices, unless otherwise noted.
2. EXECUTIVE SUMMARY:

The customer view towards the animal health market:
One reason for the growth in sales of pet products and services is the changing lifestyle of pet owners in the richer developed nations, where animals are increasingly seen as family members—a development tied in part to the fact that more people live on their own, to the slowdown in human birth rates, and to urban alienation.

The global market:
The global market for veterinary drug products (companion animals and livestock) amounted to approximately $13.7 billion in 2002. Annual growth rates for the future are estimated at about 2 percent.

The Spanish market:
Spain is one of the fastest-growing animal health markets in the world, with sales up 30% in five years to reach €504 million in 2002.

Leading Manufacturer Involvement:
The major manufacturers in the animal health market typically hold a wider involvement in either the human pharmaceutical or chemical industries. Of the top ten animal health companies, no fewer than eight are subsidiaries of large pharmaceutical corporations. About 60 percent of the global veterinary medicine market is produced by ten companies.

What represent animal health for pharma companies:
Although they provide no more than 4 to 5 percent of their parents’ sales, their contribution to corporate profits can be quite substantial because human treatments, though expensive to develop, can be applied to animal care at a relatively low cost.

New Product development:
Particularly in the companion animal sector, recent years have witnessed a number of innovative new product launches which offer solutions to new disease threats. These partly arise from the increased life expectancy of animals such as dogs and cats, coupled with the raised level of consumer expectations in terms of the care their pets should receive. In this respect, there seems to be an almost direct translation of the relevance of new human drug developments to animal usage.

Research & Development – Investment Levels:
It is generally difficult to identify a discrete level of research & development investment attributable only to animal health products, because most leading manufacturers report this only at a global level. The European trade association, FEDESA, calculates that, on average, manufacturers in the animal health sector invest more than 10.0% of sales on research & development activities, which equates at global level to around $1.2 billion.

Expenditure on R&D per product:
As with the wider pharmaceutical environment, a new chemical entity requires a lengthy period of initial development to the point of regulatory approval (average 7-8 years) and even after a successful launch, the US$50-100 million required to fund that development for each new product cannot usually be recovered quickly. At the same time, in an increasingly competitive market environment, the exclusivity of a technological advance may be relatively short-lived, so that speeding the process to market launch is of prime.

Strategy to follow:
Even so, the profits can seem small to major pharma companies, and some of them are thinking about divesting these subsidiaries in order to focus more on their human drug business. My research indicates that animal health divisions could be worth keeping.

3. ANIMAL UNIVERSE AND TREATMENTS NEEDED:

It is no secret that people love their pets. What is surprising is how much pet owners will spend to keep their pets healthy.

One reason for the growth in sales of pet products and services is the changing lifestyle of pet owners in the richer developed nations, where animals are increasingly seen as family members—a development tied in part to the fact that more people live on their own, to the slowdown in human birth rates, and to urban alienation.

Dogs and cats account for more than 90 percent of total spending on pets. Dogs, cats and horses are human companions, and the part they play as they accompany us through life is growing in significance.

Increasingly, animal lovers are coming to expect the same quality of health care for their four-legged friends that they can claim for themselves. The demands placed on animal health and medical care are rising.

Furthermore, the main years of pet ownership fall in the fastest-growing part of the US population: the 45- to 64-year-old segment, which has the highest household income. Research in the United States also indicates that people in the 45- to 54-year-old age bracket with annual household incomes upward of $50,000 are far more willing to spend money on their pets than are people in other income groups (Exhibit 2).

![Exhibit 2: Pet sensitive, not price sensitive](image-url)

<table>
<thead>
<tr>
<th>Age</th>
<th>&lt;$20,000</th>
<th>$20,000–$50,000</th>
<th>&gt;$50,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>0.3%</td>
<td>1.8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>25–34</td>
<td>$79</td>
<td>$165</td>
<td>$319</td>
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<tr>
<td>35–44</td>
<td>$144</td>
<td>$333</td>
<td>$583</td>
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<tr>
<td>45–54</td>
<td>$199</td>
<td>$458</td>
<td>$796</td>
</tr>
<tr>
<td>55–64</td>
<td>$208</td>
<td>$482</td>
<td>$843</td>
</tr>
<tr>
<td>65 and older</td>
<td>$111</td>
<td>$259</td>
<td>$449</td>
</tr>
</tbody>
</table>

Amount pet owner is willing to spend annually

2000 data; figures do not sum to 100%, because of rounding.
4. THE ANIMAL HEALTH INDUSTRY:

Animal health products are used by veterinarians and pet owners to extend the length and quality of life of the animals and also contribute to safe food.

4.1 Pharmaceuticals:
This category includes sales of insecticides and dosage-form medicines and other pharmaceutical preparations used in disease prevention and treatment programs for both pets and farm animals.
Sales increased by nearly 5 percent in 2003.
Estimated sales for the global market in this category are $13.7 billion in 2002.

4.2 Feed Additives:
This category includes sales of all feed additives used in livestock and poultry production, including products used to control and prevent disease, enhance growth, and improve feed efficiency.
Feed additives sales dropped 5 percent in 2003.

4.3 Biologicals:
This category includes sales of products used to create immunity to disease in both livestock and pets. Biologicals include vaccines, bacterins and antitoxins, and sales in this category show a gain of 9 percent in 2003.

Chart: Value Sales Development of Animal Health Products by Sector

Source: Euromonitor from trade sources

Pharmaceuticals were the driver of sales expansion in the animal health market between 1995 and 1999.

Another classification:
1) Livestock production
2) Companion animals
   - Companion animals now account for one-third of the world market for animal health products.
   - Sales in companion animals were $4.5 billion in 2003 and Animal Pharma Reports forecast that they will rise to $6.9 billion by the end of the decade.
   - The sector attracts the bulk of R&D investment.
   - There is a range of new products in companies’ development pipelines. At the same time, market leading products will come off-patent, and generics companies are already planning launches of competitor brands.
5. THE GLOBAL MARKET OF ANIMAL HEALTH CARE:

5.1 Global Market size:
The global market for veterinary drug products (companion animals and livestock) amounted to approximately €13.7 billion in 2002. Annual growth rates for the future are estimated at about 2 percent. The animal health businesses of the major pharma companies have two parts: one for production animals and one for companion animals such as dogs and cats.

5.2 Global Market trends:
- The world market for animal health products has grown by 15.2% between 1999 and 2004 to reach a value sales level of $13.7 billion.
- The world market for animal health products increased in value by 16.1% between 1995 and 1999.

**Chart 1 World Sales of Animal Health Products**

Source: Euromonitor from trade sources

- The engine of sales growth will remain the major North American region, although the Rest of the World will increase sales at a faster rate and steadily expand its share of global sales.
- Veterinary pharmaceuticals will record the strongest sales growth rates, largely due to expansion in the companion animals sector.
- Biologicals will also enjoy sales growth boosted by technological development, whereas feed additives will experience a further undermining of their position, primarily due to reduction in use of medicated feed additives.

5.3 Regional Market Trends:
- North America remained the largest single region, accounting for 31.0%, having increased by some 18.7% across the 5-year review period.
- Sales in Western Europe grew at virtually the same level (+18.1%) to account for 23.5% of global sales, with Latin America and Asia-Pacific being the other two principal regions.
5.4 Major Market Share
- The US dominated the global animal health market, with a 29.3% share of value sales in 1999, with Japan and France in distant second and third places.
- The world’s top 10 markets accounted for 55.3% of global sales.

Chart: Major Markets’ Share of Global Animal Health Sales

Source: Euromonitor from trade sources

5.5 The US animal health market:
Worth more than $7.3 billion in 2003, the US is the world's biggest market for animal health and nutrition products, contributing almost 39% to global sales in the sector. From previous 2.9% in 1999.

5.6 The European animal health market:
The European animal health market is worth $3.5 billion, but each of the 15 national markets has its own structure, distribution routes, buying culture and regulatory environment - this represents 15 sets of challenges and opportunities. The 15 old Member States, which used to form the European Union (EU), generate nearly a quarter of the global animal health market. Five countries, France, the UK, Germany, Spain and Italy, dominate the regional market, accounting for 80% of the EU sales total.
5.7 A country-by-country strategic analysis of the $13.4 billion world animal health market.
The 15 largest national animal health markets were worth $10.89 billion in 2002 and accounted for 81% of the world market

- **Spain** is one of the fastest-growing animal health markets in the world, with sales up 30% in five years to reach €504 million in 2002. Pigs accounted for 31% of this and cattle for 32%.
- China's animal health market is forecast to increase from $846 billion in 2002 to almost $1.5 billion in 2010, when it will be the second largest national market after the US. Brazil will be in third place with sales of $1.2 billion.
- The Brazilian animal health market was worth $620 million in 2002 and biologicals accounted for one quarter of this, making it one of the largest biologicals markets in the world.
- The Mexican market is forecast to grow from $336 million in 2002 to $415 million in 2010, with the main drivers of growth being the NAFTA agreement, livestock production and health, and developments in the companion animal sector.

**Chart 4 Value Sales Development of Animal Health Products by Major Market**

**US$ million, msp**

![Chart showing value sales development of animal health products by major market.](chart.png)

*Source: Euromonitor from trade sources*
6. CORPORATE DEVELOPMENTS, MAYOR MANUFACTURERS:

6.1 Corporate Context
Essentially an involvement in the animal health sector almost always derives from a broader presence in the pharmaceuticals, chemicals or life sciences sectors, there being obvious synergistic opportunities in this respect.

Table: Animal Health Products: Major Manufacturers’ Sales Ranking

<table>
<thead>
<tr>
<th>Rank</th>
<th>Manufacturer</th>
<th>Sales (US$ million)</th>
<th>% share of total market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Merial 1</td>
<td>1,495</td>
<td>8.1</td>
</tr>
<tr>
<td>2</td>
<td>Roche 1</td>
<td>1,362</td>
<td>7.4</td>
</tr>
<tr>
<td>3</td>
<td>Pfizer</td>
<td>1,345</td>
<td>7.3</td>
</tr>
<tr>
<td>4</td>
<td>Bayer</td>
<td>976</td>
<td>5.3</td>
</tr>
<tr>
<td>5</td>
<td>BASF 1</td>
<td>770</td>
<td>4.2</td>
</tr>
<tr>
<td>6</td>
<td>Fort Dodge/AHP 1</td>
<td>700</td>
<td>3.8</td>
</tr>
<tr>
<td>7</td>
<td>Schering-Plough</td>
<td>678</td>
<td>3.7</td>
</tr>
<tr>
<td>8</td>
<td>Elanco</td>
<td>623</td>
<td>3.4</td>
</tr>
<tr>
<td>9</td>
<td>Novartis</td>
<td>618</td>
<td>3.4</td>
</tr>
<tr>
<td>10</td>
<td>Aventis</td>
<td>515</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: Euromonitor/company accounts

6.2 Leading Manufacturer Involvement:
The major manufacturers in the animal health market typically hold a wider involvement in either the human pharmaceutical or chemical industries. Of the top ten animal health companies, no fewer than eight are subsidiaries of large pharmaceutical corporations. About 60 percent of the global veterinary medicine market is produced by ten companies.

Chart: World’s Major Manufacturers of Animal Health Products

% value sales

Source: Euromonitor/company accounts
6.3 Industry consolidation: Trends in Merger & Acquisition Activity

1) There has been a significant degree of merger and acquisition activity in the global animal health market during the recent years. In most instances this has been prompted by changes in a wider business context.

2) At a different level, leading manufacturers have also been busy in acquiring smaller companies, often with a particular regional presence, in order to consolidate their global market position in animal health. This also sometimes extends the acquiring company’s sectoral presence.

6.4 Animal Health Share of Total Sales

This categorisation of leading manufacturers by the context of their involvement in the animal health market is confirmed by the following analysis of the proportion of their total group sales which animal health products are calculated to have represented in 1999.

Source: Euromonitor from company accounts

Although they provide no more than 4 to 5 percent of their parents’ sales, their contribution to corporate profits can be quite substantial because human treatments, though expensive to develop, can be applied to animal care at a relatively low cost.
7. RESEARCH AND DEVELOPMENT:

7.1 Product Innovation:
Research & development has become a key focus of manufacturers' attempts to develop their position in the animal health market. Particularly in the companion animal sector, recent years have witnessed a number of innovative new product launches which offer solutions to new disease threats. These partly arise from the increased life expectancy of animals such as dogs and cats, coupled with the raised level of consumer expectations in terms of the care their pets should receive. In this respect, there seems to be an almost direct translation of the relevance of new human drug developments to animal usage.

The quality of life of companion animals has also become a much more important feature of veterinary treatment, with the advent of drugs which treat problems such as cognitive dysfunction (the equivalent of Alzheimer's disease) or separation anxiety in dogs. These are likely to be a forerunner of future developments in the veterinary medicines field, not least because veterinary surgeons themselves are seeking to offer a wider range of treatments and a better service to their clients.

The development pipelines of most leading companies are well stocked with innovative new products:
- Health basics. Antiparasitic products will continue to be a major category, since all companion animals face the problem of infestations. The key issues for consumers are convenience, safety, and efficacy. New products that conveniently treat and control both internal and external parasites simultaneously will probably drive the market for health basics.
- The biologicals sector, including products such as vaccines, sera (concentrated blood extracts), and diagnostics, also has bright prospects. The opportunities of the future lie not only in bacterial and viral vaccines but also in vaccines that are capable of controlling, for example, fleas or heartworms.
- Age-related and chronic conditions. As the average age of the pet population rises, the market for products treating age-related and chronic conditions is going to grow steadily.
  - The biggest opportunity in this category is professional anti-obesity treatments (excluding diets), a market that alone could be worth more than $300 million. The products—appetite suppressants and metabolism enhancers—that drive the growth of this category are mostly crossover candidates from human research.
  - The second-largest opportunity might be products (for instance, vaccines) for reversible reproduction control in dogs and cats; today, two-thirds of US pets are spayed or neutered.
  - Other possibilities include products that reduce the allergic properties of pet hair or saliva.

7.2 Research & Development – Investment Levels:
It is generally difficult to identify a discrete level of research & development investment attributable only to animal health products, because most leading manufacturers report this only at a global level. The European trade association, FEDESA, calculates that, on average, manufacturers in the animal health sector invest more than 10.0% of sales on research & development activities, which equates at global level to around $1.2 billion.
7.4 Animal health research and development spending shows modest increase in 2003:
In 2003 Animal Health Institute member companies spent $516 million to research and develop potential new products and to ensure the safety and effectiveness of existing products, according to AHI’s latest Research and Development Survey. In 2003,
1) Innovative research expenditures were reported at $439 million, representing 85 percent of total R & D spending.
2) The remaining 15 percent, or $76 million, went toward defensive research. The proportion of spending on defensive work was slightly higher in 2003 than in 2002. The 2003 total represents an increase of 1 percent over 2002. The increased investment in research and development is proportionate to the trend in overall industry sales.

R&D Investment by Sector:
The following analysis of R&D spending in the US between 1994 and 1998, published by the US Animal Health Institute (AHI), provides a good indicator of overall trends in investment levels.


% value

Source: Euromonitor from US Animal Health Institute

7.4 Research & Development – Challenges
In a general context, the trend in levels of R&D spending is influenced by several factors:
- The impact of regulatory controls on the potential cost-effectiveness of this investment in the animal health sector
- The essentially local nature of most animal health markets.

As with the wider pharmaceutical environment, a new chemical entity requires a lengthy period of initial development to the point of regulatory approval (average 7-8 years) and even after a successful launch, the US$50-100 million required to fund that development for each new product cannot usually be recovered quickly. At the same time, in an increasingly competitive market environment, the exclusivity of a technological advance may be relatively short-lived, so that speeding the process to market launch is of prime.
8. CONCLUSION:

Barriers to growth on the animal healthcare
• Animal health products typically represent a minor element of the corporate portfolio of the world’s leading manufacturers in this market. There may be intensifying pressure on investment resources to be directed at other, more significant sectors of their business.
  • This situation will not necessarily be improved by further merger and acquisition activity, unless it is specifically directed at leveraging a company’s position in the animal health market.
  • Further pressures on R&D investment will come from tightening of regulatory controls and an increase in the level of generic competition in the animal health market.
  • The depressed state of farm incomes in many countries will continue to inhibit purchasing of animal health products for use with livestock.

Strategy to follow:
Even so, the profits can seem small to major pharma companies, and some of them are thinking about divesting these subsidiaries in order to focus more on their human drug business. My research indicates that animal health divisions could be worth keeping.

Strategies:
1- Licensing and Partnership Opportunities in Animal Health R&D:
Much of the most innovative R&D in the animal health industry is being done by specialist companies developing proprietary technologies.
With no sign of an early return to more substantial rates of market growth, the operating climate facing the animal health industry will remain difficult for the foreseeable future. Companies operating in the sector face a range of internal market constraints, but many are also under pressure from parent companies to improve margins.
Improved marketing of existing portfolios and the application of cost-containment strategies might improve revenues and profitability in the short term, but success in the longer run will depend in most cases on the quality and breadth of individual company pipelines. These will feature a range of products and technologies acquired or licensed through deals with research specialists.

2- An analysis of existing products that can be adapted for the companion animal market:
Current human pharmaceuticals and insecticides present some of the best opportunities for new products for companion animals. These 'crossover products' avoid long and costly development programmes and are likely to be the brands that will drive growth in the companion animal sector over the next decade.

At the same time, research and development costs continued to spiral upwards in the face of technological change and increasing regulatory demands. Hard-pressed animal health companies have been forced to trim their research portfolios and reassess the risks associated with new product development efforts in some key product areas, notably feed additives and biotechnology products.

The growth in the market for companion animal products and the increase in R&D costs have combined with the fact that most of the leading animal health companies are owned by parent companies focused on the human pharmaceutical (and in some cases the agrochemical) sector. Consequently, many animal health companies have started to develop 'crossover' products, i.e. those developed originally for use in the human health or crop protection sectors and adapted for veterinary use.