ASTRAZENECA PLC Form 6-K March 06, 2007

#### FORM 6-K

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 Report of Foreign Issuer

> Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934

Date of Report: 28 February 2007

Commission File Number: 001-11960

#### AstraZeneca PLC

15 Stanhope Gate, London W1K 1LN, England

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F <u>X</u> Form 40-F
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):
Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):
Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.
Yes No _X_  If Yes is marked, indicate below the file number assigned to the Registrant in connection with Rule 12g3-2(b): 82

#### **AstraZeneca PLC**

INDEX TO EXHIBITS

1. Annual Report & Form 20-F Information 2006

#### **SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AstraZeneca PLC

Date: 6 March 2007 By: /s/ J W Hoskins

Name: J W Hoskins

Title: Assistant Secretary



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# Cautionary statement regarding forward-looking statements

The purpose of this Annual Report and Form 20-F Information is to provide information to the members of the Company. In order, inter alia, to utilise the □safe harbour□ provisions of the US Private Securities Litigation Reform Act 1995, we are providing the following cautionary statement: This Annual Report and Form 20-F Information contains certain forward-looking statements with respect to the operations, performance and financial condition of the AstraZeneca Group. Although we believe our

expectations are based on reasonable assumptions, any forward-looking statements, by their very nature, involve risks and uncertainties and may be influenced by factors that could cause actual outcomes and results to be materially different from those predicted. The forward-looking statements reflect knowledge and information available at the date of the preparation of this Annual Report and Form 20-F Information and the Company undertakes no obligation to update these forward-looking statements. We identify the forward-looking statements by using the words [anticipates],

□believes□, □expects□, □intends□ and similar expressions in such statements. Important factors that could cause actual results to differ materially from those contained in forward-looking statements, certain of which are beyond our control, include, among other things, those factors identified under the heading Risk Factors on pages 172 to 176 of this document. Nothing in this Annual Report and Form 20-F Information should be construed as a profit forecast.

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ASTRAZENECA IS ONE OF THE WORLD S LEADING PHARMACEUTICAL COMPANIES, WITH A BROAD RANGE OF MEDICINES DESIGNED TO FIGHT DISEASE IN IMPORTANT AREAS OF HEALTHCARE. BACKED BY STRONG SCIENCE AND WIDE-RANGING COMMERCIAL SKILLS, WE ARE COMMITTED TO SUSTAINABLE DEVELOPMENT OF OUR BUSINESS AND THE DELIVERY OF A FLOW OF NEW MEDICINES THAT MAKE A DIFFERENCE IN THE LIVES OF PATIENTS AND CREATE VALUE FOR OUR SHAREHOLDERS AND WIDER SOCIETY.

#### **2006 IN BRIEF**

- > SALES INCREASED BY 11% TO \$26,475 MILLION.
- > STRONG PERFORMANCE OF FIVE KEY GROWTH PRODUCTS (NEXIUM, SEROQUEL, CRESTOR, ARIMIDEX AND SYMBICORT) WITH COMBINED SALES REACHING \$13,318 MILLION, UP 23%.
- > OPERATING PROFIT INCREASED BY 28% TO \$8,216 MILLION.
  OPERATING MARGIN IMPROVED BY 3.8 PERCENTAGE POINTS TO 31.0%
  OF SALES.
- FREE CASH FLOW OF \$6,788 MILLION. SHAREHOLDER RETURNS TOTALLED \$5,382 MILLION (DIVIDENDS \$2,220 MILLION; NET SHARE RE-PURCHASES \$3,162 MILLION).
- > DIVIDEND INCREASED BY 32% TO \$1.72.
- > EPS UP 34% TO \$3.86.
- OUR PRODUCT PORTFOLIO NOW INCLUDES 11 MEDICINES EACH WITH ANNUAL SALES OF MORE THAN \$1 BILLION.
- > GOOD SALES GROWTH IN ALL REGIONS, WITH THE US UP 16%, EUROPE UP 6%, JAPAN UP 5% AND REST OF WORLD UP 11%.
- > BETWEEN 1 DECEMBER 2005 AND 31 JANUARY 2007, THE COMPANY HAS COMPLETED 12 SIGNIFICANT LICENSING AND ACQUISITION

### PROJECTS AND NINE SIGNIFICANT RESEARCH COLLABORATIONS.

# 2 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006 CHAIRMAN S STATEMENT

□DESPITE A CHALLENGING ENVIRONMENT, STRONG SALES GROWTH OF OUR MAJOR PRODUCTS, PARTICULARLY OUTSIDE EUROPE, COUPLED WITH OUR DETERMINED PURSUIT OF PRODUCTIVITY GAINS HAS DELIVERED ANOTHER OUTSTANDING FINANCIAL PERFORMANCE.□

In 2006, Group sales totalled \$26.5 billion (up 11%) with an operating profit of \$8.2 billion (up 28%). Our R&D investment increased this year in absolute terms and as a percentage of sales from \$3.4 billion to \$3.9 billion, reflecting our firm commitment to building the platform for future growth. That investment is focused on life-cycle management of our key marketed products, developing new products with an emphasis on efficiency and effectiveness improvements, and intelligent acquisition and licensing of products and technologies that will supplement our internal efforts. Major investments were also announced during the year in new R&D facilities that will support this strategy, notably in the UK and China.

Whilst AstraZeneca\( \) s share price fluctuated during the year, earnings per share grew by 34% from \$2.91 in 2005 to \$3.86 in 2006. This reflects the strong growth from our products and careful management of our costs. The Board has recommended a second interim dividend of \$1.23 (63.0 pence, SEK 8.60) per Ordinary Share bringing the total dividend for the year to \$1.72 (89.6 pence, SEK 12.20), an increase of 32%. The buy-back programmes approved by our shareholders at our Annual General Meeting (AGM), under which we return cash to shareholders in excess of our anticipated requirements for future investment, amounted to \$4,147 million in 2006. We are targeting net share re-purchases for 2007 of \$4 billion.

On page 90 we report on our total shareholder return relative to the FTSE 100 and to a group of our industry peers.

The Board conducted its annual formal strategy review and reinforced our commitment to the delivery of sustained revenue growth through an R&D model that delivers new science and innovative products through in-house capabilities and external partnerships,

alliances and acquisitions. The strategy review gave full consideration to overall global trends of continued growth in demand for improved healthcare; an ageing population, undiagnosed and unmet medical needs; economic development in emerging markets; sustained downward pressure on prices for medicines and ever-more demanding regulatory requirements.

David Brennan has completed his first year as our Chief Executive Officer, and you will see his review of AstraZeneca\[ \]s performance during that period, the strategic direction and his vision for the future in the following section of this report. With his distinctive leadership style and strong focus on individual accountabilities at all levels within the Company, he has been quick to make his mark. I thank him, his colleagues on the Senior Executive Team and all our employees, including those who have recently joined the AstraZeneca family through acquisition, for their contribution this year.

In addition to its review of strategy, the Board as part of its regular cycle of meetings also conducted financial and business reviews as well as functional reviews, which this year paid particular attention to risk assessment, compliance, human resources, and safety, health and environmental issues. More about these issues is provided elsewhere in this report and also in the Corporate Responsibility Summary Report 2006.

There were a number of changes to the Non-Executive composition of the Board during the year. Professor Dame Nancy Rothwell was elected at the 2006 AGM. Dame Nancy is currently Vice President for Research at the University of Manchester in the UK and as one of the leading scientists of her generation she brings a valuable perspective to our discussions.

John Varley, Group Chief Executive of Barclays Bank plc, was appointed to the Board in July, and his extensive commercial and financial expertise is already bringing considerable benefit to our work. John has joined the Remuneration Committee and he will become Chairman of that Committee when Sir Peter Bonfield steps down from the Board at the 2007 AGM. At that time it is also intended that Michele Hooper, who has been a Non-Executive Director of AstraZeneca PLC since 2003, will become the Senior Independent Director in succession to Sir Peter.

Dame Bridget Ogilvie, FRS retired at the 2006 AGM after over nine years service as a Non-Executive Director, and I would like to thank her warmly on behalf of the Board for her sustained contribution to both AstraZeneca and, before that, Zeneca.

In 2007, we will strive to continue to meet the needs of patients, reward shareholders and benefit wider society by strengthening our pipeline, driving top-line sales growth and making further productivity improvements, as well as understanding and influencing the changing business environment in which we and our stakeholders operate. You can hear more about the Company[]s strategy from David Brennan in the section that follows. David and his management team have my and the Board[]s unqualified support for the steps they are taking to address the challenges that AstraZeneca and our industry are facing.

#### **LOUIS SCHWEITZER**

Chairman

CHIEF EXECUTIVE OFFICER S REVIEW

□AFTER MY FIRST YEAR AS CHIEF EXECUTIVE OFFICER, I AM DELIGHTED TO INTRODUCE AN ANNUAL REPORT THAT NOT ONLY RECORDS OUR STRONG FINANCIAL PERFORMANCE DURING 2006 BUT ALSO DEMONSTRATES OUR COMMITMENT TO OVERCOMING THE CHALLENGES THAT WE AND OUR INDUSTRY FACE IN AN EVER-TOUGHER ENVIRONMENT AND TO CONTINUING TO DELIVER A PERFORMANCE THAT WILL PLACE US AMONG THE BEST IN THE INDUSTRY.□

AstraZeneca is a successful, research-based, prescription pharmaceutical business. We bring benefit for patients and add value for our shareholders and wider society through innovation and the responsible delivery of medicines in important areas of healthcare.

The demand for healthcare continues to grow. People are living longer, populations are increasing and the emergence of new economies means that the number of patients who can benefit from medicines is expanding. At the same time, many diseases remain under-diagnosed, sub-optimally treated or do not have effective therapies. Alongside these significant opportunities for AstraZeneca to make a difference, we face some tough challenges [including growing pressure on the price of our marketed products, higher costs and regulatory hurdles for the development of new ones and an increasingly competitive marketplace, including earlier challenges to our patents.

Our strategy for achieving sustained, industry-leading growth within this environment centres on three key priorities:

- > Strengthening our pipeline of new medicines, from our own research laboratories and by accessing scientific innovation outside AstraZeneca;
- > Delivering the full potential of all our marketed medicines, through rigorous life-cycle management, excellent customer support; and
- > Challenging our cost structure to make room for further investment in R&D and externalisation, while increasing access to our medicines.

#### PATIENTS, PRODUCTS, PEOPLE AND PERFORMANCE

Our business objectives are focused on four core areas  $\square$  patients, products, people and performance  $\square$  that we believe are core drivers of success in delivering our strategy.

To bring the most benefit for patients and those who treat them, we must continue to understand what makes a difference for them  $\$  and apply that insight across all of our activities to ensure we remain targeted on their changing needs. For the future, we recognise that sustainable long-term success depends on further strengthening the flow of new products  $\$  whether from our own laboratories or from outside AstraZeneca. The continued commitment and energy of our people is vital, and we aim to provide the leadership and support they need to deliver their best contribution to achieving our business goals. By keeping our promises in all aspects of our business, and effectively managing the associated opportunities and risks, we aim to drive a performance that will place us among the best in the industry.

#### **OUR YEAR IN BRIEF**

2006 saw some good progress. The Company delivered excellent financial results, with strong sales growth of 11%, enhanced by our continued commitment to improve productivity across the business.

#### **Product performance**

In the short to medium term, our growth is expected to continue to be driven by five key products, launched over the last 12 years

☐ Arimidex, Crestor, Nexium, Seroquel and Symbicort. In 2006, these five key growth products together delivered sales of \$13.3 billion, up 23% from last year, and overall sales of all our products, including our successful mature brands such as Casodex, Zoladex, Seloken/Toprol-XL, Zomig, Diprivan and Merrem, totalled \$26.5 billion.

With sales of \$1.5 billion, up 29% from last year, *Arimidex* is now the leading hormonal breast cancer therapy in the US, Japan and France. This continued growth is largely based on results from the ATAC study, which showed *Arimidex* to be superior to tamoxifen in the five years after surgery, when the risk of the cancer recurring is at its highest. In June, following approval through mutual recognition for a new use, many patients in Europe currently receiving tamoxifen can now be switched to *Arimidex*.

Crestor, our highly effective treatment for managing cholesterol levels, achieved sales of over \$2 billion, an increase of 59% over last year. Data from two clinical studies (ORION in 2005 and ASTEROID in 2006) demonstrated strong potential for *Crestor* in the treatment of atherosclerosis. The METEOR study has also now been completed, and the results will be presented in March 2007. The METEOR study forms the basis of a submission for an atherosclerosis label made to the Food and Drug Administration (FDA) and in the EU through the Mutual Recognition Procedure in January 2007. ASTEROID and ORION were included in the submission as supportive studies.

*Nexium*, our treatment for acid-related diseases, achieved sales of \$5.2 billion. During the year, we gained approval for the additional use of *Nexium* in children aged 12-17 years with gastro-oesophageal reflux disease, and for a new use in treating patients with the rare gastric acid disorder, Zollinger Ellison Syndrome.

Seroquel, with sales of \$3.4 billion, further strengthened its position as the market-leading atypical anti-psychotic therapy in the US and continued to grow strongly elsewhere. Already used for the treatment of schizophrenia and bipolar mania, we gained approval during the year in the US for its use in bipolar depression. Seroquel is the first and only single-agent medication approved for both mania and depression in bipolar disorder.

#### 4 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006

#### CHIEF EXECUTIVE OFFICER S REVIEWCONTINUED

In December, the European Patent Office ruled that one of the European substance patents for *Nexium* would be rejected. Both *Nexium* and *Seroquel* continue to be the subject of patent litigation in the US following the filing of Abbreviated New Drug Applications in 2005 and 2006. AstraZeneca continues to have confidence in the intellectual property portfolio protecting *Nexium* and *Seroquel* and will defend and enforce its intellectual property rights protecting both products.

Symbicort achieved global sales of \$1.2 billion in 2006, up 18%. During the year, it was approved in the US in a pressurised Metered Dose Inhaler for maintenance treatment of asthma in patients aged 12 years and above. We continue to plan for a US launch for Symbicort around the middle of 2007, although achieving this launch timeline is dependent upon successful transfer of technology from development to manufacturing and completion of validation batches. In addition, Symbicort SMART was approved for use in adults through the EU Mutual Recognition Procedure.

You can read more about our product performance in other sections of this report.

#### In our markets

The growing demand for healthcare means increasing pressure on the budgets of governments and others who pay for it. We must manage the associated downward pressure on the price of our products, whilst continuing to invest in providing medicines that make a difference. During 2006, pricing pressure was particularly strong in Europe, where governments continue to introduce cost-containment measures such as jumbo reference pricing in Germany. In the US, still the world slargest pharmaceutical market, the Democratic gains in the mid-term election may signal further changes to the pricing environment in that country. You can read more about this in the Geographic Review and Price Regulation sections (pages 33 and 50).

As we continue to focus on managing such challenges and building on our leading positions in established markets, we are also increasing our strength in fast-developing markets, such as China. During the year, we announced a \$100 million R&D investment over the next three years in China, which reflects our commitment to building our presence in this important market. As part of this, I was pleased to hold in 2006 the first AstraZeneca Senior Executive Team meeting in that country.

#### Strengthening our pipeline

There are three linchpins in our strategy to strengthen the pipeline. First, improve the productivity of our own in-house discovery and development efforts. Second, continue to increase the pace with which we evaluate and acquire promising projects from external sources. This is not a short-term stopgap to backfill the pipeline. It represents an important change in mindset. We are making a long-term commitment to step up our access to the world of scientific innovation that resides outside AstraZeneca. The third element is our commitment to establishing AstraZeneca as a major international presence in biopharmaceuticals.

#### **Enhancing in-house discovery and development**

During 2006, we continued our drive to improve the efficiency of our internal R&D processes and the effectiveness of our decision-making so that we can quickly eliminate weaker drug candidates and concentrate on the robust, rapid progress of the ones most likely to succeed as significant advances in healthcare. We also reviewed our disease target areas and re-focused our effort to ensure our scientific resources are prioritised on those areas where we believe our skills can make the most difference and where the largest opportunities lie.

The results of our drive to improve productivity are reflected in the sustained size of the early development portfolio. During 2006, 21 candidate drugs were selected for development (compared with 25 in 2005 and 18 in 2004). We have a number of compounds in the later stages of development including *Zactima* and *Recentin* (formerly AZD2171) for treating cancer, and AGI-1067 and AZD6140

for cardiovascular disease. You can read more about these and the other compounds in the therapy area review (pages 16 to 32) and in our development pipeline table on pages 40 to 42.

#### **Accessing external innovation**

Our commitment to keeping up the pace of externalisation to further strengthen our pipeline is reflected in our establishment of a new Strategic Planning and Business Development function, dedicated to finding the best opportunities available and delivering high quality deal execution and alliance management capabilities. In January 2007, we made a significant step in strengthening our late-stage pipeline when we announced a collaboration with Bristol-Myers Squibb Company (BMS) to develop and commercialise two late-stage compounds, discovered by BMS, being studied for the treatment of Type 2 diabetes  $\square$  an area of high unmet medical need. Together with other recent successes, such as the alliance with Schering AG to co-develop and jointly commercialise a novel breast cancer treatment and the collaboration with Abbott to co-develop and market a combination treatment for mixed dyslipidaemia, it also indicates the progress we have already made towards becoming a preferred partner.

#### **Building our biopharmaceuticals presence**

Biopharmaceuticals [] medicines derived from biological molecules [] have been the fastest-growing segment of the pharmaceuticals market in recent years. While AstraZeneca[]s science base already possessed some discovery and development capabilities for new biological medicines, our historic strength has been centred on small molecules. We need to strengthen our capacity to attack new disease targets with small molecules and biologicals in an integrated fashion, across all our therapy areas. Our acquisition of Cambridge Antibody Technology Group plc (CAT) was a significant step towards achieving this aim. CAT[]s skills in biopharmaceuticals complement our own expertise in small molecule science, and provide a foundation for building a future pipeline of new products from both areas of research. We anticipate that from 2010 onwards, one in four AstraZeneca candidate drugs eligible for full development will be biologicals.

#### CHIEF EXECUTIVE OFFICER S REVIEW 5

These efforts will strengthen our long-term sustainability and help us to withstand the impact of some of the setbacks that we experienced with our pipeline this year. In February 2006, we withdrew our anticoagulant, *Exanta*, from the market and halted its development on patient safety grounds. We also stopped late-stage development of *Galida*, our potential diabetes therapy, and NXY-059, a potential treatment for stroke, because they were not demonstrating sufficient patient benefit. Whilst such decisions are disappointing to make, they are an indication of the challenges associated with delivering a new medicine and reflect our commitment to patient safety and to maintaining a portfolio of only the highest quality, highest potential candidates.

Throughout all of these activities, maintaining our fundamental commitment to corporate responsibility (CR) remains a top priority. More information about our CR commitment, policies and performance in this area is available in our separate Corporate Responsibility Summary Report 2006 or on our website.

#### THE PEOPLE OF ASTRAZENECA

In my first year as CEO, I have visited many areas of AstraZeneca and have been consistently impressed with the skills, creativity and professionalism of our people around the world. They are our most valuable asset, and without their continued commitment to achieving our goals we would not succeed. I would like to take this opportunity to thank them for their hard work and contribution to driving the continued success of the Company.

#### **LOOKING FORWARD**

The pharmaceutical industry operates in an increasingly tough environment. We know that, to continue to be successful in this environment, we must recognise and manage the challenges and actively exploit the many opportunities that rising demand for healthcare and advances in science and technology offer.

Strengthening the pipeline remains our top priority. However, we will also continue to challenge all elements of our business to drive productivity and provide for the increased investment to support achievement of our strategic objectives. As part of this, in February 2007, we announced further plans to improve the efficiency and effectiveness of our supply organisation, which will involve reductions to the workforce. Decisions such as these are not taken lightly and I am very aware of the impact this will have on the people affected and the communities in which we operate. The reductions will be the subject of a full consultation process with works councils, trade unions and other employee representatives, and in accordance with local labour laws, to ensure the process is fair and transparent.

I am confident that, with strong leadership, clear direction and a sense of urgency around delivery, we have a sound platform for continued success. Above all, my aim is to deliver sustained, profitable and responsibly managed growth while ensuring that AstraZeneca continues to make a valuable contribution to global healthcare.

#### **DAVID R BRENNAN**

Chief Executive Officer

# 6 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006 FINANCIAL HIGHLIGHTS

#### **DIVIDEND FOR 2006**

Total	1.72	89.6	12.20	
Second interim dividend	1.23	63.0	8.60	19 March 2007
First interim dividend	0.49	26.6	3.60	18 September 2006
	\$	Pence	SEK	Payment date

<sup>&</sup>lt;sup>1</sup> Growth rates represent underlying performance, which shows growth at constant exchange rates (CER) by excluding the effects of exchange rate movements. Underlying CER growth is calculated by retranslating the current year performance at the previous year sexchange rates and adjusting for other exchange effects, including hedging.

 $<sup>^2</sup>$  Free cash flow represents net cash flows before financing activities, and is calculated as: net cash inflow before financing activities, adjusted for acquisitions of businesses, movements in short term investments and fixed deposits and disposal of intangible assets.





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#### **BUSINESS REVIEW**

#### **ASTRAZENECA IN BRIEF**

- WE DISCOVER, DEVELOP, MANUFACTURE AND MARKET PRESCRIPTION PHARMACEUTICALS FOR IMPORTANT AREAS OF HEALTHCARE: CARDIOVASCULAR, GASTROINTESTINAL, NEUROSCIENCE, ONCOLOGY, RESPIRATORY AND INFLAMMATION, AND INFECTION.
- > BROAD PRODUCT RANGE, INCLUDING MANY WORLD LEADERS AND A NUMBER OF KEY GROWTH PRODUCTS: ARIMIDEX, CRESTOR, NEXIUM, SEROQUEL AND SYMBICORT.
- > ACTIVE IN OVER 100 COUNTRIES WITH GROWING PRESENCE IN IMPORTANT EMERGING MARKETS; CORPORATE OFFICE IN LONDON, UK; MAJOR R&D SITES IN SWEDEN, THE UK AND THE US.
- > OVER 66,000 EMPLOYEES (58% IN EUROPE, 27% IN THE AMERICAS AND 15% IN ASIA, AFRICA AND AUSTRALASIA).
- > AROUND 12,000 PEOPLE AT 16 R&D CENTRES IN 8 COUNTRIES.
- > 27 MANUFACTURING SITES IN 19 COUNTRIES.
- WE SPEND OVER \$16 MILLION EACH WORKING DAY ON DISCOVERING AND DEVELOPING NEW MEDICINES.

#### **INTRODUCTION**

In this section, we have applied the best practice principles of an operating and financial review and discuss the main trends and factors underlying the development, performance and position of AstraZeneca during 2006.

To that end, we provide in this business review an overview of AstraZeneca\( \) s business environment and information about our research, development, manufacturing and sales and marketing activities worldwide, including our 2006 performance in these areas, as seen through the eyes of the Board.

We describe the external environment in which we operate, including the opportunities and challenges, the market for pharmaceuticals, the competitive and regulatory environment, and the principal risks and uncertainties.

We describe our strategy for managing the opportunities and challenges of our business environment, the resources that we bring to bear and how they are aligned to create value through achievement of our strategic objectives, and likely future developments in our business. We also highlight the importance of leadership, effective decision-making and risk management.

Finally, we explain how our progress towards achievement of our objectives is measured.

In the therapy area, geographic and financial reviews, we report on our financial performance during 2006 at a global level, in different geographic areas and at a product level. We also report in detail on the progress of our pipeline and developments in relation to our marketed products (such as new indications, regulatory filings and clinical trial data).

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## DIRECTORS' REPORT 9 Business Review

#### **BUSINESS ENVIRONMENT**

# AS A GLOBAL, RESEARCH-BASED PHARMACEUTICAL COMPANY, WE OPERATE IN AN EVER-CHANGING ENVIRONMENT THAT PRESENTS BOTH OPPORTUNITIES AND CHALLENGES FOR OUR BUSINESS.

#### **GROWING DEMAND FOR HEALTHCARE**

There remains a strong fundamental demand for healthcare that underpins the industry s future growth prospects. Specific elements that contribute to this include:

- > The growing number of people who expect high standards of healthcare, especially among the elderly, who represent a rising proportion of developed nations populations; and
- Many diseases are under-diagnosed, sub-optimally treated or do not have effective therapies.

The growing demand for healthcare will be met not only by existing therapies but also by new ones originating from advances in the understanding of the biology of disease and the application of new technologies. Innovative new products have been launched by the industry in recent years, which are changing therapeutic approaches and are improving quality of life for patients.

In addition, fast-developing economies such as China and India are expanding the number of patients who can benefit from medicines. This represents a significant opportunity for the industry.

#### **WORLD MARKETS**

The world pharmaceutical market in 2006 was valued at \$574 billion. This represents an increase in constant US dollar terms of 6% over the previous year, which is lower than in 2005 (when growth was 7%). The US is by far the largest pharmaceutical market in the world, accounting for \$267 billion of sales (47% of the worldwide total). US growth rose to 7% in 2006 (from 5% in 2005), despite continuing cost-containment pressures and the growing use of generic pharmaceuticals. This rise was largely due to the increased uptake of products following implementation of the Medicare prescription drug

Japan is the second largest country for pharmaceutical sales at \$57 billion (10% of worldwide sales), with growth of 1% in 2006 declining from 7% growth in 2005. This was largely due to the biennial price revisions enforced by the Japanese Ministry of Health, Labour and Welfare.

Europe accounts for 29% of the world market and growth slowed to 5% in 2006 (from 6% in 2005). Growth among major markets within Europe ranged from 0% in Belgium to 7% in Spain, with large countries such as Germany, France and the UK showing growth of 3%, 4% and 3%, respectively.

Asia Pacific and Latin America account for 7% and 4%, respectively, of worldwide sales. Notable growth from countries in these regions in 2006 came from China (sales of \$10.4 billion, growth of 13%), Brazil (sales of \$8.6 billion, growth of 14%), Korea (sales of \$8.3 billion, growth of 13%) and India (sales of \$5.4 billion, growth of 13%), which ranked 9th, 10th, 11th and 15th respectively in world markets.

#### **THERAPY AREAS**

According to the World Health Organization (WHO), the greatest burden of disease is in non-communicable disease. Conditions such as malignant tumours, ischaemic heart disease, cerebrovascular disease, chronic obstructive pulmonary disease (COPD), schizophrenia, bipolar disorder and asthma are significant contributors. However, communicable diseases are also increasing, due primarily to HIV/AIDS and tuberculosis.

AstraZeneca skills, experience and resources are focused on the following therapy areas, which together represent a significant proportion of the worldwide burden of disease:

#### Cardiovascular (CV)

CV disease claims more lives each year than the next four leading causes of death combined.

benefit scheme in 2006.

In this Business Environment section, unless otherwise specified, sector-wide market data (ie not specific to AstraZeneca or any of its products) are based on MAT (Moving Annual Total) Q3 2006 data and the 2005 comparisons are based on MAT Q4 2005 data.

Globally, CV disease accounts for 17 million deaths each year, making it the greatest risk to life for most adults. CV is also the single largest therapy area in the global healthcare market, with a world market value of \$137 billion. One in three adults has some form of CV disease, including diseases such as high blood pressure (market value \$48 billion), abnormal levels of blood cholesterol (market value \$35 billion), thrombosis  $\square$  including heart attacks and stroke (market value \$17 billion)

and diabetes (market value \$20 billion). High blood pressure and abnormal levels of blood cholesterol are well known to damage the arterial wall and thereby to lead to atherosclerosis. The most important and frequent manifestations of atherosclerosis are heart attacks and stroke. Diabetes is associated with an increased risk for a number of serious, sometimes life-threatening complications, including heart attack, stroke, blindness, kidney disease, nervous system disease and amputations. Heart disease death rates among adults with diabetes are two-to-four times higher than the rates for adults without diabetes. In the US, 21 million people suffer from diabetes and two in five people with diabetes still have poor cholesterol control, one in three have poor blood pressure control and one in five have poor glucose control.

#### **Gastrointestinal (GI)**

The world GI market is valued at \$35 billion, of which the proton pump inhibitor market represents \$23 billion. In the West (ie Europe and North America combined), according to different estimates between 10% and 20% of adults suffer from gastro-oesophageal reflux disease (GERD). The prevalence rate of GERD in Asia is lower but increasing.

#### **Neuroscience**

The world market value in this therapy area is \$108 billion. It comprises psychiatry (market value \$49 billion), neurology (market value \$30 billion), analgesia (market value \$25 billion) and anaesthesia (market value \$4 billion). The medical need continues to be significant in all of these areas, and at AstraZeneca we are targeting areas where new therapies can make a real difference:

- > Depression and anxiety disorders remain under-diagnosed and under-treated, with 15% of the population suffering from major depression on at least one occasion in their lives, schizophrenia affecting around 1% of the population, and 17 million people suffering from bipolar disorder across the major markets.
- > Alzheimer s disease, the most commorcause of dementia, affects more than 24 million people worldwide today, with this number predicted to reach 40 million by 2020. Further, current therapy is symptomatic and does not significantly modify the course of this progressive neuro-degenerative disorder.
- > Chronic pain, which affects over 20% of the population, is a significant medical need, with pain management the most common reason for seeking medical care.

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#### **BUSINESS ENVIRONMENT CONTINUED**

#### Cancer

The world market value for cancer therapies is \$32 billion and growing strongly. Despite dramatic advances in treatment, cancer remains the second highest cause of death in developed countries, and epidemiological evidence points to this trend now emerging in the less developed world. At present cancer accounts for 7.6 million (or 13%) of all deaths worldwide annually, with these numbers projected to continue rising, resulting in an estimated 9 million people dying from cancer in 2015 and 11.4 million dying in 2030. Globally, lung cancer kills more people than any other tumour type. However, there are significant differences in the pattern and severity of disease between Asian and Western populations. Whilst breast, prostate and colo-rectal cancers are common in the West, gastric and liver cancers are more prevalent in Asia. For further information about our cancer therapies, see page 26.

#### **Respiratory & Inflammation**

The respiratory world market value is \$43 billion. The WHO estimates that 100 million people worldwide suffer from asthma and more than twice that from COPD, which is currently the fourth leading cause of death in the world with further increases in the prevalence and mortality of the disease predicted for the coming decades. The inflammatory market is estimated to be worth \$16 billion, with over 40% being for the treatment of rheumatoid arthritis. Biological therapies dominate the inflammatory market in terms of sales value.

Information about the medicines we have or are developing in the above disease areas and our 2006 product performance is set out on pages 29 to31.

#### Infection

The world market value is \$59 billion, with anti-bacterials accounting for \$31 billion. Infectious diseases cause more than 11 million deaths each year. World demand for antibiotics remains high, due to escalating resistance and the increased risk of serious infections. Tuberculosis remains a worldwide threat and is newly diagnosed in approximately two million people every year in India and over eight million people worldwide.

#### **GROWING CHALLENGES FOR INDUSTRY**

Whilst the fundamentals of the world pharmaceuticals market remain robust, the industry is facing real challenges.

#### **Pressure on costs**

Expenditure on healthcare typically represents between 6% and 15% of a country Gross Domestic Product (GDP), with developed countries towards the top end of that range and developing countries spending less. As a proportion of this, pharmaceutical expenditure is usually between 10% and 20% and is therefore still less than 2% of GDP in most countries.

Nevertheless, healthcare systems, whether based on public or private funding, have a finite ability to pay for treatments. Cost-containment remains an ever-present constraint on industry growth. During 2006, further pricing pressures have been placed on the industry through legislation and other means, not only in major established markets, but also in China and India. For more information, see page 50 (Price Regulation).

Doctors remain the principal decision makers regarding which of the available treatments should be prescribed for their patients, but as the economic burden of funding therapies increases, payers, including governments, health insurers, managed care organisations and employers are increasing their efforts to influence the choices doctors make.

#### **Demonstrating economic benefit**

Research-based pharmaceutical companies increasingly have to demonstrate the economic as well as the therapeutic value of their medicines to those who pay for healthcare. This requires investment, throughout the life-cycle of a medicine, in studies to demonstrate added medical benefit, cost-effectiveness, cost-benefit and medical outcomes (such as survival and quality of life improvements) in addition to traditional clinical trials

designed to establish safety and efficacy. These research efforts also help to ensure we can target our treatments at those patients who will benefit most, a growing expectation of payers and of society in general.

#### Research and development productivity

Successful companies will be those that enhance their productivity in the discovery and development of new and differentiated medicines designed to meet the growing demand. The industry is working to improve research productivity through the application of new technologies. At the same time, our regulators are also setting increasingly high hurdles for the approval of medicines.

#### **Drug safety**

Decisions on acceptable benefit/risk profiles for medicines have the potential to be positively or negatively affected by a number of factors. These include pre-clinical data, pre- and post-marketing clinical data and regulatory decisions reflecting society concerns and aspirations. For more information, see page 46.

#### **Competition**

AstraZeneca[s principal competitors are other international, research-based pharmaceutical and biotechnology companies that also sell branded, patent-protected, prescription medicines. In common with those other companies, following patent expiry, our products also compete with generic pharmaceuticals [] mainly on price, since generic manufacturers do not bear the high costs of research and development. Nor do they typically invest in safety monitoring or marketing to create the demand that companies such as AstraZeneca do. The industry[s intellectual property base is increasingly being challenged by generic companies seeking an early entry into large markets, which puts pressure on product life-cycles.

#### **Industry regulation**

The pharmaceutical industry is one of the most strictly regulated of all industries. Prescription pharmaceutical products are subject to significant legislation and regulation, the amount and impact of which are still growing, concerning the requirements for establishing safety, efficacy and quality. The degree and scope of these regulations vary according to national and regional demands concerning the development and commercialisation of drug products. The processes for regulatory approval for products are complex, time-consuming and involve significant expenditure. In addition to safety and efficacy, regulation covers every aspect of the product including the chemical composition, manufacturing, quality controls, handling, packaging, labelling, distribution, promotion and marketing. After launch of new medicines, regulatory agencies require numerous conditions to be met in the safety surveillance, risk management, clinical, manufacturing and marketing areas. For more information, see pages 50 and 51.

#### Reputation

The reputation of the pharmaceutical industry has been in decline. Contributory factors include heightened public concern about issues such as drug safety (exacerbated by some high-profile withdrawals of marketed medicines in recent years), transparency of information, sales and marketing practices, and the cost of medicines.

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#### **STRATEGY**

# ASTRAZENECA IS A SUCCESSFUL GLOBAL RESEARCH-BASED PRESCRIPTION PHARMACEUTICAL COMPANY, AND OUR GOAL IS TO

MAKE A DIFFERENCE IN THE LIVES OF PATIENTS AND CREATE VALUE

FOR OUR SHAREHOLDERS AND WIDER SOCIETY, THROUGH THE

# DELIVERY OF INNOVATIVE MEDICINES IN IMPORTANT AREAS OF HEALTHCARE.

#### **OUR STRATEGY**

Our strategy for ensuring that we continue to make our best contribution to healthcare and deliver sustained, industry-leading, responsibly managed growth centres on three key priorities:

- Strengthening our pipeline of new medicines, from our own research laboratories and by accessing scientific innovation that resides outside AstraZeneca.
- > Delivering the full potential of all our marketed medicines, through rigorous life-cycle management and excellent customer support.
- > Challenging our cost structure to make room for the further investment necessary in these critical activities.

Across all of our activities, we will continue to work closely with all our stakeholders to provide medicines that meet patient needs and add value for society, within the scope of our existing therapy areas and beyond.

We have a clear set of objectives for delivering this strategy. Through the professionalism and commitment of our people, we are determined to deliver a performance that will place AstraZeneca among the best in the industry.

#### **OUR OBJECTIVES**

The objectives that we have identified as critical drivers of success in delivering our strategy are focused on four core areas:

#### **Patients**

> Gaining and using insight effectively by:

Working closely with patients and their healthcare providers to understand what they need and what they value.

Incorporating this insight into all aspects of our business decision-making (from discovery to marketing and beyond) to ensure we remain focused on those healthcare needs that are most relevant. This includes targeting our medicines at those patients for whom they are most effective.

> Providing superior customer support through:

Innovative practices that enable patients and their caregivers to better understand their disease and treatment options, and to get the medicines they need and the best possible value from them.

#### **Products**

> Strengthening our research platform and pipeline to deliver a flow of innovative, new products by:

Improving further the quality, speed and productivity of our internal discovery and development through the use of leading- edge science, alongside a continued focus on driving effective risk management, decision-making and efficiency across all our processes.

Accessing attractive external opportunities to enhance our internal innovation through partnerships, alliances and acquisitions that further strengthen our pipeline of new products.

Making a strategic move into biologicals to build a major presence in the fast- growing biopharmaceuticals sector.

> Realising the full potential of our marketed products by:

Actively managing the lifecycles of each of our brands to leverage the full therapeutic and commercial potential of our range.

Driving high standards of sales force effectiveness and marketing excellence.

Building on our leadership positions in existing markets and expanding our presence in important emerging ones.

#### **People**

> Getting the best from our global workforce by:

Providing effective leadership with clear objectives and accountabilities.

Effectively managing and developing all our talent.

Promoting a culture of diversity and inclusion in which people feel valued and rewarded for their individual and team contribution.

> Making every interaction count by:

Ensuring people understand that how we do business is just as important as what we do, and that everyone has a responsibility for integrating our core values into their everyday business activity.

#### **Performance**

> Delivering a performance that will place us among the best in the industry, with a reputation as one of the most forward- thinking and responsible companies by:

Meeting our promises in all aspects of our business, focusing on our core priorities and on how we deliver them.

Effectively managing the opportunities and risks associated with all our business activities.

Rigorously challenging our cost structure to improve cost-effectiveness and operational excellence.

Ensuring a continuous focus on corporate governance and compliance.

# 12 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006 OUR RESOURCES, SKILLS AND CAPABILITIES

WE HAVE WIDE-RANGING RESOURCES, SKILLS AND CAPABILITIES ALIGNED TO DELIVERING OUR STRATEGIC OBJECTIVES.TOGETHER WITH THE CLEAR DIRECTION OUR STRATEGY PROVIDES, WE BELIEVE ASTRAZENECA IS WELL PLACED TO CONTINUE TO DELIVER A STRONG PERFORMANCE IN EACH OF OUR CORE AREAS OF ACTIVITY AND MAINTAIN BUSINESS SUCCESS OVER TIME.

#### **OUR MEDICINES**

We have a powerful range of medicines targeted at meeting patient needs in the important areas of healthcare discussed earlier. Many of them are world leaders. All of them are designed to be innovative and more effective and/or to offer added patient benefits such as reduced side effects or better ways of taking the treatment. Even after a new medicine is launched, we continue to explore all the ways it can be used to get the most benefit for patients. Underpinning all our activities is a commitment to developing and/or maintaining a continuous dialogue with patients and other stakeholders to help ensure we gain the insight necessary to maintain a flow of new medicines that make a difference in healthcare.

Our portfolio of marketed medicines is highly competitive, with growth in the short to medium term being driven by five key growth products, *Arimidex*, *Crestor*, *Nexium*, *Seroquel* and *Symbicort*, all launched over the

#### **Intellectual property**

Patents enable information on inventions to be made widely available and are important incentives for the continued innovation that drives society\□s progress. Patents do not create a monopoly for treating a disease □ other manufacturers are able to develop a different medicine to treat the same condition. Also, patents are limited in time and after their expiry, competitors (both innovative and generic) can legitimately market the same product. Because patents require the disclosure and publication of information about the patented medicine, they can stimulate competition to innovate improved alternatives that expand the range of treatment options □ which is important because patients respond differently to different medicines in the same class.

Our policy is to apply for appropriate intellectual property protection for all of the inventions and innovations that arise from our drug discovery, development, manufacturing and other business When a new medicine is launched, we may typically have between eight and 15 years of patent or data protection in which to generate the income needed to recoup the investment required to maintain a flow of new medicines for important areas of healthcare.

We rigorously manage our patent portfolio through a team of intellectual property professionals dedicated to the cost-effective management and enforcement of intellectual property rights for the optimal global protection of, and legitimate reward from, AstraZeneca\s innovations and commercial products. We vigorously defend our intellectual property rights, including taking appropriate infringement action in various courts throughout the world. See page 136 for details of patent litigation.

#### Sales and marketing

Active in over 100 countries, we have an extensive worldwide sales and marketing network. In the majority of key markets, we sell through wholly-owned local marketing companies. Elsewhere, we sell through distributors or local representative offices. Global brand strategy is built and led by our Global Marketing (GM) function (formerly known as Global Marketing and Business Development) working in partnership with our largest marketing companies. This shared approach creates a consistent platform on which all our local marketing companies can build according to individual market needs.

Our products are marketed primarily to physicians (both primary care and specialist) as well as to other healthcare

last 12 years. Backed by our successful mature brands such as *Pulmicort*. *Zoladex*.

Seloken/Toprol-XL, Diprivan and Merrem, these five key growth products provide the platform for our continued success whilst we enhance our pipeline for the future by improving internal innovation and productivity and accessing external innovation potential.

We have clearly defined life-cycle management programmes for our marketed products designed to maximise the benefit they bring to patients lives and their commercial potential within the timeframe that patent protection is available to us.

activities. This policy is designed to provide each of our products with an effective portfolio of valid. enforceable patent and other intellectual property rights in all significant markets to protect against unauthorised competition during commercialisation. This shield of intellectual property rights extends to research technologies, for discovering, manufacturing and delivering products, in which we invest significant resources. The adequacy of the patent, design, trade mark and domain name portfolio for individual products is kept under review during product development, clinical evaluation and marketing so that, wherever possible, additional protection may be sought for new applications and other developments. Our research operating model allows appropriate intellectual property strategies to be formulated and regularly updated from an early stage in product development.

professionals. Marketing efforts are also directed towards explaining the economic as well as the therapeutic benefits of our products to governments and healthcare buying groups.

Face-to-face contact is still the single most effective marketing method, but increasingly the efforts of our sales forces are being complemented by our use of the internet to facilitate and enhance our commercial activities. For a few products we also use direct-to-consumer television advertising campaigns in the US. A specific focus on sales and marketing innovation is driving us to explore new ideas, including implementation of learning from other industries, to ensure AstraZeneca is at the forefront in responding to the rapidly changing external environment.

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As well as building on our leading positions in existing key markets such as the US, Japan and Europe, we continue to increase our strength through strategic investment in the fast-growing markets of the future, of which China offers the most outstanding opportunity.

#### **Supply and manufacturing**

We currently have some 13,500 people at 27 manufacturing sites in 19 countries, dedicated to delivering a secure, high quality, cost-effective supply of our product range worldwide. Of these 13,500 people, around 1,300 are employed in active pharmaceutical ingredient supply and 11,500 in formulation and packaging. We operate a small number of sites for the manufacture of active ingredients, complemented by efficient use of outsourcing. AstraZeneca has active ingredient sites in the UK, Sweden and France and a bulk drug purification plant in Germany. Principal formulation sites for tablets and capsules are located in the UK, Sweden, Puerto Rico, France, Germany and the US. There are also major formulation sites for the global supply of parenteral and inhalation products in Sweden, France and the UK. Packaging is undertaken at a large number of locations, both at AstraZeneca sites and at contractors facilities, located close to our marketing companies to ensure rapid and responsive product supply.

#### **OUR RESEARCH AND DEVELOPMENT**

Our global research and development (R&D) organisation is therapy area-led with scientific, medical, technical input and control provided by large multi-skilled Discovery and Development functions. This offers a number of advantages including sharing of best practice and efficient use of resources across a multi-site, global organisation. During 2006, we continued to improve our focus on speed and quality of project delivery and to ensure we fully exploit promising new projects and technology platforms across and outside the main therapy areas. In total we employ around 12,000 people at 16 R&D centres in eight countries  $\square$  comprising eight joint Discovery and Development facilities in the UK, US, Sweden and a new Innovation Centre that will be built in China; a further seven sites in the UK, US, Canada, India and France that focus only on Discovery; and a facility in Japan for drug development only. These resources are complemented by clinical development capability at 40 sites around the world.

#### **Development portfolio**

A core priority is ensuring that our growing range of candidate drugs (compounds with the potential to become new medicines) are developed effectively to meet the future needs of patients. We have a wide range of compounds in early development, and a total of 23 projects in Phase I, 20 projects in Phase II and 28 projects in Phase III development. Whilst the majority of projects are small molecule candidate drugs, an increasing proportion of our early development compounds are biopharmaceuticals (see pages 38 and 39 for more information).

#### **Externalisation**

In today sworld of rapid scientific and technological advance, no company can rely exclusively on its own discovery and development. Where appropriate we seek to strengthen our internal capabilities through acquisitions and alliances with external partners whose skills and resources complement our own and which broaden our base for disease research.

We continuously monitor new and emerging sciences for opportunities that will help us to develop the next generation of medicines that offer better results for patients. One such opportunity is biopharmaceuticals [] medicines derived from biological molecules, which are often based on proteins produced naturally by living organisms in response to disease, for example antibodies. New technologies have opened up the possibility of producing effective, potent antibodies in large supply that can be used to fight disease. As part of our expansion into this fast-growing area, and building on a successful alliance, during 2006 we acquired Cambridge Antibody Technology Group plc (CAT) [] a leading UK-based biotechnology company. CAT[]s skills in biological therapeutics complement our expertise and strength in small molecule science, and provide a foundation for building a future pipeline of new products from both areas of research. For more information on CAT research, see page 38 or visit the website, cambridgeantibody.com.

Elsewhere in this report you can read about other licences, collaborations and acquisitions we have entered into.

#### **Product portfolio management**

One of the greatest challenges facing any pharmaceutical company is maintaining the quality of its product portfolio. We work to ensure that we effectively prioritise emerging research opportunities (whether from our own discovery activities or from external sources), develop them to meet market needs and maximise the potential of our marketed brands.

During 2005 to 2006, to further strengthen our effort in these areas, we reviewed and refined the way the relevant teams across our business work together. The refinements aim to improve the connectivity, co-ordination and focus of all the various activities, both internally and externally focused, that contribute to maintaining a high quality range of differentiated products that meet patient needs and add value for our stakeholders. More details about our Portfolio Management and Commercialisation can be found on page 43.

#### **OUR PEOPLE**

Our most important resource is our people. With over 66,000 employees, we value the diversity of skills and abilities that a global workforce brings to our business. Within our performance-driven culture, we aim to give our employees the support they need to develop their full potential and to provide a working environment in which they are energised and informed. Optimising individual and team performance, effectively managing and developing all our talent, communicating and fostering our core values and improving our leadership capability are core priorities, alongside a commitment to ensuring the safety, health and wellbeing of all our employees worldwide. For more information, see page 48.

#### Leadership

Good leadership and effective risk management are key to ensuring our resources and capabilities continue to be focused on meeting the challenges, and maximising the opportunities, of our business environment.

**The Board of Directors:** Our Board comprises Executive Directors, with direct responsibility for business operations, and Non-Executive Directors, who have responsibility to bring independent, objective judgement to bear on Board decisions. The Board sets Company strategy and policies and monitors progress

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towards meeting objectives. It conducts an in-depth strategy review annually. It also assesses whether or not obligations to shareholders and others are understood and met, which includes regular reviews of financial performance and critical business issues. See pages 80 and 81 for more information on the Board.

The Senior Executive Team (SET): The SET is a cross-functional, cross-territorial group, established and led by the Chief Executive Officer. It focuses on the day-to-day running of business operations and on Company development. It regularly reviews and makes decisions on all major business issues, save those which have been specifically reserved for the Board. The SET comprises the three Executive Directors and six executive vice-presidents, each of whom has a specific area of responsibility in line with our business structure. See page 77 for more information on the SET.

#### **RISK MANAGEMENT**

Our ability to effectively identify and manage the risks to our business is also key to our continued success. Our Risk Advisory Group (RAG), led by the Chief Financial Officer and consisting of representatives from each business function, assists senior management in identifying and assessing our main business risks in a co-ordinated manner. It focuses in particular on cross-functional risks, linking risk management to business performance reporting and sharing best practice across the organisation to drive continuous improvement. The RAG reports twice a year to the SET and its reports on the Company's risk profile are reviewed annually by the Board and Audit Committee. For more information, see pages 45 and 75.

#### **REPUTATION AND RESPONSIBILITY**

We also know that how we do business, as well as what we do, is important to our reputation among stakeholders and wider society. Maintaining their trust and confidence in AstraZeneca as a responsible company means ensuring that wherever we have a presence or an impact, we live up to our core values and publicly stated standards of ethical behaviour. Backed by our global Corporate Responsibility Policy and performance measures, we continue to drive the integration of corporate responsibility considerations into everyday business thinking throughout the Company. This includes providing managers with guidance on putting the global standards into practice at a local level, as well as communicating with our employees to ensure their understanding of our commitment and how everyone has a part to play in making sure AstraZeneca continues to be welcomed as a valued member of the global community.

During 2006, we undertook a comprehensive stakeholder engagement exercise across the full range of our key stakeholders to understand better their perception of AstraZeneca and its activities. The feedback from this initiative is helping to inform the development of a more consistent approach to stakeholder engagement and reputation management across the Company. This includes further improving our ability to gain, and consistently capture, the insight that helps us to remain focused on real healthcare needs.

For more information about our approach to managing our corporate responsibility and about our performance, policies and principles, see page 47 of this report and also the separate Corporate Responsibility Summary Report 2006.

## DIRECTORS' REPORT 15 Business Review

#### MEASURING PERFORMANCE

# THE BOARD AND THE SENIOR EXECUTIVE TEAM (SET) USE A QUARTERLY BUSINESS PERFORMANCE MANAGEMENT (BPM) REPORT TO MEASURE OUR PROGRESS IN DELIVERING OUR STRATEGIC OBJECTIVES.

The report provides Board and SET members with shared insight into current progress against short-term non-financial objectives and current year milestones for longer-term strategic goals.

A range of financial and non-financial objectives are set each year. During 2006 the focus was on the following key areas:

- > Product performance
- > Pipeline
- > Productivity and profitability
- > Shareholder returns
- > Reputation
- > Governance

During 2006, we reviewed our BPM framework with a view to further enhancing our focus on our strategic objectives, which are now grouped under four areas:

- > Patients
- > Products
- > People
- > Performance

Reputation and governance objectives have been included in all four areas, to reflect the importance of integrating consistent behaviours across all of our business activities.

Shareholder returns have been included in the Performance area.

The means of measuring performance in these areas range from quantitative, comparative performance measures to more qualitative, discursive analysis.

#### **PRODUCTS**

#### **Marketed products**

- > Sales value growth at constant exchange rates, split between [key growth], [patent expiry] and [base] produ(stee page 52).
- Slobal sales and US prescription share trends for key growth products (see page 52).
- Market share percentages for key growth products.
- > Life-cycle delivery.

#### **Pipeline**

- > New candidate drugs (see page 39).
- Number of development projects by Phase (see page 39).
- > R&D investment in US dollar terms (see page 6).
- > Progress against development milestones.

#### **PERFORMANCE**

- > Earnings per share growth (see page 6).
- > Cost growth rates (see page 6).
- Gross margin, costs and operating profit margin percentages (progression over time)

(see page 52).

Together, they provide the framework for consistently monitoring and reporting our progress towards achieving our objectives and, ultimately, delivering enduring shareholder value.

Specific measures that our Board and SET use when assessing performance in relation to the key areas noted above, or that are otherwise judged to be helpful in enabling shareholders better to understand and evaluate our business, are described and illustrated

- Dividends and share re-purchases (see page 6).
- > Free cash (see page 6).
- > Total shareholder return (see page 90).

As a result of our review of our BPM framework in 2006, we are developing new objectives for 2007 in relation to Patients and People. We will report on these objectives in due course.

#### **MEASURING REPUTATION**

throughout this report. Examples include:

The performance measures referred to above are measures of our progress in what we do in the business of delivering successful medicines and, thus, shareholder value. As previously mentioned, we also include reputation and governance objectives within the key areas described above.

In terms of measuring the way we do business, we have a range of key performance indicators (KPIs), by which we measure our progress in important areas of corporate responsibility (CR). Auditing of compliance and external assurance is fundamental to ensuring high standards of ethical behaviour, and compliance is integrated into many of the KPIs used to measure our CR progress. More details about these KPIs and our 2006 performance are provided in the separate Corporate Responsibility Summary Report 2006, or on our website.

We also participate in leading external surveys, such as the Dow Jones Sustainability Indexes, which are important means of evaluating our performance and understanding better the demands of sustainable development.

AstraZeneca is listed in the 2007 Dow Jones Sustainability World Index, used by asset managers globally to guide their socially responsible investment. However, whilst we improved our score, we did not regain the place we lost in 2005 in the European Index (Dow Jones STOXX), where competition for places is increasingly fierce.

#### **GOVERNANCE**

The AstraZeneca Code of Conduct (which is available on our website<sup>1</sup>) sets out the high standards we expect from our employees, and with which compliance is mandatory. As part of our commitment under that Code to comply with all applicable laws and codes of practice, we apply all of the principles of good governance in the 2006 UK Combined Code on Corporate Governance. The way in which we do so is described on page 75. We also comply with all of the provisions of the UK Combined Code and our corporate governance practices are generally consistent with the New York Stock Exchange scorporate governance listing standards (see page 75 for a description of any significant differences). Our continuous assurance processes, as described on page 75, are designed to ensure we effectively monitor our compliance with these standards.

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#### **CARDIOVASCULAR (CV) MEDICINES**

#### **2006 IN BRIEF**

- > CRESTOR SALES EXCEEDED \$2 BILLION, WITH OVER 9 MILLION PATIENTS TREATED AND ALMOST 72 MILLION PRESCRIPTIONS WRITTEN SINCE LAUNCH.
- > SELOKEN/TOPROL-XL SALES EXCEEDED \$1.7 BILLION, BUT OUR PATENT PROTECTION FOR TOPROL-XL WAS INVALIDATED BY A US COURT, A DECISION WHICH IS BEING APPEALED.
- > IN NOVEMBER, SANDOZ LAUNCHED ITS 25MG VERSION, AND PAR PHARMACEUTICAL STARTED DISTRIBUTING AN AUTHORISED GENERIC VERSION, OF METOPROLOL SUCCINATE EXTENDED-RELEASE TABLETS IN THE US.
- > EXANTA WAS WITHDRAWN IN FEBRUARY 2006 FOLLOWING NEW PATIENT SAFETY DATA.
- > APPROVAL OF NEW HEART FAILURE INDICATION FOR ATACAND IN THE US.
- > THE DEVELOPMENT PROGRAMME FOR GALIDA WAS TERMINATED IN MAY.
- > IN JANUARY 2007 WE ANNOUNCED A WORLDWIDE COLLABORATION WITH BRISTOL-MYERS SQUIBB COMPANY TO DEVELOP AND COMMERCIALISE TWO INVESTIGATIONAL COMPOUNDS BEING STUDIED FOR THE TREATMENT OF TYPE 2 DIABETES.

#### **MARKETED PRODUCTS**

**Crestor**\* (rosuvastatin calcium) is a member of the class of products known as statins and is used for the treatment of high cholesterol levels.

**Atacand**# (candesartan cilexetil) is an angiotensin II antagonist for the first-line treatment of hypertension and symptomatic heart failure.

**Seloken/Toprol-XL** (metoprolol succinate) is a once daily tablet for 24-hour control of blood pressure and for use in heart failure and angina.

**Plendil** (felodipine) is a calcium antagonist for the treatment of hypertension and angina.

due to

**Zestril** (lisinopril dihydrate), an ACE inhibitor, is used for the treatment of a wide range of CV diseases, including hypertension.

PERFORMANCE				2006 compared to	2005 compare
	2006	 2005	2004	2005	
	Growth	Growth			

due to

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	Sales \$m	Growth underlying \$m	exchange effects \$m	Sales \$m	Growth underlying \$m	exchange effects \$m	Sales \$m	Growth underlying %	Growth reported %	Growth underlying %	Gı rep
Crestor	2,028	745	15	1,268	338	22	908	59	60	38	
Seloken/Toprol-XL	1,795	62	(2)	1,735	333	15	1,387	3	3	24	
Atacand	1,110	133	3	974	68	27	879	14	14	8	
Tenormin	320	(24)	(8)	352	(21)	5	368	(7)	(9)	(5)	
Zestril	307	(23)	(2)	332	(118)	10	440	(7)	(8)	(27)	
Plendil	275	(86)	1	360	(103)	8	455	(24)	(24)	(23)	
Other	283	(27)	(1)	311	(38)	9	340	(9)	(9)	(12)	)
Total	6,118	780	6	5,332	459	96	4,777	15	15	10	

PIPELINE Compound	Mechanism	Areas under investigation	Phase	Estimated filing d	
NCEs			PC I II III	Europe	US
AGI-1067	Anti-atherogenic	atherosclerosis		4Q 2007	2Q/3Q 2007
AZD6140	ADP receptor antagonist arterial thrombosis	t		> 2009	> 2009
Saxagliptin (BMS)	dipeptidyl peptidase-4 (DPP-4) inhibitor	diabetes		> 2009	1H 2008
Crestor/ABT-335 (Abbott)	statin + fibrate fixed combination	dyslipidaemia			2009
AZD9684	CPU inhibitor	thrombosis		> 2009	> 2009
AZD0837	thrombin inhibitor	thrombosis		> 2009	> 2009
AZD6610	PPAR alpha with	dyslipidaemia		> 2009	> 2009
Dapagliflozin (BMS)	sodium-glucose cotransporter-2 (SGLT2) inhibitor	diabetes		> 2009	> 2009

AZD2479	Reverse Cholesterol Transport enhancer	dyslipidaemia		> 2009	> 2009		
AZD1175		diabetes/obesity		> 2009	> 2009		
AZD2207		diabetes/obesity		> 2009	> 2009		
AZD1305	antiarrhythmic	arrhythmias		> 2009	> 2009		
AZD6370		diabetes		> 2009	> 2009		
AZD8593		haemostasis		> 2009	> 2009		
AZD4121	cholesterol absorption inhibitor	dyslipidaemia		> 2009	> 2009		
AZD1283		thrombosis		> 2009	> 2009		
AZD5861		dyslipidaemia		> 2009	> 2009		
AZD1656		diabetes/obesity		> 2009	>2009		
AZD3988		diabetes/obesity		> 2009	> 2009		
Line extensions							
Atacand	angiotensin II antagonist	diabetic retinopathy		2009	2009		
Atacand Plus	angiotensin II antagonist	32/12.5 mg, 32/25 mg for hypertension		2H 2008			
Crestor	statin	atherosclerosis		Filed	Filed		
Crestor	statin	outcomes CHF		2H 2008	2H 2008		
Crestor	statin	outcomes End Stage Renal Disease		2009	2009		
Seloken/Toprol-XL	beta-blocker	HCTZ combination			Approved		
Discontinued project	cts						
Exanta		prevention of stroke in AF					
AZD1092		diabetes					
Galida		diabetes/metabolic syndrome		ve discontinu development			

of their failure to meet their target product profiles.

AZD8677	dyslipidaemia/diabetes
AZD7009	atrial fibrillation conversion
AZD8450	dyslipidaemia

Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

<sup>\*</sup> Licensed from Shionogi & Co., Ltd.
# Licensed from Takeda Chemical Industries Ltd.

Licensed from Merck & Co., Inc

## DIRECTORS' REPORT 17 Business Review

## WE ARE A WORLD LEADER IN CV MEDICINES, BACKED BY OVER 40 YEARS EXPERIENCE. WE AIM TO BUILD ON OUR STRONG POSITION, FOCUSING ON THE GROWTH SEGMENTS OF DYSLIPIDAEMIA, THROMBOSIS, TYPE 2 DIABETES, ATHEROSCLEROSIS AND ATRIAL FIBRILLATION.

#### **PRODUCTS**

**Crestor** has now been approved in 84 countries and launched in 74, including the US, Canada, Japan and the majority of EU countries.

Dyslipidaemia is increasingly recognised as a major health issue. Of those people currently being treated for high cholesterol, only about half reach their cholesterol goal on existing treatments, whilst the other half remain at higher cardiovascular risk. More effective treatments, such as *Crestor*, continue to be required in this area.

In multiple clinical studies, *Crestor* has been shown to be highly effective in lowering low-density lipoprotein cholesterol or [bad cholesterol] (LDL-C), allowing the majority of patients to reach their LDL-C goals with the 10mg usual starting dose. Additionally, *Crestor* produces an increase in high-density lipoprotein cholesterol or [good cholesterol] (HDL-C), an effect that is observed across the 5, 10, 20 and 40mg doses.

We have an extensive database of pre-and post-approval clinical trials experience involving more than 70,000 patients treated with *Crestor* and post-marketing surveillance involving more than 9.1 million patients treated with *Crestor* since its launch in 2003. These data and data from the ongoing pharmacoepidemiology programme support the favourable benefit/risk profile of *Crestor* and confirm that the safety profile is in line with other marketed statins.

*Crestor* provides significant reductions in LDL-C, with the additional benefits of raising HDL-C and lowering triglycerides. At its usual 10mg starting dose, *Crestor* has been shown to reduce LDL-C by up to 52% and to bring 8 out of 10 patients to their LDL-C goal.

Our extensive, long-term global clinical research programme (known as the GALAXY programme), which began in 2002, includes studies that investigate the

designed to address important unanswered questions in statin research by investigating links between optimal lipids control, atherosclerosis and cardiovascular morbidity and mortality. So far, a number of the studies have been completed and we have seen data from two completed atherosclerosis studies: the ORION study, which in 2005 examined the potential for Crestor to shrink the lipid-rich necrotic core of plaques and so improve their stability; and the ASTEROID study, which in 2006 demonstrated that Crestor has significant effects on coronary atherosclerosis. The METEOR study has been completed and will be presented at the American College of Cardiology meeting in March 2007. METEOR is a placebo-controlled, long-term study in low-risk patients and forms the basis of a submission for an atherosclerosis label made to the Food and Drug Administration (FDA) and in the EU through the Mutual Recognition Procedure in January 2007. ASTEROID and ORION were included in the submission as supportive programme will begin to deliver results in 2008.

The large *Crestor* post-marketing surveillance (PMS) programme in Japan has been successfully completed. An interim report received a positive response from the Pharmaceutical and Medical Devices Agency (a unit within the Japanese regulator), leading to a full launch of *Crestor* in Japan in September 2006. Promotional activities in Japan increased in September with an expansion of the number of sales representatives to 1,350 from AstraZeneca and 1,350 from Shionogi (who co-market the drug in Japan).

These representatives are calling on more than 30,000 healthcare professionals and we have reported commercial sales for *Crestor* in Japan in the second half of 2006.

Other launches of *Crestor* in 2006 included Australia and South Africa.

Since June, several companies have launched generic forms of simvastatin in the US, which will increase competition in the cholesterol treatment market. We

effect of *Crestor* on cardiovascular risk reduction and believe patient outcomes with *Crestor*. The programme involves over 50,000 patients in over 50 countries. The GALAXY programme was

believe the impact on Crestor will be modest.

**Atacand:** The family of products to which *Atacand* belongs has been well accepted in the market and competes in the fastest growing sector in terms of value of the global hypertension market (angiotensin II antagonists [] plain and combinations with diuretic). A 32mg dose is available to support the use of *Atacand* in hypertension and congestive heart failure (CHF). Launches of the 32mg dosage strength outside the US continued, and this strength is now available in most major markets. The clinical programme investigating the effect of *Atacand* (up to 32mg dosage) on retinopathy normotensive in diabetic patients (DIRECT) continued during 2006.

**Seloken/Toprol-XL** is the world s leading product by sales in the beta-blocker (plain and combinations with diuretic) class.

As reported last year, on 17 January 2006 summary judgment was entered against AstraZeneca in the ongoing patent litigation in the US involving three companies challenging AstraZeneca spatents and seeking FDA approval to sell metoprolol succinate (the generic name for *Seloken/Toprol-XL*). The Court found that the patents-in-suit are invalid and unenforceable. We disagree with and are disappointed by these conclusions and have appealed to the US Court of Appeals for the Federal Circuit. The appeal has been fully briefed and argued and a decision of the Federal Circuit is expected in 2007. Further information about this litigation is set out on page 142.

In November, Sandoz (formerly Eon) launched its 25mg metoprolol succinate product in the US and we announced that we had entered into a supply and distribution agreement with Par Pharmaceutical Companies, Inc. to distribute an authorised generic version of metoprolol succinate extended-release tablets in the US. Currently, the authorised generic product will be distributed only in the 25mg dosage strength. The signing of this agreement does not affect the availability of our branded *Toprol-XL*. We will continue to manufacture *Toprol-XL* and to make it available in the US. The timing of any approval or entry to the market of other proposed generic products is hard to predict, and consequently the 2007 financial contribution from sales of *Toprol-XL* in the US is difficult to forecast with any degree of certainty.

**Exanta:** In February 2006, we announced that we were withdrawing the anti-coagulant *Exanta* (melagatran/ximelagatran) from the market and terminating its development. This decision was triggered by new patient

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#### **CARDIOVASCULAR (CV) MEDICINES CONTINUED**

safety data from a clinical trial in orthopaedic surgery involving patients treated for a 35-day period for venous thromboembolic events (VTE) prophylaxis, longer than was currently approved for marketing. The new data indicated a potential risk of severe liver injury, with a new observation of rapid onset of signs and symptoms in the weeks following the end of treatment. This was an observation that had not previously been made in relation to *Exanta*. It indicated that regular liver function monitoring might not mitigate the possible risk.

Exanta was previously marketed in 12 countries for up to 11 days□ use in prevention of VTE in patients undergoing elective hip or knee replacement surgery.

#### **PIPELINE**

Our pipeline includes life-cycle management initiatives for approved products mentioned above, as well as development compounds across the whole discovery and development cycle.

AGI-1067 is an anti-atherosclerotic agent being studied for the treatment of patients with coronary artery disease (CAD), which is the subject of licence, collaboration and co-promotion agreements between AstraZeneca and AtheroGenics, Inc.

Existing cardiovascular treatments are effective at reducing risk, but morbidity and mortality associated with CV disease remain high. There is a need for new treatments that can provide further CV morbidity and mortality benefits, over and above those already provided by the current standard of care.

Current treatments are focused on treating the risk factors that contribute to plaque growth in the vessel wall. Studies conducted to date indicate that AGI-1067 appears to have effects on the oxidative-inflammatory process in the vascular wall, thereby potentially more directly influencing the disease process that leads to atherosclerotic plaque.

AGI-1067 is being evaluated in a Phase III clinical trial called ARISE (Aggressive Reduction of Inflammation Stops Events). ARISE is a double-blind, placebo-controlled study designed to assess the safety and efficacy of AGI-1067 on top of current standard therapies in reducing CV morbidity and mortality in patients with CAD. The study involves more than 6,000 patients in over 250 cardiac centres in Canada, South Africa, the UK and the US. The science in this area is challenging: the mode of action of AGI-1067 is novel and, if successful, AGI-1067 would be the first

drug of its type. The results from the pivotal ARISE trial, which are expected in early 2007, will characterise both the safety and efficacy of AGI-1067. Only when these results are available and have been fully evaluated can a meaningful assessment be made of the balance of risk and benefit for AGI-1067 and of the potential for regulatory approval and clinical use.

AZD6140 is being investigated as a reversible oral adenosine diphosphate (ADP) antagonist to prevent more thrombotic events than are prevented with currently available thienopyridine therapies in patients afflicted with Acute Coronary Syndrome (ACS).

ACS encompasses a range of clinical conditions that include unstable angina, ST segment elevation MI (STEMI) and non-ST segment elevation MI. Despite many advances, ACS still accounts for about 2.5 million hospital admissions worldwide annually and is a major cause of morbidity and mortality. There remains a need to develop products that offer improvements over the current standard of care.

AZD6140 is currently being evaluated in PLATO, a single, large, event-driven, head-to-head outcomes study, which began in October. PLATO is designed to demonstrate the superior efficacy of AZD6140 over clopidogrel in the reduction of CV death, myocardial infarction and stroke in patients with ACS. PLATO is expected to run in 40 countries with over 1,000 centres and aims to recruit 18,000 patients. If successful, AZD6140 could represent an

important treatment option for patients and physicians.

**Galida:** In May, AstraZeneca announced that it was discontinuing the development of its dual peroxisome proliferator-activated receptor (PPAR) alpha and gamma agonist *Galida* (tesaglitazar), which was being evaluated for the treatment of the glucose and lipid abnormalities associated with Type 2 diabetes.

The decision was based on our interpretation of clinical data from the completed and ongoing Phase II and Phase III studies. AstraZeneca, in consultation with health authorities and leading medical experts in the field, judged that the overall benefit/risk profile of *Galida* was unlikely to offer patients significant advances over currently available therapy.

All primary efficacy endpoints were met in the Phase III trials and there were no immediate safety concerns for patients. In line with our commitment to transparency, we will make all *Galida* clinical trial data available as

appropriate through scientific presentation, publication in peer-reviewed scientific journals or via the Company Clinical Trials Website (astrazenecaclinical trials.com), once the final analyses have been completed.

We remain committed to the development of novel treatments for diabetes and related metabolic and CV diseases. See more in relation to diabetes in the Early Development Activities section below.

#### **Early Development Activities**

Activities that are currently in the early development phase  $\square$  up to dose-finding in humans  $\square$  are focused on four main areas: diabetes/obesity; atherosclerosis (dyslipidaemia and other approaches to treatment of atherosclerosis): thrombosis-related diseases: and atrial fibrillation.

#### **Diabetes/Obesity**

Following the closure of the *Galida* project in 2006, our focus is now on new, non-PPAR-related targets. Two projects have been moved into Phase I clinical testing and several compounds are in pre-clinical development.

In January 2007, we made a significant step in strengthening our late-stage pipeline when we announced a worldwide (apart from Japan) collaboration with Bristol-Myers Squibb Company (BMS) to develop and commercialise two investigational compounds being studied for the treatment of Type 2 diabetes. Both compounds were discovered by BMS. Saxagliptin, a once-daily oral dipeptidyl peptidase-4 (DPP-4) inhibitor, is currently in Phase III development. Upon successful completion of the development programme, the companies plan to file for US regulatory approval of saxagliptin during the first half of 2008. Dapagliflozin (previously referred to as BMS-512148), an oral sodium-glucose cotransporter-2 (SGLT2) inhibitor, is currently in Phase IIb development.

On 1 February 2007, we announced an exclusive global licensing and research collaboration agreement with Palatin Technologies, Inc. The collaboration is aimed at discovering, developing and commercialising small molecule compounds that target melanocortin receptors and have potential in treating obesity, diabetes and metabolic syndrome.

#### **Atherosclerosis**

In order to provide effective therapy for all patients with any type of dyslipidaemia, new projects are underway to discover and develop medicines to be used as monotherapy or in combination with statins (such as *Crestor*).

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The cholesterol absorption inhibitor project aims to provide additional LDL-C reduction when an absorption inhibitor is used in combination with a statin. Our development compound (AZD4121) is expected to enter clinical development during 2007. AZD6610 is a PPAR alpha compound with partial effect on gamma receptors and is in Phase II clinical testing for the treatment of combined dyslipidaemia (LDL-C and trygliceride elevation with low levels of HDL-C).

Patients with various mixed dyslipidaemias are expected to become more prominent segments of the dyslipidaemic population, due to increased prevalence of metabolic syndrome and diabetes. In July we signed an agreement with Abbott Laboratories to co-develop and co-promote a cholesterol treatment in the US to treat three important blood lipids  $\square$  LDL-C, HDL-C and triglycerides  $\square$  in a single pill. The fixed-dose combination therapy will combine *Crestor* with either ABT 335, a next-generation fenofibrate currently under development by Abbott, or Abbott $\square$ s currently marketed fenofibrate, TriCor $\square$ . Final selection between the two programmes will be based upon data generated from the initial studies, with an anticipated regulatory submission to the FDA in 2009.

#### **Thrombosis**

In the anti-coagulation area our focus is on AZD0837, an oral direct thrombin inhibitor in Phase II testing. Three months treatment of patients with atrial fibrillation indicated that the liver signal seen with Exanta is not seen with AZD0837 treatment. Work is ongoing to develop an extended-release formulation in order to reduce peak/trough variability and provide an opportunity for once-daily dosing.

In the anti-platelet area AZD1283 has been selected for pre-clinical development. The aim is to develop an effective anti-platelet drug with markedly reduced bleeding risk. AZD9684 has been tested in a proof-of-principle study with patients with diagnosed acute pulmonary embolism. Data indicate that the compound enhances the endogenous fibrinolytic system. Due to its short half-life, the compound needs to be given parenterally to treat acute thrombosis-related CV events.

In 2006 we entered into an agreement with the Australian company Cerylid Biosciences to acquire kinase inhibitors that have the potential to deliver a very effective anti-platelet therapy with minimal risk for bleeding complications. The aim is to start a lead optimisation pre-clinical project in early 2007.

#### **Atrial fibrillation (AF)**

During 2005, we discontinued development of the oral formulation of AZD7009 (for the maintenance of sinus rhythm after conversion of AF) due to non-cardiac adverse events. New clinical results from a dose-finding study with short-term intravenous administration of AZD7009 were delivered during 2006. However, due to non-cardiac adverse events, a decision to stop further development was taken during the summer. Continued work in the area has focused on a follow-up compound, AZD1305, where efficacy can be anticipated to be similar to AZD7009, but with an aim to provide a better side-effect profile. AZD1305 is in Phase I.

Details of all compounds in the CV pipeline are contained in the table on page 16.

#### **PERFORMANCE 2006**

#### **Reported performance**

CV sales were up by 15% on a reported basis, rising from \$5,332 million in 2005 to \$6,118 million in the current year. The strong performance of *Crestor* was the principal driver of growth.

#### **Underlying performance**

Excluding exchange effects, CV sales grew by 15%. Annual sales for *Crestor* exceeded \$2 billion for the first time in 2006 and, since launch in early 2003, more than 70 million prescriptions have been written. *Crestor* sales in the US were up 57% to \$1,148 million for the year. New prescriptions for statins in the US were up 18%; *Crestor* new prescriptions were up 58%. *Crestor* new prescription market share in December 2006 was 9.6%, a 2.7 percentage

point increase over the last year, and this represented the largest share gain recorded by a branded statin in 2006. Beginning in January 2007, new prescription market data will be distorted by the launch of multiple generic simvastatin products. In other markets *Crestor* sales increased by 61% on good growth in Europe (up 56%) and in Asia Pacific following launch in Australia and Japan in the second half. Volume share of the statin market for *Crestor* is now 17.4% in Canada; 11.5% in the Netherlands; 19.3% in Italy; and 12.9% in France.

Sales of *Toprol-XL* in the US were up 7% for the full year to \$1,382 million. Total prescriptions in the US increased by 10% versus last year. The November launch of Sandoz s 25mg metoprolol succinate product in the US was followed by an announcement that we had entered into a supply and distribution agreement with Par Pharmaceutical to distribute an authorised generic version of the same 25mg dosage strength in the US market. As a consequence, adjustments

were taken in respect of pipeline inventory in the marketplace with the effect that sales are now being recognised as prescriptions are written. Sales of *Seloken* in other markets were down 7% for the full year to \$413 million.

*Atacand* sales in the US were up 12% to \$260 million with new prescriptions up 7%. In other markets, *Atacand* sales were up 14% to \$850 million.

*Plendil* sales were down 24% as a result of generic competition in the US market, where *Plendil* sales declined by 71% to \$24 million.

#### **PERFORMANCE 2005**

#### **Reported performance**

Reported CV sales rose by 12% from \$4,777 million in 2004 to \$5,332 million in 2005. Strong growth from *Crestor* and *Seloken/Toprol-XL* more than offset the declines in *Plendil* and *Zestril*.

#### **Underlying performance**

Excluding exchange effects, CV sales grew by 10%.

Crestor sales for the full year reached \$1,268 million, up 38%. Crestor sales in the US increased by 34% to \$730 million for the full year. In the week ending 20 January 2006, share of new prescriptions in the US statin market was 6.9%. Market share in the dynamic segment (new and switch patients) was 8.8% in that same week. In other markets, sales for the full year were up 41%, on good growth in Europe (up 44%) and Canada (up 25%). Volume share of the statin market for Crestor in November 2005 was 13.4% in Canada; 11.2% in the Netherlands; 11.7% in Italy; and 6.0% in France.

Sales of *Toprol-XL* in the US increased by 32% for the full year to \$1,291 million, which was ahead of underlying growth of 23% as a result of the de-stocking which occurred in 2004. Sales of *Seloken* in other markets were up 4% for the full year.

Atacand sales in the US were down 8% for the full year to \$232 million, in line with the decline in total prescriptions. Increased promotion following regulatory approval for the heart failure indication stabilised Atacand prescription market share over the second half of 2005. In other markets, Atacand sales were up 14% for the full year to \$742 million.

*Plendil* sales for the full year were down 23% worldwide as a result of generic competition in the US market, where sales declined by 49% to \$84 million. *Zestril* sales also fell, by 27% from \$440 million to \$332 million.

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#### **2006 IN BRIEF**

- > SALES OF NEXIUM EXCEEDED \$5 BILLION FOR THE FIRST TIME.
- > NEXIUM RECEIVED APPROVAL IN THE US FOR THE TREATMENT OF CHILDREN AGED 12-17 YEARS OLD WITH GERD AS WELL AS THE TREATMENT OF PATIENTS WITH ZOLLINGER ELLISON SYNDROME.
- > NEXIUM SACHET 20MG AND 40MG FORMULATION RECEIVED APPROVAL IN THE US.
- > WE COMMENCED LITIGATION AGAINST TEVA/IVAX IN THE US FOR INFRINGEMENT OF OUR PATENTS IN RELATION TO ESOMEPRAZOLE MAGNESIUM.
- > THE EUROPEAN PATENT OFFICE RULED THAT ONE OF THE EUROPEAN SUBSTANCE PATENTS FOR NEXIUM WOULD BE REJECTED.
- > LOSEC/PRILOSEC SALES WERE \$1.4 BILLION WITH CONTINUED STRONG SALES GROWTH IN JAPAN.

#### **MARKETED PRODUCTS**

**Nexium** (esomeprazole) is the first proton pump inhibitor (PPI) for the treatment of acid-related diseases to offer clinical improvements over other PPIs and other treatments.

**Losec/Prilosec** (omeprazole) was the first PPI, and is used for the short-term and long-term treatment of acid-related diseases.

**Entocort** (budesonide) is a locally acting corticosteroid for the treatment of inflammatory bowel disease (IBD) with better tolerability than other corticosteroids and greater efficacy than aminosalicylic acid medicines.

PERFORMANC	PERFORMANCE 200					2005 2004			2006 compared to 2005		2005 compared	
	Sales \$m	Growth underlying \$m	Growth due to exchange effects \$m	Sales \$m	Growth underlying \$m	Growth due to exchange effects		Growth underlying	Growth reported %	Growth underlying %	Grov report	
Nexium	5,182	555	(6)	4,633	702	48	3,883	12	12	18		
Losec/Prilosec	1,371	(266)	(15)	1,652	(339)	44	1,947	(16)	(17)	(17)	(	
Other	78	8		70	(19)	1	88	11	11	(21)	(	
Total	6,631	297	(21)	6,355	344	93	5,918	4	4	5		

#### **PIPELINE**

Compound	Mechanism	Areas under investigation	n Phase Estimated filing		l filing date			
NCEs			PC	I	П	Ш	Europe	US
AZD9056	ion channel blocker (P2X7)	inflammatory bowel disease					>2009	>2009
AZD3355	inhibitor of transient lower GERD oesophageal sphincter relaxations (TLESR)						>2009	>2009
AZD2066		GERD					>2009	>2009
AZD5329		functional GI disease					>2009	>2009
Line extensions								
Nexium	proton pump inhibitor	NSAID GI side effects [] symptom resolution			Promotable1	Filed		
Nexium	proton pump inhibitor	NSAID GI side effects [] ulcer healing			Launched	Filed		
Nexium	proton pump inhibitor	peptic ulcer bleeding					1H 2008	1H 2008
Nexium sachet formulation	proton pump inhibitor	GERD				Filed	Approved	
Nexium low dose aspirin combination		low dose aspirin associated peptic ulcer				>2009	>2009	
Nexium	proton pump inhibitor	extra-oesophageal reflux disease					>20092	>20092
Discontinu	ed projects							
AZD9343 GERD		GERD					e have discont	
AZD6538		GERD functional GI disease			these developments as a result of their failure to meet their target product profiles.			lure to
AZD8081								
AZD9272		GERD						

AZD9335	GERD

<sup>1</sup> Authorities stated these symptoms were already captured within the GERD label. Text stating  $\square$ No clinical interaction with naproxen or rofecoxib $\square$  was approved.

<sup>&</sup>lt;sup>2</sup> Project Extraesophageal reflux disease (reflux asthma) will be completed but will not result in a regulatory filing. Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

## DIRECTORS' REPORT**21**Business Review

WE AIM TO MAINTAIN OUR LEADING POSITION IN GI TREATMENTS THROUGH CONTINUED MARKET PENETRATION FOR NEXIUM WORLDWIDE, EXPLORING NEW AREAS OF CLINICAL USE FOR NEXIUM AND FURTHER BROADENING ITS USE IN CURRENT APPROVED INDICATIONS, COUPLED WITH HIGH QUALITY INNOVATION AND PRODUCTIVITY IN THE RESEARCH AND DEVELOPMENT OF NEW THERAPIES IN THE GERD AREA.

#### **PRODUCTS**

Nexium has been evaluated in clinical studies involving around 80,000 patients in over 60 countries and offers very effective acid inhibition. In the treatment of reflux oesophagitis, it provides healing and symptom relief in more patients than Losec/Prilosec, lansoprazole or pantoprazole. It is an effective, long-term therapy for patients with gastro-oesophageal reflux disease (GERD), with or without oesophagitis. For the treatment of active peptic ulcer disease, seven-day Nexium triple therapy (in combination with two antibiotics for the eradication of H.pylori) heals most patients without the need for follow-up anti-secretory therapy. In the US, Nexium received approval in 2006 for the treatment of children aged 12-17 years old with GERD, and the Nexium sachet 20mg and 40mg formulation received approval as an alternative to oral capsules. Also in 2006, Nexium was approved in the US, EU and Australia for the treatment of patients with the rare gastric acid disorder Zollinger Ellison Syndrome.

Nexium is used to treat a wide range of patients with acid-related

The parenteral form of *Nexium*, which is used in the EU when oral administration is not applicable for the treatment of GERD and upper GI side effects induced by NSAIDs (non-steroidal anti-inflammatory drugs), has now been approved in 86 countries, including the US and all EU countries.

Nexium is approved in Europe for healing and prevention of ulcers associated with NSAID therapy. In the US, Nexium is approved for the reduction in the occurrence of gastric ulcers associated with continuous NSAID therapy in patients at risk of developing gastric ulcers.

In December 2006, the European Patent Office (EPO) ruled that one of the European substance patents for *Nexium* would be rejected, following an appeal from the German generic manufacturer ratiopharm. The original patent expiry for this patent was 2014.

Whilst disappointed with the EPO decision, AstraZeneca has confidence in the intellectual property portfolio protecting *Nexium*. This portfolio includes

2006. Although Dr. Reddy□s filed an Abbreviated New Drug Application in August 2006, Dr. Reddy□s did not challenge three patents with exclusivity expiring in November 2017 and August 2015. Dr. Reddy□s cannot market generic esomeprazole magnesium in the US until the end of the exclusivity afforded by those patents. Details of our ongoing litigation for wilful patent infringement by Ranbaxy, IVAX/Teva are set out on page 140.

The rejection of the AstraZeneca European substance patent relating to *Nexium* should not have any substantive impact on our ability to uphold and enforce our *Nexium* patents in the US. We have several US patents covering *Nexium*, all of which can be differentiated from the rejected European patent.

**Losec/Prilosec:** Patients have benefited from over 840 million treatments with *Losec/Prilosec* since its launch in 1988. Continued strong sales growth of *Losec/Omepral* was seen in Japan in 2006.

Patent protection for omeprazole, the active ingredient in Losec/Prilosec, has expired. (The first patent expiration was in Germany in 1999.) In a small number of countries, including some major markets, patent term extensions or supplementary protection certificates have been granted for the active ingredient. Further information about the status of omeprazole patents and patent litigation, including details of generic omeprazole launches, is set out on pages 137 to 139.

Our appeal to the Court of First Instance regarding the European Commission decision to impose fines totalling \[ \] 60 million (\$75 million) for

disorders, including patients that are newly diagnosed, as well as those that are switched from other therapies such as omeprazole, other PPIs and H2-receptor antagonists.

Nexium was first launched in Sweden in August 2000 and is now available in approximately 100 markets, including the US, Canada and all EU countries. It has been well received by patients and physicians alike and close to 539 million patient treatments had been administered by the end of 2006.

process, method of use and additional substance patents with expiration dates ranging from 2009 through to 2019. The process patent is under opposition with the EPO and an Opposition Division oral hearing is scheduled for October 2007 (postponed from the original hearing date in March 2007). In addition to these patents, *Nexium* has data exclusivity valid to 2010 in major European markets.

In the US, we commenced patent litigation against generic manufacturers Ranbaxy Laboratories in 2005 and IVAX in January alleged infringements of European competition law relating to certain omeprazole intellectual property and regulatory rights is still pending. Details of this appeal are set out on page 139.

**Entocort** continued its progress during 2006, based on its increasing acceptance as first-line therapy for mild to moderate active Crohn

disease. It is approved in 44 countries.

#### 22 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006

#### **GASTROINTESTINAL (GI) MEDICINES CONTINUED**

#### **PIPELINE**

Our pipeline includes the life-cycle management initiatives for approved products mentioned above, as well as development compounds across the whole discovery and development cycle.

In addition to exploring new areas of clinical use for *Nexium* and further broadening the scope of its use in current areas, we focus on developing novel approaches to treating GERD by inhibition of reflux with or without concomitant treatment of gastro-oesophageal hypersensitivity.

During the year, AZD3355 and AZD9343 were tested in humans. Based on its better profile, AZD3355 was selected to enter Phase II testing in patients for the treatment of GERD.

Following the disease area review described on page 38 we took the decision to discontinue discovery work in other areas of GI.

Details of all compounds in the GI pipeline are contained in the table on page 20.

#### **PERFORMANCE 2006**

#### **Reported performance**

Gastrointestinal sales grew by 4% to \$6,631 million, up from \$6,355 million in 2005. The performance of *Nexium* (particularly in the US) more than compensated for the continued decline in *Losec/Prilosec* sales.

#### **Underlying performance**

After excluding the effects of exchange, GI sales grew by 4%.

In the US, *Nexium* sales increased by 13% to \$3,527 million. Dispensed tablet volume for *Nexium* increased by 17%; all other PPI class brands in aggregate declined by 4%. *Nexium* volume growth more than offset lower realised prices from contracted sales.

Sales of *Nexium* in other markets reached \$1,655 million for the full year (up 10%) as good volume growth in France and Italy helped mitigate the significant price erosion in Germany. As a result, Europe sales improved by 6% to \$1,166 million, whilst Asia Pacific revenues increased by 14% to \$195 million, driven by Japan and China.

Losec/Prilosec sales were down 16% to \$1,371 million. Prilosec sales were down 12% in the US and Losec sales in other markets were down 17%. Sales in Japan were up 7% at \$227 million, whilst sales in China were flat.

#### **PERFORMANCE 2005**

#### Reported performance

Gastrointestinal sales grew by 7% to \$6,355 million in 2005 from \$5,918 million in the previous year. The slowing in the decline of *Losec/Prilosec* sales and the continued strong performance of *Nexium* accounted for this growth.

#### **Underlying performance**

After excluding the effects of exchange, GI sales rose by 5%.

In the US, *Nexium* sales increased by 15% to \$3,125 million. *Nexium* market share of total prescriptions in the US PPI market was 30.3% in December 2005. Strong growth in dispensed tablets (up 14%) was partially offset by lower realised prices resulting from performance-based contracts and Medicaid. *Nexium* was the only branded PPI

to gain market share in 2005. Sales of *Nexium* in other markets reached \$1,508 million for the full year (up 25%) on a 2 percentage point gain in market share.

Losec/Prilosec sales were down 17% to \$1,652 million. In the US, sales were \$264 million, a fall of 28%. In other markets, Losec sales declined 15% overall, although sales increased by 25% in Japan and by 16% in China.

## DIRECTORS' REPORT**23**Business Review

#### **NEUROSCIENCE MEDICINES**

#### **2006 IN BRIEF**

- > SEROQUEL GLOBAL SALES GREW 24% TO \$3.4 BILLION.
- > SEROQUEL 50MG AND 400MG NEW TABLET STRENGTHS LAUNCHED IN THE US.
- > SEROQUEL APPROVED FOR BIPOLAR DEPRESSION IN THE US IN OCTOBER.
- > REGULATORY PACKAGE FOR SEROQUEL SR FORMULATION SUBMITTED IN THE US, EUROPE AND REST OF WORLD.
- > NXY-059 DEVELOPMENT TERMINATED FOLLOWING RESULTS FROM SAINT II TRIAL.
- > US ANAESTHETIC AND ANALGESIC PRODUCTS DIVESTED TO ABRAXIS BIOSCIENCE, INC. IN JULY.
- > AZD3480 TO PROGRESS INTO PHASE IIB CLINICAL TESTING IN ALZHEIMER DISEASEAND COGNITIVE DISORDERS IN SCHIZOPHRENIA.

#### **MARKETED PRODUCTS**

**Seroquel** (quetiapine fumarate) is an atypical anti-psychotic drug. It is indicated for schizophrenia in 87 markets and bipolar mania in 73 markets and in the US has the additional indication for bipolar depression. Its overall clinical efficacy and tolerability profile has made it the leading atypical anti-psychotic in the US.

**Zomig** (zolmitriptan) is for the treatment of migraine with or without aura.

**Diprivan** (proposed), an intravenous general anaesthetic, is used in the induction and maintenance of anaesthesia, light sedation for diagnostic procedures and for intensive care sedation.

**Naropin** (ropivacaine) is the world\[ \] s bestselling, long-acting local anaesthetic. With its safety and mobility profile, it is replacing the previous standard treatment of bupivacaine in major markets.

**Xylocaine** (lidocaine) continues to be the world most widely used short-acting local anaesthetic after more than 50 years on the market.

PERFORMANCE										
		2006			2005	2004	2006 con	pared to 2005	2005 con	npared t 200
		Growth due to			Growth due to					
Sale	Growth es underlying	exchange effects	Sales	Growth	exchange	Sales	Growth underlying	Growth reported	Growth underlying	Growt reporte
	m Śm	\$m	\$m	, \$m	\$m	\$m	, %	. %	, %	

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Diprivan       304       (62)       (3)       369       (136)       5       500       (17)       (18)         Local Anaesthetics       529       24       (6)       511       (44)       13       542       5       4         Other       57       (8)       (1)       66       (6)       1       71       (12)       (14)	(8) (8) (
Local	
Diprivan 304 (62) (3) 369 (136) 5 500 (17) (18)	27) (2
	27) (2
Zomig 398 47 (1) 352 (11) 7 356 13 13	(3) (
Seroquel 3,416 655 [ 2,761 710 24 2,027 24 24	35 3

#### PIPELINE

Compound Mechanism		Areas under investigation	Phase	•	Estimated filing date		
NCEs			PC	1 11 111	Europe	US	
PN-400 (Pozen)	naproxen + esomeprazole	signs and symptoms of OA and RA			>2009	>2009	
AZD3480	neuronal nicotinic receptor agonist	cognitive disorders in schizophrenia	· · · · · · · · · · · · · · · · · · ·		>2009	>2009	
AZD3480	neuronal nicotinic receptor agonist	Alzheimer∏s disease	Alzheimer∏s disease		>2009	>2009	
AZD9272	glutamate receptor modulator	neuropathic pain			>2009	>2009	
AZD2327	enkephalinergic receptor modulator	anxiety and depression			>2009	>2009	
AZD5904	enzyme inhibitor	multiple sclerosis			>2009	>2009	
AZD1080		Alzheimer∏s disease			>2009	>2009	
AZD3783		anxiety and depression			>2009	>2009	
AZD3102		Alzheimer∏s disease		ı	>2009	>2009	
AZD6538		neuropathic pain		ı	>2009	>2009	
AZD8797		multiple sclerosis		ı	>2009	>2009	
AZD1940		nociceptive and neuropathic pain		I	>2009	>2009	

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AZD3241		Parkinson∏s disease		>2009	>2009			
AZD2066		analgesia		>2009	>2009			
AZD6280		anxiety		>2009	>2009			
AZD1386		analgesia		>2009	>2009			
AZD2624		schizophrenia		>2009	>2009			
AZD0328		Alzheimer <u></u> s disease		>2009	>2009			
AZD3043	GABA-A receptor modulator	short-acting anaesthetic		>2009	>2009			
AZD7903		analgesia		>2009	>2009			
Line extensions								
Seroquel SR	D <sub>2</sub> /5HT <sub>2</sub> antagonist	schizophrenia		Filed	Filed			
Seroquel	D <sub>2</sub> /5HT <sub>2</sub> antagonist	bipolar maintenance	r maintenance		2Q 2007			
Seroquel	D <sub>2</sub> /5HT <sub>2</sub> antagonist	bipolar depression	40		Approved			
Seroquel SR	D <sub>2</sub> /5HT <sub>2</sub> antagonist	generalised anxiety disorder		2H 2008	1H 2008			
Seroquel SR	D <sub>2</sub> /5HT <sub>2</sub> antagonist	major depressive disorder		2H 2008	1H 2008			
Seroquel SR	D <sub>2</sub> /5HT <sub>2</sub> antagonist	bipolar mania		1H 2008	1H 2008			
Seroquel SR	D <sub>2</sub> /5HT <sub>2</sub> antagonist	bipolar depression		1H 2008	1H 2008			
Discontinue	ed projects							
NXY-059		stroke						
AZD9272		anxiety	developme	scontinued tents as a resu	ılt of their			
AZD9335		neuropathic pain		failure to meet their target product profiles.				
AZD7512	3	depression and anxiety						

Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

## 24 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006 NEUROSCIENCE MEDICINES CONTINUED

## WE AIM TO STRENGTHEN OUR POSITION IN THE NEUROSCIENCE MARKET, THROUGH FURTHER GROWTH OF SEROQUEL AND THE SUCCESSFUL INTRODUCTION OF A RANGE OF LIFE-CHANGING MEDICINES IN AREAS OF SIGNIFICANT MEDICAL NEED.

#### **PIPELINE**

Our pipeline includes the life-cycle management initiatives for approved products mentioned above, as well as development compounds across the whole discovery and development cycle.

#### **PRODUCTS**

**Seroquel** offers a well-established benefit/risk profile, with proven efficacy across a range of symptoms in schizophrenia and bipolar disorder and has an advantageous tolerability profile. This includes placebo-like effects on extrapyramidal symptoms across the dose range in the licensed indications of schizophrenia and bipolar mania. In addition there is no elevation of prolactin.

This profile has led to the increased use of *Seroquel*, exceeding market growth in all markets commercialised by AstraZeneca. *Seroquel* is the market-leading atypical anti-psychotic in the US in terms of monthly new and total prescriptions. In Europe, *Seroquel* continues to grow two to three times faster than the atypical market by value. *Seroquel* for the treatment of bipolar mania has been licensed in 73 countries. Bipolar disorder is now the fastest-growing segment for *Seroquel*.

In October, the US Food and Drug Administration (FDA) approved the new indication for *Seroquel* in bipolar depression. *Seroquel* is the first and only single-agent medication approved for both poles (mania and depression) in bipolar disorder. The approval was based on the results of the two BOLDER studies, which highlighted the effectiveness of *Seroquel* as early as week one in both bipolar disorder type I and II. A boxed warning regarding risk of suicidality in children and adolescents was added to the US bipolar depression labelling for *Seroquel*. This is consistent with the US label warnings on other anti-depressants.

New dosage strengths of *Seroquel* (50mg and 400mg) were launched in the US in April 2006, providing increased dosing flexibility.

In July, a New Drug Application (NDA) was submitted to the FDA seeking approval for the new once-daily, sustained-release (SR) formulation of *Seroquel* for schizophrenia. Beginning in October, further submissions were made to regulatory authorities in Europe, Canada and other markets. In addition to the convenience of once-daily dosing, the new formulation will offer faster titration and the ability to reach the effective

dose range by the second day of dosing. The *Seroquel* SR data set contains unique data on relapse prevention compared with the immediate-release (IR) formulation. *Seroquel* SR is also being studied in the new indications of major depressive disorder (MDD) and generalised anxiety disorder (GAD).

In February 2006, Teva Pharmaceuticals USA amended its previously submitted Abbreviated New Drug Application for quetiapine fumarate 25mg by adding 100, 200 and 300mg tablets. Further information on our ongoing patent infringement lawsuit against Teva in the US in relation to quetiapine fumarate (the active ingredient in *Seroquel*) is set out on page141.

**Zomig** is available in a unique range of formulations, offering physicians a choice of ways to provide rapid relief for migraine patients. *Zomig* is the prescription market leader in Europe.

Zomig Nasal Spray delivers fast pain relief and now accounts for 7% of Zomig global sales.

Zomig Rapimelt is a melt-in-the-mouth formulation offering patients a convenient, orange-flavoured tablet that can be taken without water whenever a migraine attack strikes. Zomig Rapimelt now accounts for more than 36% of Zomig global sales.

**Diprivan** is the world s best-selling intravenous general anaesthetic. More than 90% of tota Diprivan sales consist of Diprivan EDTA, a microbial-resistant formulation, which is approved in the majority of markets.

**Naropin** obtained approval in the EU and New Zealand for extended use in paediatric patients to include neonates and infants aged below one year old. These are the first approvals that will enable children of this age to benefit from an effective, long-acting local anaesthetic.

In July, we sold our range of US branded anaesthetics and analgesic products (including *Diprivan* and *Naropin*) to Abraxis BioScience, Inc. and entered into a five-year supply agreement with them for these products.

Our product pipeline and life-cycle management efforts are focused on the important areas of psychiatry, analgesia, neurology and anaesthesia. Following the disease area review described on page 38 we took the decision to discontinue discovery work in Parkinson s disease, multiple sclerosis and neuroprotection in stroke, but current projects in development will continue as planned.

#### **Psychiatry**

In psychiatry, we continue to expand the opportunities for *Seroquel*. Clinical programmes for GAD and MDD using the *Seroquel* SR formulation are underway. An additional clinical programme with *Seroquel* SR was initiated in bipolar disorder in December. Filings for all these programmes are anticipated in 2008.

To strengthen our psychiatry pipeline in 2006, we progressed two compounds, AZD2327 and AZD3783, into clinical development for the treatment of anxiety and depression.

#### **Analgesia**

In pain control, our research focus is nociceptive pain (caused by tissue damage) and neuropathic pain (caused by nerve damage). We will expand our research capabilities in the area of chronic pain by building on the phage and ribosome technologies owned by Cambridge Antibody Technology Group plc.

Our three candidate drugs in development from the collaboration we entered into with NPS Pharmaceuticals, Inc. in March 2001, have been joined by AZD1940 and AZD1386 [] potential analgesics from our Montreal discovery laboratories.

In August, we announced an exclusive global agreement with Pozen Inc. to co-develop fixed-dose combinations utilising Pozen proprietary formulation technology. The initial development is PN-400, a fixed-dose combination of naproxen and esomeprazole, which has the potential to provide chronic pain sufferers with a new treatment that has good efficacy and a low upper gastrointestinal side-effect profile.

## DIRECTORS' REPORT 25 Business Review

#### **Neurology**

We have eight development programmes, of which three are in clinical evaluation, in Alzheimer s disease and specific segments of other neuro-degeneration diseases, multiple sclerosis and Parkinson s disease.

In October, we announced that we were ceasing development of the investigational drug NXY-059 for Acute Ischaemic Stroke, after analysing the results from the second and pivotal Phase III trial, SAINT II. The trial, which recruited approximately 3,200 patients worldwide, did not meet its primary outcome of a statistically significant reduction in stroke-related disability, as assessed by the Modified Rankin Scale. The SAINT II trial did not support the findings from the first, smaller (approximately 1,700 patients) Phase III trial, SAINT I, which did show a positive effect on disability as measured by the Modified Rankin Scale. Both trials were required to show a positive benefit on disability to support a regulatory filing.

We will work closely with the SAINT trial steering Committee to analyse the pooled data from the SAINT I and SAINT II trials to ensure the lessons for future stroke research are identified and communicated appropriately via peer-reviewed medical journals and relevant scientific congresses. We plan to work with the SAINT Steering Committee to present the data at the International Stroke Congress in San Francisco in February 2007. NXY-059 was licensed from Renovis, Inc.

AZD3102, for the treatment of Alzheimer∏s disease, is in pre-clinical development in collaboration with Dyax Corp.

As announced by Targacept, Inc. in December, AZD3480, the neuronal nicotinic receptor agent that we licensed from Targacept, has successfully completed the planned evaluation studies and will progress into Phase IIb clinical testing in both Alzheimer studies and cognitive disorders in schizophrenia.

#### **Anaesthesia**

AZD3043, a novel, short-acting intravenous anaesthetic/sedative agent, was licensed from Theravance, Inc. in May. AZD3043 is in late pre-clinical development and we will undertake the clinical development of the compound. If the project succeeds and if regulatory approval is received, AstraZeneca will manufacture and commercialise this compound.

Details of all compounds in the pipeline in the areas of psychiatry, analgesia, neurology and anaesthesia are contained in the table on page 23.

#### **PERFORMANCE 2006**

#### **Reported performance**

Neuroscience sales grew by 16% to \$4,704 million in 2006 from \$4,059 million in 2005 with growth in all geographic areas, driven chiefly by *Seroguel*.

#### **Underlying performance**

After excluding exchange effects of \$11 million, underlying growth was 16%.

Seroquel sales reached \$3,416 million (up 24%). In the US, Seroquel sales were up 24% to \$2,486 million. Total prescriptions increased by 12%, well ahead of the market. The Seroquel share of total prescriptions in the US anti-psychotic market increased to 30.2% in December, up 1.7 percentage points over last year. In other markets, sales were up 23%, on good growth in Europe (up 25% to \$619 million) and in Asia Pacific (up 15% to \$149 million).

Zomig sales increased by 13% to \$398 million. Zomig sales comparisons in the US for the full year as compared with 2005 are affected by the resumption of full responsibility from MedPointe, Inc. for US commercialisation in April 2005. Sales for Zomig in the US were up 39%, although total prescriptions declined by 6%. Sales of Zomig in other markets were unchanged.

The divestment of *Diprivan* in the US in June led to a 17% decline in sales to \$304 million.

#### **PERFORMANCE 2005**

#### **Reported performance**

Sales in the Neuroscience therapy area rose by 16% in 2005, up to \$4,059 million from \$3,496 million in 2004. *Seroquel* was the principal driver of performance, recording a 36% increase in sales.

#### **Underlying performance**

On a constant exchange rate basis, Neuroscience sales grew by 15%.

Seroquel sales reached \$2,761 million (up 35%). In the US, Seroquel sales increased 33% to \$2,003 million, ahead of prescription growth of 20% as a result of higher realised prices and favourable contract rebate adjustments. Seroquel share of new prescriptions in the US atypical anti-psychotic market increased to 29.8% in December 2005. In other markets, sales for the full year increased by 40% on strong growth in Europe (up 48%), Asia Pacific (up 22%) and Canada (up 29%).

Zomig sales declined by 3% to \$352 million, as growth in other markets (up 8%) was more than offset by an 18% decline in the US. The US decline was chiefly as a result of lower first-quarter sales following the return of the distribution arrangements from MedPointe, which took effect from 1 April 2005.

*Diprivan* sales in other markets were down 8% to \$369 million. US sales declined 44%, chiefly on lower prices as a result of the introduction of another generic product.

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#### **ONCOLOGY MEDICINES**

#### **2006 IN BRIEF**

- > ARIMIDEX SALES GREW 29% TO \$1.5 BILLION ☐ NOW THE LEADINGHORMONAL BREAST CANCER THERAPY IN THE US, JAPAN AND FRANCE.
- > CASODEX GROWTH CONTINUED IN BOTH EARLY AND ADVANCED PROSTATE CANCER.
- ZOLADEX SALES AGAIN EXCEEDED \$1 BILLION, 20 YEARS AFTER FIRST APPROVAL.
- > ZACTIMA PHASE III NSCLC TRIALS CONTINUE.
- > RECENTIN (FORMERLY AZD2171) PIVOTAL CRC CLINICAL TRIAL PROGRAMME STARTED.
- > AGREEMENT TO CO-PROMOTE ABRAXANE® WITH ABRAXIS BIOSCIENCE, INC. IN THE US.
- > ALLIANCE WITH SCHERING AG TO CO-DEVELOP A NOVEL SERD TO TREAT BREAST CANCER.

#### **MARKETED PRODUCTS**

**Arimidex** (anastrozole) is the world\(\sigma\) s leading aromatase inhibitor by value and volume for the treatment of breast cancer.

**Faslodex** (fulvestrant) is an oestrogen receptor antagonist for the treatment of breast cancer, with no known agonist effects, that down-regulates the oestrogen receptor.

**Casodex** (bicalutamide) is the world seleading anti-androgen therapy by value and volume for the treatment of prostate cancer.

**Zoladex** (goserelin acetate implant), in one-and three-month depots, is the world\[ s second largest LHRH agonis by value for the treatment of prostate cancer, breast cancer and certain benign gynaecological disorders.

*Iressa* (gefitinib) is an epidermal growth factor receptor-tyrosine kinase inhibitor (EGFR-TKI) that acts to block signals for cancer cell growth and survival in NSCLC.

**Nolvadex** (tamoxifen citrate) remains a widely prescribed breast cancer treatment.

**Abraxane**<sup>®</sup> (paclitaxel protein-bound particles for injectable suspension) (albumin-bound), owned by Abraxis BioScience, Inc., is a novel, albumin-bound formulation of paclitaxel for the treatment of breast cancer. Abraxane<sup>®</sup> is co-promoted in the US under an agreement with Abraxis BioScience, Inc.

		iocea iii ciie	oo amaci a	ag.cci		151 47115 5101		, , , , , ,			
PERFORMAN	CE										
			2006			2005	2004		pared to 2005	2006 com	pared to 200
			Growth			Growth					
			due to			due to					
		Growth	exchange		Growth	exchange		Growth	Growth	Growth	Growt
	Sales	underlying	effects	Sales	underlying	effects	Sales	underlying	reported	underlying	reporte
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	%	%	%	9
Arimidex	1 508	338	(11)	1 181	354	16	811	29	28	44	4

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Total	4,262	470	(53)	3,845	411	58	3,376	12	11	12	14
Other	28	18		10	(5)	1	14	180	180	(36	(29
Nolvadex	89	(22)	(3)	114	(21)	1	134	(19)	(22)	(16	(15
Faslodex	186	45	1	140	39	2	99	32	33	39	4:
Iressa	237	(30)	(6)	273	(118)	2	389	(11)	(13)	(31	(30
Zoladex	1,008	17	(13)	1,004	65	22	917	1	_	7	Ġ
Casodex	1,206	104	(21)	1,123	97	14	1,012	9	7	10	13

PIPELINE Compound	Mechanism	Areas under investigation	Phase	Estimated filing date		
NCEs			PC I II III	Europe	US	
Zactima	VEGF/EGF TKI inhibitor with RET kinase activity	NSCLC		2H 2008	2H 2008	
Recentin (AZD2171)1	VEGF signalling inhibitor (VEGFR-TKI)	NSCLC and CRC		>2009	>2009	
Zactima	VEGF/EGF TKI inhibitor with RET kinase activity	medullary thyroid cancer		2H 2008	2H 2008	
ZD4054	endothelin A receptor antagonist	prostate cancer		>2009	>2009	
AZD5896	AGT inhibitor	solid tumours		>2009	>2009	
AZD6244 (ARRY-142886)	MEK inhibitor	solid tumours		>2009	>2009	
CAT-3888	recombinant immunotoxin hairy cell	hairy cell leukaemia		>2009	>2009	
AZD0530	SRC kinase inhibitor	solid tumours and haematological malignancies		>2009	>2009	
AZD1152	aurora kinase inhibitor	solid tumours and haematological malignancies		>2009	>2009	

	solid tumours		>2009	>2009
PARP inhibitor	breast cancer		>2009	>2009
	solid tumours		>2009	>2009
hypoxia activated cytotoxic	solid tumours		>2009	>2009
	solid tumours		>2009	>2009
	solid tumours		>2009	>2009
VEGF signalling inhibitor (VEGFR-TKI)	solid tumours		>2009	>2009
SRC kinase inhibitor	solid tumours		>2009	>2009
anti-angiogenic	solid tumours		>2009	>2009
	solid tumours		>2009	>2009
	solid tumours		>2009	>2009
	solid tumours and haematological malignancies		>2009	>2009
	solid tumours		>2009	>2009
	solid tumours		>2009	>2009
			>2009	>2009
recombinant immunotoxii malignancies	n haematological		>2009	>2009
recombinant immunotoxii	n solid tumours		>2009	>2009
	solid tumours		>2009	>2009
1				
oestrogen receptor antagonist	first-line advanced breast cancer		>2009	>2009
oestrogen receptor	adjuvant		>2009	>2009
	hypoxia activated cytotoxic  VEGF signalling inhibitor (VEGFR-TKI)  SRC kinase inhibitor anti-angiogenic  recombinant immunotoxi malignancies recombinant immunotoxi ocestrogen receptor antagonist	PARP inhibitor breast cancer solid tumours hypoxia activated cytotoxic solid tumours  VEGF signalling inhibitor (VEGFR-TKI) solid tumours  SRC kinase inhibitor solid tumours anti-angiogenic solid tumours frecombinant immunotoxin haematological malignancies recombinant immunotoxin solid tumours solid tumours	PARP inhibitor    solid tumours	PARP inhibitor    Solid tumours   Solid tumour

>2009
nued these a result of thei eir target
e _

<sup>1</sup> This compound is in Phase II/III development.
Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

DIRECTORS' REPORT 27

Business Review

# WE AIM TO MAINTAIN OUR POSITION AS A WORLD LEADER IN CANCER TREATMENT THROUGH CONTINUED GROWTH OF ARIMIDEX, FURTHER LAUNCHES AND LINE EXTENSIONS OF NEWER PRODUCTS SUCH AS FASLODEX, AND THE SUCCESSFUL INTRODUCTION OF NOVEL THERAPEUTIC APPROACHES CURRENTLY IN THE DEVELOPMENT PIPELINE.

did, however, confirm a number of important clinical benefits for *Iressa*, including tumour shrinkage and a significant improvement in the time to treatment failure. Pre-planned subgroup analyses showed a statistically significant increase in survival with *Iressa* in patients of Asian ethnicity and in patients who had never smoked.

#### **PRODUCTS**

**Arimidex** continues to grow strongly on the basis of the ATAC five-year treatment data. In several key markets, it has already replaced tamoxifen as the preferred primary adjuvant treatment for post-menopausal women with hormone-receptor positive invasive early breast cancer. In 2006, *Arimidex* exceeded two million patient years of clinical experience and is now the leading hormonal therapy in the US, Japan and France. In June, *Arimidex* was approved in Europe for a new switch indication for patients who have already received two to three years of tamoxifen. This was based on results from three collaborative group trials: ABCSG-8, ARNO and ITA, which showed the benefits of switching to *Arimidex* rather than continuing on tamoxifen. *Arimidex* is the first and only aromatase inhibitor indicated as both primary adjuvant and switch therapy.

Data presented at the European Society of Medical Oncology meeting in September showed that the combination of *Arimidex* with Herceptin (trastuzumab) was synergistic and effective in patients with advanced post-menopausal breast cancer who were both hormone-receptor positive and Her2 Neu positive. These patients are considered to be at higher risk of the cancer spreading. When the two drugs were combined, this was proved more effective than *Arimidex* alone. These data do not yet form part of the current licence. *Arimidex* is also approved for the treatment of advanced breast cancer in post-menopausal women based on demonstrated advantages over tamoxifen and megestrol acetate.

**Faslodex** offers an additional hormonal therapy for patients with hormone-sensitive advanced breast cancer, delaying the need for cytotoxic chemotherapy. Due to its novel mode of action, *Faslodex* offers an effective, well-tolerated additional treatment with the compliance and convenience benefits of a once-monthly injection. *Faslodex* is now launched in more than 30 markets. It is indicated for the second-line treatment of hormone-receptor positive advanced breast cancer in post-menopausal women.

At the San Antonio Breast Cancer Symposium in December, the first results of the EFECT

study were presented. This study compared *Faslodex* with exemestane in patients who had received prior aromatase inhibitor therapy  $\square$  the first Phase III trial in this patient population. The study showed similar efficacy to exemestane. Trials are ongoing to further understand the full utility of *Faslodex* in the treatment of post-menopausal breast cancer.

**Casodex** continued growth has been driven by: the use of *Casodex* 50mg in advanced prostate cancer; the growth of *Casodex* 150mg, which is approved for use in locally advanced prostate cancer in over 60 countries; and the growth of *Casodex* 80mg, which is only available in Japan, where it is approved for all stages of prostate cancer.

**Zoladex** is used for the treatment of prostate cancer (for which it is approved in 105 countries), breast cancer and gynaecological disorders. In non-metastatic prostate cancer, *Zoladex* is the only luteinising-hormone-releasing hormone (LHRH) agonist shown to improve overall survival both when used in addition to radical prostatectomy and when used in addition to radiotherapy. In breast cancer, *Zoladex* is widely approved for use in advanced breast cancer in pre-menopausal women. In a number of these countries, *Zoladex* is also approved for the adjuvant treatment of early stage pre-menopausal breast cancer as an alternative to and/or in addition to chemotherapy. *Zoladex* offers proven survival benefits for breast cancer patients with a favourable tolerability profile.

*Iressa* is indicated for the treatment of advanced non-small cell lung cancer (NSCLC) in patients who have failed chemotherapy. It is approved in 35 countries. Clinical trials have shown that *Iressa* is an effective and generally well-tolerated treatment for some patients with advanced NSCLC. Those patients who benefit tend to do so quickly, and sometimes results are dramatic.

In 2004, results from the ISEL study, which compared *Iressa* with placebo in advanced NSCLC patients who had failed prior chemotherapy, failed to reach statistical significance compared with placebo in the overall population and in the subgroup of patients with adenocarcinoma. The ISEL study

Following the announcement of the ISEL data, in 2005 we voluntarily withdrew the European submission for *Iressa* and regulatory authorities in the US and Canada restricted the use of *Iressa* to those patients already benefiting from the drug. In the Asia Pacific region, due to the ethnic differences in lung cancer, *Iressa* has become an established therapy for pre-treated advanced NSCLC, and use of the drug in the first-line advanced setting is now being studied in a large, Phase III, pan-Asian trial known as the IPASS study, which involves 1,212 patients.

Progress continues to be made in identifying which patients, in which treatment settings, are most likely to benefit from treatment with *Iressa*, and we will strive to complete a programme of such work.

The Japanese Phase III Study V-15-32 comparing *Iressa* with docetaxel in NSCLC has now reported. There was no statistically significant difference in overall survival between the two treatments but the study, which was set up to demonstrate statistical non-inferiority, did not meet the primary objective, as the confidence interval did not lie entirely below the pre-defined non-inferiority limit. However, we believe these data have not altered the benefit/risk profile of *Iressa* in pre-treated Japanese NSCLC patients.

Further Phase II trials are ongoing to evaluate the potential benefits of *Iressa* in NSCLC and other EGF receptor-driven tumours.

**Abraxane**<sup>®</sup>: In April, we announced an agreement with Abraxis BioScience, Inc. (Abraxis) to co-promote Abraxis[s product Abraxane<sup>®</sup> in the US. Abraxane<sup>®</sup> (paclitaxel protein-bound particles for injectable suspension) (albumin-bound) is a novel, albumin-bound formulation of paclitaxel, which was approved by the US Food and Drug Administration (FDA) in January 2005. Abraxane<sup>®</sup> is indicated for the treatment of breast cancer after failure of combination chemotherapy for metastatic disease or relapse within six months of adjuvant chemotherapy. This agreement gives us access to the key US chemotherapy market and Abraxane<sup>®</sup> compliments and extends our US oncology product portfolio. Co-promotion started on 1 July.

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#### **ONCOLOGY MEDICINES CONTINUED**

#### **PIPELINE**

Our pipeline includes life-cycle management initiatives for approved products mentioned above, as well as compounds across the whole discovery and development cycle.

Zactima (vandetanib) is a once-daily oral anti-cancer therapy that selectively inhibits clinically validated pathways in cancer (vascular endothelial growth factor (VEGF) receptor, EGF receptor), blocking the development of a tumour solo supply (anti-angiogenesis) and the growth and survival of the tumour itself also inhibits receptor-tyrosine kinase (RET kinase) activity, an important growth driver in certain types of thyroid cancer.

The worldwide Phase III second-line NSCLC development programme with *Zactima* is enrolling patients in the US, Europe, and the rest of the world, including China and Japan. The Phase III studies currently underway involve: docetaxel with and without *Zactima*; pemetrexed with and without *Zactima*; *Zactima* versus erlotinib; and *Zactima* versus placebo plus best supportive care in patients who have been previously treated with an EGF receptor antagonist.

In 2005, promising early data in hereditary medullary thyroid cancer led to orphan drug designation for *Zactima* by the FDA and the European Medicines Agency (EMEA), as well as fast-track status for regulatory review by the FDA. Orphan drug designation encourages the development of new products that demonstrate promise for the diagnosis, prevention and/or treatment of life-threatening or very serious conditions that are rare and affect relatively few people (not more than five in 10,000 people a year in the EU and fewer than 200,000 people a year in the US). Fast-track designation enables more frequent discussions with the FDA in order to obtain their input into the drug development plan. It also provides the option of submitting the New Drug Application in sections as opposed to simultaneous submission of all components, thereby facilitating and expediting the development and review of new drugs intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs. A Phase II trial has completed recruitment and a randomised study is ongoing. In addition, the anti-cancer activity of *Zactima* continues to be evaluated in colo-rectal, glioma, head and neck, breast and prostate cancers.

*Recentin* (formerly AZD2171) is a highly potent, selective, orally active inhibitor of VEGF receptor signalling in solid tumours. *Recentin* inhibits all three VEGF receptors irrespective of activating ligand. Following the decision in 2005 to accelerate the development of *Recentin*, and

the subsequent commencement of the pivotal Phase II/III NSCLC study in November 2005, the pivotal colo-rectal cancer (CRC) programme started in 2006. The programme includes a head-to-head study comparing *Recentin* plus FolFox with bevacizumab (Avastin) plus FolFox in first-line CRC. It also includes two other studies in CRC, namely a second-line head-to-head study with bevacizumab and a first-line study involving *Recentin* with and without chemotherapy. As well as these programmes, the US National Cancer Institute is now recruiting to 15 studies in a number of different tumour settings as part of the *Recentin* signal search programme.

The foundations of our early oncology pipeline are novel compounds that target signalling pathways believed to be pivotal in cancer cell growth, invasion and survival, with two products in Phase II and eight others in Phase I development. AZD6244, a potent MEK inhibitor licensed from Array Biopharma, has now entered Phase II studies across a range of tumours, including malignant melanoma, pancreatic cancer, CRC and NSCLC. The Phase II trials in hormone-resistant prostate cancer for the endothelin A antagonist, AZD4054, are proceeding and will report mature survival data in early 2007. Phase I studies with the poly-ADP-ribose polymerase (PARP) inhibitor AZD2281, part of the KuDOS portfolio, have now completed and Phase II studies will commence in early 2007. The dual-specific Src/Abl kinase inhibitor, AZD0530, has shown dramatic effect on biomarkers of cell motility and bone resorption and is starting Phase II studies in a range of malignancies. This compound has the potential for activity in a wide range of tumours. The following compounds from the early portfolio achieved First Time in Man during

the year: AZD4877, a novel inhibitor of cell cycle; AZD7762, a tumour-selective chemo sensitizer; AZD8931, a dual inhibitor of epidermal growth factor receptor (erbB1 and erbB2) signalling pathways.

AstraZeneca and Schering AG formed a new alliance in September to co-develop and jointly commercialise AZD4992, Schering AG∏s novel SERD (selective estrogen receptor down-regulator) for the treatment of breast cancer.

### PERFORMANCE 2006 Reported performance

Oncology sales increased by 11% to \$4,262 million in 2006 principally due to the continued strong *Arimidex* performance.

#### **Underlying performance**

Excluding the effects of exchange, Oncology sales grew by 12%.

In the US, sales of Arimidex were up 29% to

\$614 million. Total prescriptions increased by 21%. *Arimidex* share of total prescriptions for hormonal treatments for breast cancer was 37.5% in December, up 2.7 percentage points during the year. In other markets, *Arimidex* sales grew by 29% due to an increase in sales in Europe (up 30%) and Asia Pacific (up 27%) on strong volumes.

Casodex sales increased by 9% to \$1,206 million. In the US, sales were up 23% to \$295 million. Sales in other markets were up 5%, with sales in Japan up 10% to \$286 million.

*Iressa* sales in markets outside the US increased by 10%. Sales in the Asia Pacific region were up 15% to \$207 million. Worldwide sales of *Faslodex* were up 32% to \$186 million, largely due to the 74% increase in Europe. Sales in the US were up 12%.

Zoladex sales exceeded \$1 billion for the second year in a row with declines in the US offset by growth elsewhere. We have recorded revenue of \$18 million from Abraxane®.

### PERFORMANCE 2005 Reported performance

Oncology sales increased by 14% to reach \$3,845 million in 2005, compared with \$3,376 million in 2004.

#### **Underlying performance**

Excluding the effects of exchange, Oncology sales grew by 12%.

Casodex sales in the US increased by 3% to \$239 million. Sales in other markets were up 11%, with Japan accounting for nearly half of this growth.

Arimidex sales increased 44% to \$1,181 million. Arimidex value share of the market for hormonal treatments for breast cancer reached 50% in October 2005. In the US, sales of Arimidex were up 59%. In other markets, sales were up 35% on excellent growth in Europe (up 35%) and Japan (up 27%).

*Iressa* sales were down 31%, chiefly as a result of the 63% decline in the US. *Iressa* sales in Asia Pacific increased 7% as sales in China and other markets more than offset a 15% decline in Japan.

Sales for *Faslodex* reached \$140 million (up 39%) as a result of good growth in Europe since marketing approval in March 2004. Sales in the US were up 11%.

Zoladex sales increased 7% to \$1,004 million, as good sales growth in other markets (up 13%) offset a 23% decline (from both volume and price effects) in the US.

## DIRECTORS' REPORT**29**Business Review

#### RESPIRATORY AND INFLAMMATION (R&I) MEDICINES

#### **2006 IN BRIEF**

- > SYMBICORT ACHIEVED SALES OF \$1.2 BILLION (UP 18%).
- > **PULMICORT** CONTINUED TO SHOW STRONG PERFORMANCE WITH STEADY GROWTH.
- IN JULY, THE FDA APPROVED SYMBICORT IN A PRESSURISED METERED DOSE INHALER (PMDI) FOR MAINTENANCE TREATMENT OF ASTHMA IN PATIENTS AGED 12 YEARS AND ABOVE.
- IN OCTOBER, SYMBICORT SMART, A NEW APPROACH TO MANAGING ASTHMA USING SYMBICORT AS BOTH A MAINTENANCE AND RELIEVER THERAPY WAS APPROVED FOR USE IN ADULTS THROUGH THE EU MUTUAL RECOGNITION PROCEDURE.
- > IN SEPTEMBER, WE ENTERED INTO A PARTNERSHIP WITH DYNAVAX
  TECHNOLOGIES CORPORATION TO DEVELOP A TLR-9 AGONIST FOR ASTHMA AND COPD.

#### **MARKETED PRODUCTS**

**Symbicort** (budesonide/formoterol) is an innovative and effective asthma and COPD treatment that offers superior efficacy with flexible dosing.

**Pulmicort** (budesonide) is a corticosteroid anti-inflammatory inhalation drug that helps prevent symptoms and improves the control of asthma.

**Pulmicort Respules** (budesonide inhalation suspension) is the first and only nebulised corticosteroid in the US for children as young as 12 months.

Oxis (formoterol) is a fast- and long-acting beta-agonist therapy for asthma and COPD.

**Rhinocort** (budesonide) is a nasal steroid treatment for allergic rhinitis (hay fever), perennial rhinitis and nasal polyps.

Accolate (zafirlukast) is an oral leukotriene receptor antagonist for the treatment of asthma.

PERFORMA	ANCE	_			2006 compared to	2005 compared to
	2006		2005	2004	•	2004
	Growth		Growth			
	due to		due to			

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Total	3,151	284	(6)	2,873	230	60	2,583	10	10	9	11
Other	146	(9)		155	(7)	4	158	(6)	(6)	(5)	(2)
Accolate	81	9		72	(45)	1	116	13	13	(39)	(38)
Oxis	88	(3)		91	(14)	4	101	(3)	(3)	(14)	(10)
Rhinocort	360	(27)		387	21	5	361	(7)	(7)	6	7
Symbicort	1,184	182	(4)	1,006	179	30	797	18	18	22	26
Pulmicort	1,292	132	(2)	1,162	96	16	1,050	11	11	9	11
	Sales (	Growth underlying \$m	exchange effects \$m	Sales \$m	Growth underlying \$m	exchange effects \$m	Sales \$m	Growth underlying %	Growth reported %	Growth underlying %	Growth reported %

	_				
Mechanism	Areas under investigation	Phase Estimated		filing date	
		PC I II III	Europe	US	
ion channel blocker (P2X7)	rheumatoid arthritis		>2009	>2009	
	asthma		>2009	>2009	
	rheumatoid arthritis		>2009	>2009	
	rheumatoid arthritis		>2009	>2009	
	COPD		>2009	>2009	
anti-IL-13 antibody	asthma		>2009	>2009	
	COPD		>2009	>2009	
	asthma		>2009	>2009	
protease inhibitor	COPD		>2009	>2009	
	osteoarthritis		>2009	>2009	
	COPD		>2009	>2009	
	asthma		>2009	>2009	
	ion channel blocker (P2X7) anti-IL-13 antibody	ion channel blocker (P2X7)  asthma rheumatoid arthritis rheumatoid arthritis COPD  anti-IL-13 antibody  asthma  COPD  asthma  protease inhibitor  COPD  osteoarthritis  COPD	Mechanism investigation Photo PC I II III  ion channel blocker (P2X7)  asthma  rheumatoid arthritis  rheumatoid arthritis  COPD  anti-IL-13 antibody asthma  COPD  asthma  protease inhibitor COPD  osteoarthritis  COPD	MechanisminvestigationPhase EstimatedPC I II IIIEuropeion channel blocker (P2X7)rheumatoid arthritis>2009rheumatoid arthritis>2009rheumatoid arthritis>2009COPD>2009anti-IL-13 antibodyasthma>2009COPD>2009asthma>2009protease inhibitorCOPD>2009copp>2009copp>2009copp>2009copp>2009copp>2009copp>2009copp>2009copp>2009copp>2009copp>2009	

AZD3825		asthma		>2009	>2009
AZD1236		COPD		>2009	>2009
AZD5069		COPD		>2009	>2009
AZD9668		COPD		>2009	>2009
AZD9215		asthma		>2009	>2009
AZD1678		asthma		>2009	>2009
AZD8848		asthma		>2009	>2009
AZD8075		asthma		>2009	>2009
AZD6605		osteoarthritis		>2009	>2009
CAM-3001		rheumatoid arthritis		>2009	>2009
AZD3199		asthma/COPD		>2009	>2009
Line extensions					
Symbicort Turbuhaler	inhaled steroid/fast onset, long-acting ß <sub>2</sub> agonist	Symbicort Maintenanc and Reliever Therapy for asthma (SMART)	е	Approved	
Symbicort pMDI	inhaled steroid/fast onset, long-acting ß <sub>2</sub> agonist	asthma		Filed1	Approved <sup>2</sup>
Symbicort pMDI	inhaled steroid/fast onset, long-acting ß2 agonist	COPD		Filed1	1H 2008
Discontinued pro	jects				
AZD3778	indication	n rhinitis			
AZD2914	COPD				
AZD8955	OA				
AZD9056 COPD			We have disco		
AZD8309		to meet their			

AZD8309	COPD
AZD3342	COPD

To be supplemented in 2008 with data supporting two additional strengths.
 US approval based on 12 years and above.
 Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

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#### RESPIRATORY AND INFLAMMATION (R&I) MEDICINES CONTINUED

WE AIM TO BUILD ON OUR STRONG POSITION IN ASTHMA TREATMENT THROUGH THE GROWTH OF KEY PRODUCTS, PARTICULARLY SYMBICORT, NEW INDICATIONS AND MARKET LAUNCHES AND THE SUCCESSFUL INTRODUCTION OF NOVEL APPROACHES TO OTHER AREAS OF INFLAMMATORY DISEASE SUCH AS SEVERE CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD), RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS.

#### **PRODUCTS**

**Symbicort** is an innovative treatment that provides rapid, effective control of asthma and COPD.

In July, the Food and Drug Administration (FDA) approved *Symbicort* in the US in a pressurised Metered Dose Inhaler (pMDI) for maintenance treatment of asthma in patients aged 12 years and above. We continue to plan for a US launch around the middle of 2007, although achieving this launch timeline is dependent upon successful transfer of technology from development to manufacturing and completion of validation batches.

Outside the US, *Symbicort* is marketed in the *Turbuhaler* dry powder device and is approved in over 90 countries and launched in more than 70.

In October, Symbicort SMART, a new approach to managing asthma using Symbicort as both a maintenance and reliever therapy was approved for use in adults through the EU Mutual Recognition Procedure. Symbicort SMART has been approved for use in over 25 countries and enables patients to take control of their asthma simply using just one inhaler for both maintenance and relief of asthma symptoms. This treatment concept, which represents a change from current medical practice, is possible with Symbicort as it contains formoterol, a bronchodilator which is both rapid-acting and long-lasting, coupled with the corticosteroid budesonide to provide an important anti-inflammatory effect. With Symbicort SMART, patients receive a maintenance dose in line with normal practice to establish asthma control, and then take additional inhalations ∏as needed∏ if symptoms occur, to provide both rapid relief and increased asthma control. This means that the underlying inflammation is treated with every inhalation, even when Symbicort is used for symptom relief, which

The SMILE study was published in *The Lancet* in August. This study (which involved 3,394 patients) was designed to evaluate the contribution of the <code>[as-needed]</code> budesonide part of *Symbicort* SMART in preventing asthma exacerbations. All patients were given *Symbicort* as maintenance therapy and either terbutaline, formoterol or *Symbicort* as reliever. The results show that the <code>[as-needed]</code> budesonide part of *Symbicort* SMART is effective in reducing exacerbations of all types as well as in improving day-to-day symptom control compared to traditional reliever therapy with bronchodilators alone.

Preliminary data from the COMPASS study were published as an abstract at the European Respiratory Society meeting in September. This double-blind study demonstrated that the *Symbicort* SMART concept was more effective in reducing all forms of exacerbations than both double the usual maintenance dose of *Symbicort* plus a separate reliever medication and salmeterol/fluticasone at its most frequently prescribed fixed dose (50/250 µg twice daily) plus a separate reliever medication.

Symbicort is also approved in many countries for use in patients with COPD, where trial data have shown it reduces exacerbation rates compared to a long-acting bronchodilator.

**Pulmicort** remains one of the world seading asthma medicines and is available in several forms, including the *Turbuhaler* dry powder inhaler, a pMDI and *Pulmicort Respules* suspension for the treatment of children and infants.

The current *Pulmicort Turbuhaler* has been technically modified to improve dosing properties (dose uniformity) and to introduce a dose counter. The

leads to a reduced risk of having an asthma attack. enhanced version was approved by the FDA in July. The first European approvals (in Finland, Latvia, Germany, Austria and Denmark) for a more environmentally friendly HFA-based *Pulmicort* pMDI were received in 2006.

**Pulmicort Respules** is the first and only nebulised corticosteroid in the US for children as young as 12 months. Sales have grown strongly as a result of high medical need in the age group combined with the product sensition beneficial profile, which together have strengthened the product sposition as the inhaled corticosteroid of choice for the treatment of children under five with asthma. In September, *Pulmicort Respules* was approved and launched in Japan for the maintenance treatment of paediatric asthma and as prophylactic therapy in children aged six months or over and less than five years of age.

Information on AstraZeneca\[ \]s ongoing patent infringement action against IVAX in the US in relation to a budesonide inhalation suspension is set out on page141.

**Oxis** is a beta-agonist therapy with a fast onset and long-acting clinical effect for the relief of asthma symptoms. Oxis is added to the treatment regime when corticosteroid treatment alone is not adequate. Oxis is also indicated for symptom relief in COPD. During 2006, all drugs classified as []long-acting beta agonists[] were required to include safety precautions in their prescribing information such as []not to be used in asthma without concurrent steroid treatment[].

**Rhinocort** is a treatment for allergic rhinitis (hay fever). It combines powerful efficacy with rapid onset of action and minimal side effects and is available as a once-daily treatment in the *Rhinocort Aqua* (nasal spray) and the *Turbuhaler* dry powder inhaler forms.

#### **PIPELINE**

Our pipeline includes the life-cycle management initiatives for approved products mentioned above, as well as development compounds across the whole discovery and development cycle.

We focus on developing new therapies for currently unmet medical needs in COPD, asthma, rheumatoid arthritis and osteoarthritis.

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The development of *Symbicort* for COPD and paediatric asthma in the US is on track, with submissions scheduled for the first half of 2008 and late 2007 respectively. The development of two new strengths of the pMDI product is also on track, with submission of additional data to supplement the filing in the EU scheduled for the second half of 2008.

As discussed in more detail on page 38, we acquired Cambridge Antibody Technology Group plc (CAT) during the year. The existing alliance with CAT had established a strong portfolio in R&I diseases, which continued to make good progress. Together, we are now working on 11 discovery projects in R&I diseases. The first compounds are expected to move into development in 2007. In addition to forming the foundation for our biopharmaceuticals strategy, the acquisition of CAT added CAT-354 (in Phase I trials for asthma) and CAM-3001 to the R&I pipeline.

In September, we announced we had entered into a three-year partnership with Dynavax Technologies Corporation (Dynavax) to pursue opportunities in the field of Toll-like receptor 9 (TLR-9) for use in asthma and COPD. Dynavax has unique competence in generating immunostimulatory sequences that activate TLR-9, and the alliance will enable us to expand our portfolio of small molecules and biologicals.

On 1 February 2007, we announced a major discovery alliance with Argenta Discovery Limited aimed at identifying improved bronchodilators to treat COPD. A team of scientists from each company will collaborate in order to identify long-acting muscarinic (M3) antagonists (LAMAs) and dual acting muscarinic antagonist-ß2 agonist (MABA) candidate drugs.

Details of all compounds in the R&I pipeline are contained in the table on page 29.

#### **PERFORMANCE 2006**

### **Reported performance**

Sales in the R&I therapeutic area grew by 10% from \$2,873 million in 2005 to \$3,151 million in 2006. *Pulmicort* and *Symbicort* were the major contributors to this growth.

#### **Underlying performance**

On a constant exchange rate basis, sales in R&I increased by 10%.

Sales of *Symbicort* increased by 18% to \$1, 184 million on continued market growth and share gains in Europe, where sales were \$1,018 million. Sales in other markets reached \$166 million.

Worldwide sales of *Pulmicort* were up 11% to \$1,292 million. Once again, the primary driver for growth was *Pulmicort Respules* in the US, where sales were up 24%. Volume growth in the US was approximately 10%, with price changes, managed care rebate adjustments and inventory movements also contributing to the sales growth. *Pulmicort* sales in the rest of the world were \$457 million.

Rhinocort sales were down 7% to \$360 million, chiefly on sales of Rhinocort Aqua in the US market (down 9%).

### **PERFORMANCE 2005**

## **Reported performance**

Continued growth from *Symbicort* drove the increase in reported sales for R&I, which grew by 11% from \$2,583 million in 2004 to \$2,873 million in 2005.

## **Underlying performance**

On a constant exchange rate basis, sales in R&I increased by 9%.

*Symbicort* sales reached \$1,006 million. Sales growth was 22% as market share continues to increase in the fast-growing combination product segment of the asthma and COPD markets. Over 80% of *Symbicort* sales were made in Europe in 2005.

Sales of *Pulmicort* were up 9% as the 18% growth in the US (fuelled by a 28% increase in *Pulmicort Respules*) to \$682 million more than offset a 2% decline in other markets.

Rhinocort sales were up 6% chiefly on sales of Rhinocort Aqua in the US (up 7%), where price changes and managed care rebate adjustments more than offset the 10% decline in total prescriptions. Rhinocort sales in the US were \$277 million.

## 32 ASTRAZENECA ANNUAL REPORT AND FORM 20-F INFORMATION 2006 INFECTION MEDICINES

WE AIM TO BUILD A FRANCHISE IN THE TREATMENT OF INFECTIOUS DISEASES BY INCREASING SALES OF MERREM AND BY EXPLOITING OUR TRADITIONAL, STRUCTURAL AND GENOMIC-BASED DISCOVERY TECHNOLOGIES TO BRING NEW PRODUCTS TO MARKET.

#### MARKETED PRODUCTS

Merrem/Meronem\* (meropenem)

is an intravenous carbapenem anti-

bacterial for the treatment of serious

hospital-acquired infections.

\* Licensed from Sumitomo Pharmaceuticals Co., Ltd.

#### **2006 IN BRIEF**

- MERREM SALES OF \$604 MILLION.
- > STEADY UNDERLYING GROWTH FOR *MERREM* IN THE US (33%), EUROPE (18%) AND GLOBALLY (20%), DESPITE THE NEED TO RESTRICT SUPPLY DURING MANUFACTURING DISRUPTIONS.
- > WORK DEDICATED TO FINDING A NEW TREATMENT FOR TUBERCULOSIS CONTINUES AT OUR R&D FACILITY IN BANGALORE, INDIA.
- > AGREEMENT TO DEVELOP AND COMMERCIALISE CUBICIN WITH CUBIST PHARMACEUTICALS, INC. IN CHINA AND CERTAIN OTHER COUNTRIES.

PERFOR	MANC	E									
								2006 com	•	2005 com	•
			2006			2005	2004		2005		2004
			Growth			Growth					
			due to			due to					
		Growth	exchange		Growth	exchange		Growth	Growth	Growth	Growth
	Sales	underlying	effects	Sales	underlying	effects	Sales	underlying	reported	underlying	reported
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	%	%	%	%
Merrem	604	96	3	505	67	15	423	19	20	15	19
Other	73	(29)	-	102	(16)	2	116	(28)	(28)	(14)	(12)
Total	677	67	3	607	51	17	539	11	12	9	13

#### **PIPELINE**

Compound	Mechanism	Mechanism Areas under investigation		Estimated filing date		
NCEs			PC I II III	Europe	US	
CytoFab□	anti-TNF-alpha polyclonal antibody	severe sepsis		>2009	> 2009	
AZD5099		infection		>2009	> 2009	

Abbreviations in this pipeline table are explained in the Glossary on pages 179 and 180.

#### **PIPELINE**

Continued progress has been made in the discovery work at our R&D facility in Boston, US. Focused on anti-bacterial agents with a novel mechanism of action, the programme is now delivering clinical candidates for initial human phase testing.

As announced by us in November, the development programme for CytoFab, our treatment for severe sepsis licensed from Protherics Inc., will be expanded with the addition of a 480-patient Phase II study programme. This will be used to estimate more accurately both the required number of patients and the appropriate dose(s) for the subsequent pivotal Phase III study. Sepsis is a life-threatening condition resulting from uncontrolled severe infections, which affects an estimated three million people a year worldwide.

Work dedicated to finding a new treatment for tuberculosis continues at our R&D facility in Bangalore, India. Tuberculosis remains a worldwide threat and is newly diagnosed in approximately two million people every year in India and over eight million people worldwide. For more information see the separate Corporate Responsibility Summary Report 2006.

In December we entered into a licence agreement with Cubist Pharmaceuticals, Inc. for the development and commercialisation of the antibiotic Cubicin (daptomycin for injection) in China and certain other countries in Asia, the Middle East and Africa not covered by existing Cubicin International partnering agreements. The agreement does not include Japan, which is yet to be partnered. Cubicin sthe first antibiotic in a new class of anti-infectives called lipopeptides.

On 31 January 2007 we announced our acquisition of Arrow Therapeutics Ltd., a biotechnology company focused on the discovery and development of anti-viral therapies. This transaction is an important strategic step in strengthening our portfolio of anti-infective treatments and complements our internal capabilities in anti-bacterials. It also fits with our decision to re-focus our disease area research, with infection and anti-bacterials now one of our key therapy areas. The acquisition augments our portfolio with clinical and pre-clinical compounds and programmes. These include two anti-Hepatitis C Virus (HCV) compounds that target the novel NS5a protein: A-831 in Phase I and A-689 in pre-clinical development. Arrow[s most advanced compound is RSV604, currently in Phase II clinical development and partnered with Novartis. RSV604 is a first-in-class, small molecule, oral anti-Respiratory Syncytial Virus (RSV) compound.

#### **PERFORMANCE 2006**

### **Reported performance**

Infection sales rose by 12% from \$607 million in 2005 to \$677 million in 2006, as sales of Merrem grew by 20%.

## **Underlying performance**

Excluding effects of exchange, underlying sales in Infection increased by11%. *Merrem* sales grew by 19% to reach \$604 million, primarily driven by increased performance in the US and Europe.

### **PERFORMANCE 2005**

**Reported performance** 

Infection sales grew by 13% to \$607 million from \$539 million in 2004, with Merrem sales increasing by 19%.

## **Underlying performance**

After excluding the effects of exchange, infection sales grew by 9%. Underlying growth of 15% from *Merrem*, with sales of \$505 million, was the principal driver of this growth.

## DIRECTORS' REPORT**33**Business Review

## **GEOGRAPHIC REVIEW**

#### **2006 IN BRIEF**

- > THE US DELIVERED AN EXCELLENT YEAR, DRIVEN NOTABLY BY NEXIUM, SEROQUEL, CRESTOR AND ARIMIDEX.
- > ASTRAZENECA MAINTAINED ITS MARKET POSITION AS THE SECOND LARGEST PHARMACEUTICAL COMPANY IN CANADA.
- > THE REST OF THE WORLD DELIVERED A STRONG YEAR, DRIVEN BY KEY GROWTH PRODUCTS (NEXIUM, CRESTOR, SYMBICORT, SEROQUEL AND ARIMIDEX) AND EXPANSION INTO EMERGING MARKETS.
- EUROPE ACHIEVED GOOD GROWTH IN 2006 AHEAD OF KEY COMPETITORS, DESPITE SIGNIFICANT GOVERNMENT COST-CONTAINMENT INTERVENTIONS, ESPECIALLY IN GERMANY.
- IN ASIA PACIFIC, ASTRAZENECA REMAINS ONE OF THE FASTEST- GROWING COMPANIES, INCLUDING CHINA WHERE HKAPI RANKED US THE NUMBER ONE MULTINATIONAL PHARMACEUTICAL COMPANY IN THE PRESCRIPTION MARKET.
- > JAPAN CONTINUED TO GROW AHEAD OF THE MARKET, DRIVEN BY THE PERFORMANCE OF CASODEX, LOSEC, ARIMIDEX AND IRESSA.
- > SALES IN THE LATIN AMERICA REGION INCREASED BY 22%, DRIVEN BY MEXICO, VENEZUELA, CENTRAL AMERICA AND THE CARIBBEAN.

# STATEMENTS OF COMPETITIVE POSITION, GROWTH RATES AND SALES

As in the rest of this Annual Report and Form 20-F Information, except as otherwise stated, market information in this Geographic Review regarding the position of our business or products relative to its or their competition is based upon published statistical sales data for the 12 months ended 30 September 2006 obtained from IMS Health, a leading supplier of

statistical data to the pharmaceutical industry. For the US, dispensed New or Total prescription data are taken from the IMS Health National Prescription Audit for the 12 months ended 31 December 2006. Except as otherwise stated, these market share and industry data from IMS Health have been derived by comparing our sales market sales revenues for that period. Except as otherwise stated, growth rates and sales are given at constant exchange rates.

PERFO	RMANCE										
								2006 com	pared to	2005 com	•
			2006			2005	2004		2005		2004
			Growth			Growth					
			due to			due to					
		Growth	exchange		Growth	exchange		Growth	Growth	Growth	Growth
	Sales	underlying	effects	Sales	underlying	effects	Sales	underlying	reported	underlying	reported
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	%	%	%	%
US	12,449	1,678		10,771	1,140		9,631	16	16	12	12
Europe	8,903	519	(79)	8,463	598	216	7,649	6	5	8	11
Japan	1,503	73	(97)	1,527	114	(17)	1,430	5	(2)	8	7
RoW	3,620	343	88	3,189	290	183	2,716	11	14	15	21
Total	26,475	2,613	(88)	23,950	2,142	382	21,426	11	11	10	12

## **NORTH AMERICA**

US

Product Performance, Clinical Trial Data and Regulatory Submissions

Reflecting our continued commitment to attaining market leadership in a highly competitive and challenging environment, sales in the US rose by 16% from \$10,771 million in 2005 to \$12,449 million in 2006. The combined sales of *Nexium*, *Seroquel*,

Seroquel is now the first and only single medication approved by the FDA to treat both depressive and manic episodes associated with bipolar disorder. Clinical trials intended to support indications for Seroquel in both major depressive disorder and general anxiety disorder were recruiting in 2006.

*Crestor* was the fastest-growing branded single-agent statin in terms of share of new prescriptions in the US in 2006, with sales of \$1,148 million. This performance

#### Crestor and

Arimidex were \$7,775 million in 2006, which represented over 62% of our total US sales. AstraZeneca is currently the fifth largest pharmaceutical company in the US, with our sales representing a 5% share of US prescription pharmaceutical sales. Sales for Aptium Oncology (previously Salick Health Care) and Astra Tech rose by 12% and 41% to \$374 million and \$41 million, respectively.

Nexium continues to lead the proton pump inhibitor (PPI) market for new prescriptions, total prescriptions and total capsules dispensed. The new Medicare prescription benefit helped to fuel overall PPI market growth of 10% in 2006. Nexium posted growth rates ahead of the PPI market. The Medicare programme, along with the overall competitive market, did result in some net price erosion for Nexium in 2006. There were several positive regulatory milestones, as approvals were granted for Nexium for Zollinger Ellison Syndrome and for paediatric patients aged 12-17 years old. A new Nexium formulation of delayed-release granules for oral suspension was also approved and will be introduced in 2007.

In 2006, Seroquel enhanced its leading position as the number one prescribed atypical anti-psychotic on the market, with sales of \$2,486 million (up 24%, +24% reported). Seroquel posted prescription growth of 12% with an increase of 1.6 million prescriptions. In July a New Drug Application (NDA) was submitted to the Food and Drug Administration (FDA) seeking approval for a sustained-release formulation for Seroquel for the treatment of schizophrenia. In October, we received FDA approval for a new indication for Seroquel for the treatment of patients with depressive episodes associated with bipolar disorder.

was despite the market entry of generic statins, confirming that *Crestor* remains a clinically important option for many patients, especially the broad range of higher-risk patients. There were also three large-scale studies in several ethnic populations that are historically under-represented in clinical trials. We continued to improve formulary access for *Crestor* among managed care organisations in 2006.

Atacand continued to perform well in 2006, with sales totalling \$260 million (up 12%, +12% reported). In March, the results of the TROPHY study were presented, which evaluated the effects of early pharmacological treatment with Atacand in patients with pre-hypertension and showed potential for delaying the development of hypertension.

Toprol-XL sales continued to grow in 2006, by 7%, with net sales of \$1,382 million representing a \$91 million increase compared to 2005. As reported last year, on 17 January 2006 summary judgment was entered against AstraZeneca in the ongoing patent litigation in the US involving three companies challenging AstraZeneca spatents and seeking FDA approval to sell metoprolol succinate (the generic name for Toprol-XL). The Court found that the patents-in-suit are invalid and unenforceable. We disagree with and are disappointed by these conclusions and have appealed to the US Court of Appeals for the Federal Circuit. The appeal has been fully briefed and argued and a decision of the Federal Circuit is expected in 2007. Further information about this litigation is set out on page 142.

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## GEOGRAPHIC REVIEW CONTINUED

In November, Sandoz (formerly Eon Labs Manufacturing, Inc., one of the parties to the above litigation), launched a 25mg dosage strength of generic metoprolol succinate extended-release tablets. Subsequently, we announced that we had entered into a supply and distribution agreement with Par Pharmaceutical, and Par began distribution of an authorised generic version of the 25mg dosage strength of metoprolol succinate extended-release tablets in the US. The signing of this agreement does not affect the availability of AstraZeneca strengths.

Arimidex continued to perform well with sales up 29% (+29% reported) to \$614 million for the full year. In the second half of the year, *Arimidex* became the market leader in total and new prescriptions for hormonal treatments for breast cancer in the US market, surpassing tamoxifen for the first time.

Pulmicort Respules, the only inhaled corticosteroid for the treatment of asthma approved in the US for children as young as 12 months, has experienced strong sales growth of 24% over the previous year. In June, we filed a Citizen septition with the FDA raising our concern regarding the bioequivalence testing, product quality and labelling changes that would be, in its view, necessary for approval of any follow-on budesonide inhalation suspension, such as that filed by IVAX Pharmaceuticals Inc. in September 2005.

An NDA was filed in September 2005 for *Symbicort* pMDI for the long-term maintenance treatment of asthma in patients aged 12 years and above for two strengths (80/4.5 and 160/4.5 micrograms). This application was approved in 10 months (July 2006) within the Prescription Drug User Fee Act (PDUFA) timeline, only the third inhalation product within the pulmonary division to achieve approval within a 10-month period. Since the FDA approval, we have been preparing for US launch and the first pivotal trial data were unveiled in an abstract at the American College of Asthma, Allergy and Immunology in November. We continue to plan for a US launch around the middle of 2007, although achieving this launch timeline is dependent upon successful transfer of technology from development to manufacturing and completion of validation batches.

## Medicare Part D Prescription Drug Benefit

Implementation of the Medicare Part D prescription drug benefit began in January 2006. A new, robust market segment formed this year, as a greater than anticipated number of elderly and disabled Medicare beneficiaries signed up for this voluntary programme. Of the 43 million eligible beneficiaries, more than 50%  $\square$  22.5 million people  $\square$  are now enrolled in the programme, including six million who, prior to 2006, were covered by Medicaid. Another 40% of beneficiaries receive prescription benefits through other sources judged to be equivalent to or better value than Part D, such as employment-based retiree coverage or the Veteran  $\square$ s Administration. Less than 10% of the eligible population remains without coverage.

Enrolment data from the Centers for Medicare and Medicaid Services (CMS) show that two providers enrolled 44% of the Part D enrolees into their plans. Three-quarters of the Part D enrolees are enrolled in plans offered by 12 providers. According to CMS, competition among private plans reduced beneficiary and government costs by 35% in 2006, with similar savings expected in 2007. CMS has found that, on average, Medicare beneficiaries in the plans with the lowest prices could save up to 23% off the prices they would have paid without coverage, and some could save up to 56%. As part of our commitment to helping patients get the medicines they need, including those who are enrolled in, or who are eligible for, a Medicare Part D prescription drug plan, the Company gave a significant grant of \$10 million that helped produce the My Medicare Matters but reach and education initiative. Thanks to this support, during the first open enrolment period, My Medicare Matters but reach and education individuals in 44 regions within the US, helping to make My Medicare Matters be most recognised Part D outreach initiative among these community groups.

Our brands currently have extensive access on Medicare Part D formularies and are widely available to Medicare beneficiaries. Whilst payer mix varies by brand, between 20% and 30% of total prescriptions for our major in-line

brands are currently paid for by Part D plans. Driven primarily by both the success of our contracting strategy and prescription volume growth in the Medicare segment, AstraZeneca

has, on balance, realised a positive financial impact as a result of Medicare Part D. Over time, however, the success of the programme will depend, in large measure, on beneficiary satisfaction (including access to medicines), the effect of the coverage gap (a period of no insurance coverage in which beneficiaries must pay the full amount out of pocket), whether employers shift retirees to Part D and whether there will be attempts to modify or amend the programme.

#### Canada

During 2006, four products contributed combined sales of over \$600 million (*Crestor* \$185 million, *Losec* \$152 million, *Nexium* \$149 million and *Seroquel* \$122 million), with *Crestor*, *Losec* and *Nexium* among the top 20 prescription products in Canada by sales. Total sales for the year were \$1,031 million, down on an underlying basis by 1% (reported up 6%).

We maintained our market position as the second largest pharmaceutical company in Canada. *Crestor* maintained its number two market ranking and was the fastest-growing statin in both new and total prescriptions (41% and 33% respectively), supported by the *Crestor* Healthy Changes Support Program, which helps patients to understand better and improve the management of their cholesterol and to develop a healthier lifestyle.

*Seroquel* remains the leader in new and total prescriptions within the atypical anti-psychotics market. *Atacand* continues to outperform the anti-hypertensive market, with new prescription growth of over 21%, compared with market growth of only 10%.

Several of our marketed products received regulatory approval for new indications or label changes: *Nexium* to heal and reduce the risk of gastric ulcers associated with NSAID therapy (non-steroidal anti-inflammatory drugs); and *Faslodex*, whose Product Monograph was updated with clinical trial findings regarding use in patients with mild to moderate hepatic impairment. However, the Product Monograph for *Zomig* tablets,

Zomig Nasal Spray and Zomig Rapimelt underwent class-labelling changes clarifying the use of Zomig for acute migraine therapy.

## DIRECTORS' REPORT**35**Business Review

In November, the Supreme Court of Canada (SCC) reversed an earlier Federal Court of Appeal decision that had quashed the marketing approval for the generic omeprazole capsule product of Apotex Inc. (Apotex). The SCC had permitted Apotex to sell its product pending the resolution of the appeal. As a result of the November decision, Apotex can now continue to sell its omeprazole capsules in Canada. For more details of this and other litigation in Canada, see page 138.

#### **REST OF THE WORLD**

Sales in the rest of the world performed strongly, up 8% to \$12,995 million (+6% reported). Key growth products (*Nexium*, *Crestor*, *Symbicort*, *Seroquel* and *Arimidex*) were up 24% against 2005 (+23% reported). Sales in emerging markets were up a strong 22% (+23% reported). This increase was underpinned by continued investments in sales and marketing initiatives.

### **Europe**

We performed well in Europe, ranking third in terms of sales growth rate, achieving an overall market share of 5% and maintaining our position as the fifth largest prescription drug company. At \$8,903 million, sales were up 6% (+5% reported) with strong underlying demand in Spain, Italy, Greece and many of the countries in Central and Eastern Europe. Excluding sales of patent-expired products (\$839 million, down 20% and 21% on a reported basis), sales in Europe were up 10% (+9% reported).

The good sales performance was underpinned by strong underlying volume growth for our key brands, partly offset by the impact of government interventions, with *Crestor* (+56%, +56% reported), *Arimidex* (+30%, +29% reported), *Seroquel* (+25%, +24% reported), *Symbicort* (+18%, +17% reported) and *Nexium* (+6%, +5% reported) all increasing their market shares in most countries.

Overall our sales in France (\$1,642 million) were maintained at the same level as 2005 (reported down 1%), maintaining our sales ranking of fourth. We saw good sales growth for our key growth products (+19%, +18% reported), especially *Crestor* and *Nexium*, both of which gained significant market share from competitors, although this was partially offset by the continuing decline of patent-expired products.

In Germany sales of \$1,165 million were down 4% (down 5% reported) compared with 2005. This was a result of a combination of price reductions and increased pressure on physicians to write generic prescriptions in place of branded or newer patented products, which particularly affected sales of *Nexium*. Our specialty care drugs, *Arimidex* and *Seroquel*, however, showed good growth.

In the UK, sales were \$850 million, driven by *Arimidex* (+78%, +77% reported), which benefited from approval for use with switch patients previously receiving tamoxifen. *Symbicort* (+41%, +41% reported) and *Seroquel* (+34%, +34% reported) also performed strongly.

In Italy, sales were up \$113 million to \$1,265 million, which represents growth of 11% (+10% reported). The performance of *Crestor* continued the momentum gained in 2005 (+58%, +58% reported) and *Arimidex* (+29%, +29% reported) remains the market leader in the aromatase inhibitor market by sales. *Nexium* sales were up 31% (reported +28%) and the approval for risk reduction of NSAID-associated stomach ulcers in 2005 continued to drive sales.

In Spain, sales of \$745 million were driven by *Nexium* (+67%, +67% reported), *Symbicort* (+19%, +18% reported) and *Seroquel* (+20%, +20% reported).

Strong sales were recorded in Central and Eastern Europe, particularly in Russia, where the pharmaceutical market continued to benefit from the introduction of a federal reimbursement list for pharmaceuticals in 2005.

See page 50 (Industry Regulation) for a discussion of government cost-containment measures in Europe and their impact on our business.

### Japan

In Japan, we were the second fastest-growing company amongst the top 15 pharmaceutical companies, and increased our ranking from fourteenth in 2005 to thirteenth this year. Strong volume growth from key products offset the biennial government review of drug prices to deliver sales of \$1,503 million, growth of 5% (down 2% reported). The key drivers of this were the oncology portfolio, particularly *Arimidex* (+19%, +12% reported),

Casodex (+10%, +3% reported) and Iressa (+6%, flat reported), together with Losec (+7%, flat reported) and Seroquel (+4%, down 2% reported).

The planned interim analysis for the *Crestor* Post-Marketing Surveillance (PMS) study was submitted to the regulatory authorities in September and, based on its findings, and together with Shionogi & Co. Ltd., we started the full-scale launch of *Crestor* ahead of schedule on 25 September.

### **Asia Pacific (excluding Japan)**

Asia Pacific (excluding Japan) sales were up 10% (+10% reported) to \$1,528 million in 2006, with contributions from some of the fastest-growing and important emerging markets in the world. Sales growth for these emerging markets (all Asia Pacific markets excluding Australia and New Zealand) was up 17% (+20% reported) with sales of \$974 million.

South Korea growth (+29%, +38% reported) was driven by the successful launch of *Crestor* and continued development of *Atacand* and *Iressa*.

In China, the growth and expansion strategy of the past four years has continued to provide strong returns. AstraZeneca is the largest multinational pharmaceutical company in the prescription market in China, as surveyed by the Hong Kong Association of the Pharmaceutical Industry, with one of the highest growth rates. Investments in a large field force covering extensive areas of China allow AstraZeneca to ensure our products reach Chinese patients. In 2006, AstraZeneca also announced the establishment of the Innovation Centre, China (ICC). This investment in Chinese research and discovery science is aimed at creating new opportunities in the area of lung cancer, hepatocellular carcinoma cancer (HCC), gastric/oesophageal cancer and pre-menopausal breast cancer. The ICC will also establish collaborations with major medical centres in China.

Strong gains were also seen in India and Thailand, where market dynamics are continuing to be positive.

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## **GEOGRAPHIC REVIEW CONTINUED**

In Australia, we are ranked third in the market in terms of sales, with high volume growth of key brands such as *Arimidex*, *Seroquel*,

Atacand and Nexium. Crestor was launched successfully in December.

#### **Latin America**

Latin America enjoyed strong sales performance of \$732 million, up 23% (+26% reported), mainly driven by Mexico, Venezuela, Central America and the Caribbean. As a result, our market share grew to 2% in the prescription market, taking us to tenth position in the rankings of the prescription market.

The Latin America region has experienced improved political and economic stability. This has led to us investing significantly in further development of our key growth products and in the fast-growing markets. As a result, they showed strong performance with sales of \$219 million, which is up 53% versus last year (+58% reported). *Nexium* took over the number one position for Latin America with sales of \$94 million (up 48%, +51% reported). *Crestor* enjoyed a strong year with sales of \$57 million (up 82%, +88% reported).

Mexico continued to be our largest market in the region, with sales of \$286 million (up 23%, +23% reported). Our share in the prescription market moved up to 3% and we moved up to eleventh position in the rankings. *Crestor* is the market leader in terms of volume and second in terms of value. The over-the-counter (OTC) business increased \$7 million to \$30 million (up 32%, +31% reported), with particularly strong sales of *Losec* OTC (\$21 million).

In Brazil, sales were \$247 million with an underlying growth of 17% (+30% reported). The best-selling brand was *Zoladex* with sales of \$37 million.

The performance of other markets in the region was strong, particularly for Venezuela, Central America and the Caribbean.

### **Middle East and Africa**

Middle East and Africa showed good growth of +25% (+21% reported), driven by *Nexium*, *Symbicort* and *Crestor*. We outperformed the pharmaceutical market in terms of underlying growth rate in our key markets: Egypt, Saudi Arabia, the Gulf States and South Africa.

Our new manufacturing site in Egypt was inaugurated in December. It is AstraZeneca sirst manufacturing facility in the Middle East and demonstrates our commitment to invest in the region and our confidence in Egypt. The plant will have a capacity of 250 million tablets and represent a \$32 million investment.

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## RESEARCH AND DEVELOPMENT

☐My number one priority is to deliver a stream of medicines that meet unmet patient needs. A successful pharmaceutical company needs to have a continuous flow of exciting and differentiated medicines capable of sustaining global growth in the short, medium and long term. Bearing in mind the very long time needed to deliver a new medicine, we are actively managing each of these time periods.

We must also have an organisation that is fit for purpose and capable of discovering and developing better medicines with a very strong emphasis on quality [] both the properties of the molecules and the characteristics of the organisation and its decision-making.

In our competitive world, speed is also vital. We re now focusing on increasing the productivity and speed of our development process from beginning to end. We are asking the right questions and delivering data on time even though the outcomes may not always be what we would wish.

Patient benefit underpins all our work and we continue to develop our capability to measure efficacy alongside a deep commitment to the safest possible usage of our products.

In the short term, our business needs will be met through life-cycle management and delivery of our Phase III programmes. In the mid term we look to drive our Phase I. Phase II and pre-clinical projects towards proof of concept and proof of principle as rapidly as possible whilst recognising that we need to continue to externalise, both tactically to fill potential gaps and strategically, to access the enormous world of external science. We Tve already shown what we can do through both licensing and acquisition and our organisational focus and mindset have moved to a point where discovery has become a process that is much wider than our own laboratories.

In the long term, in addition to our current capabilities, we re also seeking to transform AstraZeneca through the use of novel biomarkers and imaging as well as a strategic move into biologicals to build a major presence in the fast-growing biopharmaceuticals sector.

## JOHN PATTERSON FRCP

Executive Director, Development

WE HAVE A GLOBAL RESEARCH AND DEVELOPMENT ORGANISATION, WITH AROUND 12,000 PEOPLE AT 16 MAJOR CENTRES IN EIGHT COUNTRIES DEDICATED TO TRANSLATING LEADING-EDGE SCIENCE INTO INNOVATIVE, NEW MEDICINES

## THAT MAKE A DIFFERENCE IN THE LIVES OF PATIENTS.

In 2006, we spent \$3.9 billion on research and development (2005 \$3.38 billion, 2004 \$3.47 billion) and approved \$300 million of R&D capital investments including announcements of major new facilities in Sweden (safety pharmacology), the US (cancer and infection) and China (cancer).

We want to be among the best in the industry in terms of the quality of our work and the speed with which we get new medicines to market. During 2006 we continued our drive to improve the efficiency of our processes and the effectiveness of our decision-making, so that we can quickly eliminate weaker candidate drugs (CDs) and concentrate on the robust, rapid progress of the ones most likely to succeed as significant advances in healthcare.

In line with our strategy, we also continued to focus on accessing external innovation that complements our in-house capabilities, and on page 39 you can read more about our externalisation activities during the year.

#### **PIPELINE STRATEGY**

Our R&D strategy is geared to maintaining a flow of new products that will deliver sustained business growth in the short, medium and long term.

In the short term, our business needs will be met through successful delivery of the Phase III programmes and optimised life-cycle management for our key products.

In 2006, we experienced some setbacks with our Phase III portfolio with the termination of the programmes for *Galida* and NXY-059, as described in more detail on pages 18 and 25 respectively. Despite these setbacks, as at 1 February 2007 we still have 28 Phase III programmes compared with 29 at the end of January 2006.

Notable successes in the life-cycle management of our key marketed brands during the year included nine submissions and nine approvals in the US or EU and are described in the Therapy Area Review (pages 16 to 32).

In the mid term we will drive our pre-clinical and clinical Phase I and II projects towards proof of concept as rapidly as possible whilst recognising that we will need to continue our emphasis on externalisation to complement our internal R&D efforts. Our drug discovery effort is now a process that is much wider than our own laboratories, as we actively seek to make alliances and acquisitions with external partners to gain access to leading drug projects or technology platforms.

The progress we are making in our drive to increase productivity is reflected in the growth of our early development portfolio: during 2006 21 CDs were selected (compared with 25 in 2005 and 18 in 2004), and we have 92 development projects in the proof of principle phase (before Phase III, late-stage development).

During 2006 we progressed 12 compounds into man.

In the long term, in addition to our current capabilities, we are also seeking to transform the AstraZeneca pipeline through a strategic move into biopharmaceuticals and by using biomarkers to help identify winning projects much earlier.

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## RESEARCH AND DEVELOPMENT CONTINUED

#### **Disease area focus**

During 2006, we reviewed our disease target areas and re-focused our efforts to ensure our scientific resources are best positioned to enhance our contribution to healthcare and long-term competitiveness. We remain in the same therapy areas, but within these areas we have prioritised the diseases where we believe our skills can make the most difference, and have withdrawn from those where we believe we have less chance of success. We also established a New Opportunities Team, which is dedicated to reviewing and evaluating appropriate new opportunities beyond our current therapy areas. The table opposite shows the areas on which we are focusing mid to long term and those from which we have withdrawn.

#### **Biopharmaceuticals**

During the last few years, biological molecules have been the fastest-growing segment of the pharmaceutical market. As part of a comprehensive biopharmaceutical strategy, we are determined to secure a significant share of this market. By playing an active role in the utilisation and development of these technologies, we aim to bring new medicines based on them to patients as early as possible as well as attacking diseases that were not amenable to small-molecule approaches.

With our acquisition of Cambridge Antibody Technology Group plc (CAT) in mid-2006, we took a major step towards our goal of establishing a significant biopharmaceuticals capability. This acquisition was built upon the strong foundation laid by our existing collaboration with CAT to discover new antibody-based medicines for respiratory and inflammatory diseases. It allows AstraZeneca to apply CAT world-leading technology platform for the discovery of novel human monoclonal antibodies to all of our disease research areas. The acquisition also enables CAT to secure consistent strategic investment to broaden the range of targets and disease mechanisms to which its technology can be applied, as well as the opportunity to develop the technology beyond its current capabilities.

In addition to the antibody projects being pursued by CAT, the first anti-cancer antibody to come from our collaboration with Abgenix further strengthened our biopharmaceutical development portfolio during the year.

DISEASE AREA FOCUS		
GROW	MAINTAIN	EXIT
Diabetes/Obesity	Alzheimer s Disease	Hypertension
Infection	Arrhythmia	Inflammatory Bowel Diseases
Analgesia	Asthma	Functional GI Disorders
Inhalation	Atherosclerosis	Parkinson∏s Disease
Translational Science through the Innovation	Bipolar Disorder	Multiple Sclerosis
Centre China (ICC)	Chronic Obstructive Pulmonary Disease	Addiction
		Insomnia
	Depression/Anxiety	Neuroprotection in Stroke
	Oncology	
	Osteoarthritis	

Schizophrenia

**Thrombosis** 

Certain Gastro-oesophageal Reflux Disease including Nexium life-cycle management

Monoclonal antibody approaches to Rheumatoid Arthritis

Whilst we build our biological capabilities, both internally and through collaborations and acquisitions, we will continue to apply our long-standing in-house skills and experience in small-molecule R&D and aim to maintain a complementary flow of new products from both areas of science over time. We anticipate that from 2010 onwards, one in four AstraZeneca candidate drugs eligible for full development will be biologicals.

### **Investing in China**

During 2006, we announced a \$100 million investment over the next three years in the establishment of the AstraZeneca Innovation Centre, China. The Centre will focus on translational science by developing knowledge about Chinese patients, biomarkers and genetics. The initial therapeutic area for the Innovation Centre will be cancer. In addition, we are also expanding our research capabilities in China by increasing further the number of scientific collaborations with local Chinese organisations and through our plan to establish a China Clinical Pharmacology Unit.

## **DISCOVERY RESEARCH**

In Discovery, our scientists work together across national boundaries to exchange ideas, to promote best practice and to maximise the scientific potential offered by our size and global reach.

Improving productivity and quality remains a core priority, underpinned by three major initiatives: Lead Generation, Discovery Medicine and Safety Assessment.

#### **Lead Generation**

Our strategic initiatives are directly aligned to improving the quality of chemical leads and biological targets, so that we can eliminate, at an earlier stage, those compounds that are unlikely to make it through clinical development. Strategic alliances with WuXi Pharmatech Co. Ltd (China) and ChemBridge (US) were signed in 2006 in order to collaborate on the identification, selection and supply of proprietary compounds to significantly enhance our existing compound collection. Also in 2006, a collaboration with the Effector Cell Institute (ECI) (Japan) was initiated to further develop and apply ECI sproprietary chemotaxis monitoring technology for use in high-content screening.

#### **Discovery Medicine**

We continue to focus on the collaboration between clinical medicine and basic science (Discovery Medicine), which is increasingly important in helping us gain a better understanding of human diseases and the suitability of future medicines to treat those diseases, as well as identify and deploy biomarkers for enhanced decision-making during clinical development.

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### **Safety Assessment**

Alongside continued investment in early understanding of the profiles of new molecules, we continue to implement high-throughput testing of safety and drug metabolism and pharmacokinetics early in the research process, so that CDs chosen for development are more likely to succeed.

#### **DEVELOPMENT**

People in our Development organisation specialise in taking a newly discovered compound from the laboratories, through clinical research, regulatory submissions, ongoing pharmaceutical development and life-cycle management. Project teams bring together all the relevant skills and experience needed for the rapid progress of new medicines and the management of development risks.

The change programme initiated during 2005 to enhance project delivery and improve R&D interfaces has been further developed. Improvement objectives focused on speeding up the progression of early Phase projects along the pipeline and to market, and on increased quality, are being actively tracked and implemented in line with our aim to become one of the best companies in the industry.

In clinical development, eClinical components are now fully implemented in our working routines. These include the use of web-based data capture for all new Phase II to strategic Phase IV studies and the recruitment of healthy volunteers, patients and clinical investigators via the internet. The sharing of information via eEnablement for all clinical study teams and clinical investigators will further enhance our clinical productivity and quality and reduce costs.

#### **EXTERNALISATION**

In line with our increased drive to pursue external acquisitions, licensing and partnership opportunities that will strengthen our research pipeline and help us to deliver the next generation of medicines, between the beginning of December 2005 and the end of January 2007, the Company has completed 12 significant licensing and acquisition projects and nine significant research collaborations. These initiatives have added five Phase II and two Phase III projects to our late-stage development pipeline. We also entered into more than 300 other new collaborations (compared with more than 200 in 2005), bringing our total number of active R&D collaborations and agreements to over 1,850. Examples of some of these transactions are as follows:

## **Biopharmaceuticals**

The acquisition of CAT, which has been the cornerstone for building the biologicals pipeline in the Respiratory and Inflammatory area (Osteoarthritis, Rheumatoid Arthritis, Asthma and COPD) and will now be extended to our other research areas.

### Cardiovascular

A partnership with Abbott Laboratories to co-develop and market a *Crestor*/fenofibrate fixed-dose combination product. This collaboration has the potential to provide physicians and patients with the first statin and fibrate combination in a single pill to simplify the treatment of patients with mixed dyslipidaemia.

A partnership with the Australian company Cerylid, to acquire kinase inhibitors that have the potential to deliver a very effective anti-platelet therapy with minimal risk for bleeding complications. The aim is to start a lead-optimisation pre-clinical project in early 2007.

A worldwide (apart from Japan) collaboration with Bristol-Myers Squibb Company (BMS) to develop and commercialise two investigational compounds (both discovered by BMS) being studied for the treatment of Type 2 diabetes. Saxagliptin, a dipeptidyl peptidase-4 (DPP-4) inhibitor, is currently in Phase III development. Dapagliflozin (previously referred to as BMS-512148), a sodium-glucose cotransporter-2 (SGLT2) inhibitor, is currently in Phase IIb development.

An exclusive global licensing and research collaboration agreement with Palatin Technologies, Inc. The collaboration is aimed at discovering, developing and commercialising small molecule compounds that target melanocortin receptors and have potential in treating obesity, diabetes and metabolic syndrome.

## **Respiratory and Inflammation**

A partnership with Dynavax Technologies Corporation to develop a TLR-9 agonist for asthma and COPD.

A discovery alliance with Argenta Discovery Limited aimed at identifying improved bronchodilators to treat COPD.

#### **Cancer**

A partnership with Schering AG to co-develop and jointly commercialise a novel selective oestrogen receptor down-regulator (SERD) for the treatment of breast cancer.

#### Infection

A licence agreement with Cubist Pharmaceuticals, Inc. for the development and commercialisation of the antibiotic Cubicin (daptomycin for injection) in China and certain other countries in Asia, the Middle East and Africa not covered by existing Cubicin international partnering agreements. The agreement does not include Japan, which is yet to be partnered. Cubicin is the first antibiotic in a new class of anti-infectives called lipopeptides.

Our acquisition of Arrow Therapeutics Ltd., a privately owned UK biotechnology company, focused on the discovery and development of anti-viral therapies.

#### **Neuroscience**

A collaboration agreement with the Karolinska Institutet, Sweden on the expansion of one of the world\[ \] pre-eminent PET (Positron Emission Tomography) centres.

An exclusive global agreement with Pozen, Inc. to co-develop fixed-dose combinations of naproxen and *Nexium* for chronic pain. The fixed-dose combinations will have the potential to provide chronic pain sufferers with a new treatment with reduced upper GI side effects.

A partnership with Axon Biochemicals on Dopamine Partial Agonists for the treatment of diseases of the nervous system, including psychotic and mood disorders.

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## **ASTRAZENECA DEVELOPMENT PIPELINE 1 FEBRUARY 2007**

				Estimate	ed filing date
Therapy area PRE-CLINICAL		Mechanism	Areas under investigation	Europe	US
	AZD6370		diabetes	>2009	>2009
	AZD8593		haemostasis	>2009	>2009
	AZD4121	cholesterol absorption inhibitor	dyslipidaemia	>2009	>2009
Cardiovascular	AZD1283		thrombosis	>2009	>2009
	AZD5861		dyslipidaemia	>2009	>2009
	AZD1656		diabetes/obesity	>2009	>2009
	AZD3988		diabetes/obesity	>2009	>2009
	AZD2066		GERD	>2009	>2009
Gastrointestina	AZD5329		functional GI disease	>2009	>2009
	AZD3102		Alzheimer∏s disease	>2009	>2009
	AZD6538		neuropathic pain	>2009	>2009
	AZD8797		multiple sclerosis	>2009	>2009
	AZD1940		nociceptive and neuropathic pain	>2009	>2009
	AZD3241		Parkinson∏s disease	>2009	>2009
Neuroscience	AZD2066		analgesia	>2009	>2009
	AZD6280		anxiety	>2009	>2009
	AZD1386		analgesia	>2009	>2009
	AZD2624		schizophrenia	>2009	>2009

	AZD0328		Alzheimer∏s disease	>2009 >2009
	AZD3043	GABA-A receptor modulator	short-acting anaesthetic	>2009 >2009
	AZD7903		analgesia	>2009 >2009
	AZD9935	VEGF signalling inhibitor (VEGFR-TKI)	solid tumours	>2009 >2009
	AZD0424	SRC kinase inhibitor	solid tumours	>2009 >2009
	AZD5180	anti-angiogenic	solid tumours	>2009 >2009
	AZD1845		solid tumours	>2009 >2009
	AZD8330		solid tumours	>2009 >2009
Oncology	AZD3646		solid tumours and haematological malignancies	>2009 >2009
	AZD9468		solid tumours	>2009 >2009
	AZD2932		solid tumours	>2009 >2009
	AZD4992			>2009 >2009
	CAT-8015	recombinant immunotoxin	haematological malignancies	>2009 >2009
	CAT-5001	recombinant immunotoxin	solid tumours	>2009 >2009
	AZD6918		solid tumours	>2009 >2009
	AZD6067	protease inhibitor	COPD	>2009 >2009
	AZD6357		osteoarthritis	>2009 >2009
	AZD7928		COPD	>2009 >2009
	AZD2392		asthma	>2009 >2009
	AZD3825		asthma	>2009 >2009
	AZD1236		COPD	>2009 >2009
	AZD5069		COPD	>2009 >2009
Respiratory and Inflammation	d AZD9668		COPD	>2009 >2009
	AZD9215		asthma	>2009 >2009
	AZD1678		asthma	>2009 >2009

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	AZD8848	asthma	>2009 >2009						
	AZD8075	asthma	>2009 >2009						
	AZD6605	osteoarthritis	>2009 >2009						
	CAM-3001	rheumatoid arthritis	>2009 >2009						
	AZD3199	asthma/COPD	>2009 >2009						
Infection	AZD5099	infection	>2009 >2009						
Abbreviations	Abbreviations used in the above table are explained in the Glossary on pages 179 and 180.								

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			Estimated filing date
Compound Es	Mechanism	Areas under investigation	Europe US
AZD2479	reverse cholesterol transport enhancer	dyslipidaemia	>2009 >2009
AZD1175		diabetes/obesity	>2009 >2009
AZD2207		diabetes/obesity	>2009 >2009
AZD1305	antiarrhythmic	arrhythmias	>2009 >2009
AZD9272	glutamate receptor modulator	neuropathic pain	>2009 >2009
AZD2327	enkephalinergic receptor modulator	anxiety and depression	>2009 >2009
AZD5904	enzyme inhibitor	multiple sclerosis	>2009 >2009
AZD1080		Alzheimer□s disease	>2009 >2009
AZD3783		anxiety and depression	>2009 >2009
AZD0530	SRC kinase inhibitor	solid tumours and haematological malignancies	>2009 >2009
AZD1152	aurora kinase inhibitor	solid tumours and haematological malignancies	>2009 >2009
AZD4769		solid tumours	>2009 >2009
AZD2281	PARP inhibitor	breast cancer	>2009 >2009
AZD4877		solid tumours	>2009 >2009
AZD1689	hypoxia activated cytotoxic	solid tumours	>2009 >2009
AZD8931		solid tumours	>2009 >2009
AZD7762		solid tumours	>2009 >2009
AZD5672		rheumatoid arthritis	>2009 >2009
	AZD2479  AZD1175  AZD2207  AZD1305  AZD9272  AZD2327  AZD5904  AZD1080  AZD3783  AZD0530  AZD1152  AZD4769  AZD4769  AZD4769  AZD4877  AZD1689  AZD8931  AZD7762	AZD2479 reverse cholesterol transport enhancer  AZD1175  AZD2207  AZD1305 antiarrhythmic  AZD9272 glutamate receptor modulator enkephalinergic receptor modulator  AZD2327 enkephalinergic receptor modulator  AZD5904 enzyme inhibitor  AZD1080  AZD3783  AZD0530 SRC kinase inhibitor  AZD1152 aurora kinase inhibitor  AZD4769  AZD4769  AZD4769  AZD4877  AZD1689 hypoxia activated cytotoxic  AZD8931  AZD7762	AZD2479 reverse cholesterol transport dyslipidaemia  AZD1175 diabetes/obesity  AZD2207 diabetes/obesity  AZD1305 antiarrhythmic arrhythmias  AZD9272 glutamate receptor modulator neuropathic pain  AZD2327 enkephalinergic receptor modulator anxiety and depression  AZD5904 enzyme inhibitor multiple sclerosis  AZD1080 Alzheimer[]s disease  AZD1080 SRC kinase inhibitor solid tumours and haematological malignancies  AZD0530 SRC kinase inhibitor solid tumours and haematological malignancies  AZD1152 aurora kinase inhibitor breast cancer  AZD4769 solid tumours  AZD4877 solid tumours  AZD4877 solid tumours  AZD48931 solid tumours  AZD7762 solid tumours  Solid tumours

AZD6703		rheumatoid arthritis	>2009 >2009
AZD4818		COPD	>2009 >2009
CAT-354	anti-IL-13 antibody	asthma	>2009 >2009
AZD5904		COPD	>2009 >2009
AZD1744		asthma	>2009 >2009

PHASE II: NCEs					
	Crestor/ABT-335 (Abbott)	statin + fibrate fixed combination	dyslipidaemia		2009
	AZD9684	CPU inhibitor	thrombosis	>2009	>2009
Cardiovascular	AZD0837	thrombin inhibitor	thrombosis	>2009	>2009
	AZD6610	PPAR alpha with □partial gamma□	dyslipidaemia	> 2009	>2009
	dapagliflozin (BMS)	sodium-glucose cotransporter-2 (SGLT2) inhibitor	diabetes	> 2009	>2009
	AZD9056	ion channel blocker (P2X7)	inflammatory bowel disease	>2009	>2009
Gastrointestinal	AZD3355	inhibitor of transient lower oesophageal sphincter relaxations (TLESR)	GERD	>2009	>2009
	PN-400 (Pozen)	naproxen + esomeprazole	signs and symptoms of OA and RA	>2009	>2009
Neuroscience	AZD3480	neuronal nicotinic receptor agonist	cognitive disorders in schizophrenia	>2009	>2009
	AZD3480	neuronal nicotinic receptor agonist	Alzheimer∏s disease	>2009	>2009
	Zactima	VEGF/EGF TKI inhibitor with RET kinase activity	medullary thyroid cancer	2H 2008	2H 2008
	ZD4054	endothelin A receptor antagonist	prostate cancer	>2009	>2009
Oncology	AZD5896	AGT inhibitor	solid tumours	>2009	>2009
	AZD6244 (ARRY-142886)	MEK inhibitor	solid tumours	>2009	>2009

	CAT-3888	recombinant immunotoxin hairy cell	hairy cell leukaemia	>2009 >200
D. and instrument	AZD9056	ion channel blocker (P2X7)	rheumatoid arthritis	>2009 >200
Respiratory and Inflammation	AZD1981		asthma	>2009
Infection	CytoFab∏	anti-TNF-alpha polyclonal antibody	severe sepsis	>2009 >200

PHASE II: LINE	EXTENSIONS			
Gastrointestinal	Nexium	proton pump inhibitor	extra-oesophageal reflux disease	>20091 >2009
Oncology	Iressa	EGFR-TK inhibitor	breast cancer	>2009 >2009

 $<sup>^{</sup>m 1}$  Project Extraesophageal reflux disease (reflux asthma) will be completed but will not result in a regulatory filing.

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# **ASTRAZENECA DEVELOPMENT PIPELINE 1 FEBRUARY 2007 CONTINUED**

				Estimated filing date	
Therapy area	Compound	Mechanism	Areas under investigation	Europe	US
PHASE III: NC	Es				
Cardiovascular	AGI-1067	anti-atherogenic	atherosclerosis	4Q 2007	2Q/3Q 2007
	AZD6140	ADP receptor antagonist	arterial thrombosis	>2009	>2009
	saxagliptin (BMS)	dipeptidyl peptidase-4 (DPP-4) inhibitor	diabetes	>2009	1H 2008
Oncology	Zactima	VEGF/EGF TKI inhibitor with RET kinase activity	NSCLC	2H 2008	2H 2008
	Recentin (AZD2171) <sup>2</sup>	VEGF signalling inhibitor (VEGFR-TKI)	NSCLC and CRC	>2009	>2009
PHASE III: LIN	IE EXTENSIONS			_	
Cardiovascular	Atacand	angiotensin II antagonist	diabetic retinopathy	2009	2009
	Atacand Plus	angiotensin II antagonist/thiazide diuretic	32/12.5 mg, 32/25 mg for hypertension	2H 2008	
	Crestor	statin	atherosclerosis	Filed	Filed
	Crestor				