NOVARTIS AG
Form 6-K
February 09, 2010
Table of Contents

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 or 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934

Report on Form 6-K dated February 9 2010

(Commission File No. 1-15024)

Novartis AG

(Name of Registrant)

Lichtstrasse 35

4056 Basel

Switzerland

(Address of Principal Executive Offices)

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: x Form 40-F: o

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):

Yes: o **No**: x

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):

Yes: o **No**: x

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: o **No**: x

Table of Contents

Table of Contents

Table of Contents

GROUP REVIEW

OUR MISSION

We want to discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life.

We also want to provide a shareholder return that reflects outstanding performance and to adequately reward those who invest ideas and work in our company.

Table of Contents

Table of Contents

CONTENTS

Table of Contents

GROUP OVERVIEW

Novartis provides healthcare solutions that address the evolving needs of patients and societies worldwide.

We offer a portfolio focused on broad areas of healthcare to best meet these needs: innovative prescription medicines, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, and consumer health products.

FINANCIAL HIGHLIGHTS

KEY FIGURES

(In USD millions, unless indicated otherwise)

	2009	2008
Net sales	**44 267**	41 459
Operating income	**9 982**	8 964
Return on net sales (%)	**22.5**	21.6
Net income	**8 454**	8 163
Basic earnings per share (1) (USD)	**3.70**	3.59
Core (2)		
Operating income	**11 437**	10 319
Return on core net sales (%) (3)	**25.8**	25.0
Net income	**10 267**	9 501
Basic earnings per share (1) (USD)	**4.50**	4.18
Research & Development	**7 469**	7 217
As a % of net sales	**16.9**	17.4
Number of associates (FTE) (4)	**99 834**	96 717
Return on average equity (%)	**15.7**	16.5
Free cash flow	**5 505**	4 301

SHARE INFORMATION

	2009	2008
Share price at year-end (CHF)	**56.50**	52.70
ADS price at year-end (USD)	**54.43**	49.76
Dividend (6) (CHF)	**2.10**	2.00
Payout ratio of net income from continuing operations (%)	**55**	48

NET SALES, OPERATING INCOME, NET INCOME, CORE OPERATING INCOME AND CORE NET INCOME (5)

(Index: 2004 = 100%)

2009 NET SALES BY REGION

(% and in USD millions)

(1) 2009 average number of shares outstanding: 2 267.9 million (2008: 2 265.5 million)

(2) Core results for operating income, net income and earnings per share (EPS) eliminate the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.

(3) In 2008 based on core sales of USD 41 305 million

(4) Full-time equivalent positions at year-end

(5) To ease comparability, net sales, operating income and net income for the years 2004 to 2007 exclude the Consumer Health Division Nutrition operations divested in 2007.

(6) Dividend payment for 2009: Proposal to 2010 Annual General Meeting

4

Table of Contents

NEWS IN 2009

PERFORMANCE	Another year of record results as momentum from recently launched products drives growth across broad healthcare portfolio. Net sales rise 7% (+11% in local currencies), led by Pharmaceuticals and Vaccines and Diagnostics. Core operating income advances 11% to USD 11.4 billion on the solid business expansion and operational improvements while absorbing an adverse currency impact. Core operating income margin improves to 25.8% of net sales. Core net income up 8% to USD 10.3 billon, while core EPS grows at same pace to USD 4.50.
NEW PRODUCTS	More than 30 major regulatory approvals in the US, Europe and Japan rejuvenate the portfolio. Approvals include the new medicines *Afinitor*, *Ilaris*, *Onbrez Breezhaler* and *Valturna*. Other approvals include the first-ever biosimilars in Japan and Canada; vaccines against Japanese encephalitis and the influenza A (H1N1) pandemic virus; and the *Prevacid24HR* over-the-counter medicine.
PIPELINE	Novartis is advancing 145 pharmaceutical projects (Phase I trials to registration). Pipeline highlights include US and European regulatory submissions for FTY720 (multiple sclerosis). Our focus is on medicines and vaccines offering potential best-in-class status and health benefits.
RESEARCH	By exploring mechanisms of disease, teams at the Novartis Institutes for BioMedical Research are seeking to discover novel therapies. Biologics account for an increasing proportion of the exploratory pipeline.
PORTFOLIO	Strengthening our focused portfolio to meet evolving healthcare needs, Novartis commits to invest more than USD 1 billion in China to create the country s leading pharmaceutical R&D institute and expand offering of vaccines. Sandoz acquires EBEWE Pharma s specialty generics business, gaining a new growth platform and improving access to oncology medicines.
CORPORATE CITIZENSHIP	Engaging with society to improve healthcare is integral to how Novartis operates and important to our success. Access-to-medicine programs for those in need reach 79.5 million patients in 2009. Contributions of USD 1.5 billion represent 3% of net sales.
DIVIDEND	Proposal for 5% increase in 2009 dividend to CHF 2.10 per share (2008: CHF 2.00 per share), with a dividend yield of 3.7%.
ALCON	Novartis announces in January 2010 its intention to gain full ownership of Alcon Inc., a global leader in eye care, through completion of the April 2008 agreement with Nestlé S.A. to acquire its 77% majority stake in Alcon, and subsequently a proposed direct merger of Alcon into Novartis in the interests of all stakeholders.

Table of Contents

Table of Contents

Daniel Vasella, M.D.

DEAR SHAREHOLDER

I am pleased to report record results for 2009, both in sales and in profits, despite the global economic crisis that shaped the year.

Our Pharmaceuticals Division delivered an outstanding performance during the past year. This achievement was possible through new product growth and rejuvenation of our portfolio - both of which clearly bring value to patients and shareholders. Consumer Health and Sandoz, our generics division, showed solid growth, accelerating in the fourth quarter. The Vaccines and Diagnostics Division exceeded its targets thanks to the rapid rise in demand for influenza A (H1N1) pandemic vaccines.

The specific results were as follows:

• Net sales rose by 11% in local currencies (+7% in US dollars) to USD 44.3 billion.

• Operating income grew 11% to USD 10.0 billion.

• Net income climbed 4% to USD 8.5 billion, negatively influenced by currency effects, financing costs for Alcon and exceptional costs of USD 189 million from associated companies; excluding acquisition-related and significant one-off factors, net income rose 8% to USD 10.3 billion.

• Free cash flow before dividends showed dynamic growth and reached a level of USD 9.4 billion (+24%).

The **Pharmaceuticals** Division increased its net sales 12% in local currencies (+8% in US dollars) to USD 28.5 billion. This growth rate is twice the market, illustrating that we remain one of the strongest-growing companies in the industry. Oncology in particular posted outstanding growth rates: we have increased our global market share to 11% from 7.7% in 2001, and moved from fifth to second position in this competitive field. Operating income grew ahead of net sales despite increasing investments in research and development, and negative external factors, such as price-cutting measures and adverse exchange rates.

I am also pleased that we successfully rejuvenated our product portfolio. Two factors contributed to this accomplishment: the global launches of new products - *Lucentis*, *Exforge*, *Exjade*, *Exelon* Patch, *Reclast/Aclasta*, *Tekturna/Rasilez* - and our leukemia treatment *Tasigna*, which showed clear superiority to *Gleevec/Glivec* in comparative studies. New products accounted for 16% of total sales, a significant increase from 10% the previous year. We obtained regulatory approval for a number of important products in 2009 - in particular for the cancer medicine *Afinitor*, which shows considerable potential, and the biological therapy *Ilaris*.

The **Vaccines and Diagnostics** Division increased sales by 39% in local currencies (+38% in US dollars) to USD 2.4 billion, and operating income reached USD 372 million. These record results are largely due to the rapid development of several innovative influenza vaccines, in particular for protection against the influenza A (H1N1) virus. To date, nearly 50 million people have been infected, requiring exceptional efforts on a global scale to contain the pandemic. All vaccine production sites have been operating at maximum capacity since the summer, thanks to unprecedented support from hundreds of Novartis associates from other divisions. By the end of the year, approximately 116 million doses were delivered. To strengthen this division, we aim to discover and develop innovative vaccines to complement our influenza vaccines, which serve a cyclical public health need. One such innovative product is *Menveo*, a vaccine for meningococcal meningitis that is currently pending regulatory approval.

The generics division **Sandoz** achieved solid underlying growth (USD 7.5 billion, +5% in local currencies) in key markets thanks to new product launches and increased marketing initiatives. Operating income remained nearly stable (-1%) at USD 1.1 billion. As in past years, the business experienced an annual price erosion of about 7% and was further impacted by adverse exchange rates. Despite increases in efficiency and productivity, the impact of these factors could not be entirely neutralized. Falling sales had an impact in Eastern European countries against the backdrop of the global economic crisis. However, this was more than offset by new product launches and a significant increase in net sales from biosimilars, especially in the US.

The **Consumer Health** Division felt the impact of the global recession particularly in the first half of 2009. Nevertheless, the division posted a solid result: net sales grew 5% in local currencies to USD 5.8 billion, while operating income fell slightly by 3% to

Table of Contents

USD 1.0 billion. In the OTC Business Unit, we invested significantly in the largest-ever launch campaign for *Prevacid24HR*, our proton pump inhibitor. The *Prevacid24HR* launch was one of the biggest prescription-to-OTC switches in recent years, sales exceeded USD 100 million in the few weeks following its November launch. CIBA Vision achieved stronger growth than any competitor in the contact lens and lens care industry. New product expansion helped accelerate solid growth in local currencies. Animal Health also grew faster than the global market.

We achieved strong 2009 results in a global market that will remain challenging for the foreseeable future. We must continue to focus all our efforts and engagement - even more in this environment - on adding value for patients, and, ultimately, for our company. This focus shields us from erratic, ill-considered action on one hand and from clinging defensively to the status quo on the other - both would weaken Novartis in the long term. Since Novartis was founded in 1996 we have experienced a rapid acceleration in economic globalization and information flow, increasing the complexity of managing multinational companies.

In light of these developments, we will only remain successful if we continue to navigate the rapidly changing environment with diligence, foresight and reflection, and venture to seize strategic opportunities, which are always accompanied by risk.

Our strategy, based on the concept of diversification within the healthcare sector, has again proven to be the right approach in the past year. The fact that more and more companies are starting to imitate our strategy of focused diversification does not guarantee long-term success - but does indicate that we recognized the signs of the times at a very early stage.

We have systematically transformed Novartis into a company focused clearly on growth areas of the healthcare market. Businesses in chemicals, nutrition and agribusiness, as well as beverages and medical nutrition, were spun off or sold. Other companies were added to our portfolio, including the generics manufacturers Hexal and Eon Labs, as well as the vaccines producer Chiron, where we successfully increased our holding to 100% in 2006 and have since nearly tripled sales.

Our strong yet adaptable corporate culture enabled the successful integration of these and other companies. Since the founding of Novartis, we have shaped our culture by proactively facing inevitable change with confidence in the future, without ever giving up our fundamental beliefs. Intensive training and continuing education of our associates established a corporate culture based on performance and results, integrity and cultural openness.

I firmly believe that our recently proposed merger with Alcon can result in a successful integration of the two companies. Ultimately, we aim not only to acquire the majority stake in Alcon from Nestlé, as agreed in April 2008, but also to integrate Alcon fully as a new and largely independent division via a direct merger into Novartis. This would immediately make Novartis a world leader in eye care. With our complementary product portfolios and synergies in research and development, Alcon and Novartis constitute an excellent strategic fit. Given the growing medical needs of the aging world population, ophthalmology is an area of dynamic growth.

Last year we also substantially strengthened our generics division Sandoz with the acquisition of EBEWE Pharma s specialty generics business, which specializes in injectable cancer medicines.

8

Table of Contents

In addition, our Vaccines and Diagnostics Division announced plans to acquire an 85% stake in the Chinese vaccines manufacturer Zhejiang Tianyuan. This company is a leading privately owned producer of vaccines with a large range of competitive products in China and an interesting pipeline in the field of viral and bacterial diseases.

As a global company, our strategic investments are influenced by the fundamental eastward shift in the world economy. Twenty years ago, the equilibrium shifted from Europe to the US; today, we are experiencing a shift toward Asia. China, for example, has long been interesting not only as a highly dynamic market, but also as a promising research hub. That is why last fall we decided to increase our investment and the number of associates at our research center in Shanghai from 160 to nearly 1 000.

China is the most important market of the future. By 2013, sales in the pharmaceutical industry could nearly triple from their current level of USD 25 billion to more than USD 70 billion. This would make China, in only a few years, the third-largest pharmaceutical market after the US and Japan.

We are currently witnessing the dawn of a new era. Globalization no longer implies westernization. A company that acknowledges that Asia will shape our society and economy in the future has the potential to base its actions on the ramifications of this shift. Projects in China are typically approached systematically, strategically and with a long-term horizon - in contrast to the West, where politics, economics and financial analysis are often short-term and characterized by a hasty response to risks and opportunities. I hope that we in the West succeed in returning to the values we once embraced, such as trust in the future and belief in progress.

Robust growth drivers will remain a distinguishing characteristic of the healthcare sector in the future. There are several contributing factors:

• Demographic changes are increasing the demand for medical care. Co- and multi-morbidity are a feature of advanced age and, without effective medicines and adequate medical care, have a huge impact on quality of life.

• Chronic diseases are more common not only because of aging societies, but also because of lifestyle changes. In China there are almost 400 million smokers. In the US alone, the direct and indirect cost of obesity amounts to almost USD 500 billion annually - not including the cost of secondary diseases such as diabetes.

• The strong and stable growth of emerging markets, despite the financial crisis, is evident in the increased demand for medicines and treatments. Experience in 2009 again confirmed that demand for the best possible healthcare is outpacing economic growth in emerging markets. In the seven leading emerging markets acknowledged by IMS (Brazil, China, India, Mexico, Russia, South Korea and Turkey), the growth forecast for 2010 is between 12% and 14% and is likely to accelerate further in the years to come.

• Scientific and technological advances are creating new ways to better develop novel medicines that fight diseases we cannot treat today.

At the same time, there are several opposing forces: ever stricter regulatory authorities, financially restrictive payors increasingly aware of their power, and governments around the world trying to reduce healthcare system costs. Price-cutting is often used to reduce costs in the healthcare system; however, cutting prices across the board does not take into account the overall goal of improving productivity and quality in healthcare, which can only be achieved through transparency and the comparison of various treatment methods.

Our company can meet these challenges with confidence, because our aim is to discover and develop more innovative vaccines and medicines for patients. New and better medicines will continue to be appreciated by society and financially rewarded. Nevertheless, we should be aware that we must constantly adapt our business model to changing market demands to maintain our level of growth in the years to come.

Without better prevention and treatment, the cost of the most prevalent diseases in society - including diabetes, cancer and hypertension - will triple by the middle of the next decade, totaling billions annually for each disease area in the US alone.

Despite heated health policy controversies - where the pharmaceutical sector sometimes serves as the ideal scapegoat - I remain optimistic. I firmly believe society recognizes the value of medical progress and that the majority understands and accepts that incentives and investments make innovation possible.

Against the backdrop of cost pressure and inherent skepticism facing the pharmaceutical sector, innovation is more important than ever. Novartis is in a strong position. Our consistent investments in research and development, made regardless of business cycle pressures, are paying off: Novartis has one of the most competitive pipelines in the pharmaceutical industry with 145 projects in development. Sixty of these are new molecular entities. Since the turn of the millennium we

Table of Contents

have received more Food and Drug Administration approvals than our competitors, outperforming them year after year.

In 2009, our company received more than 30 positive decisions from regulatory authorities in the US, EU and Japan, including a record number of six approvals in Japan for *Rasilez*, *Tasigna*, *Xolair*, *Co-Dio, Lucentis* and *Clozaril*. Furthermore, in January 2010, *Equa* (local brand name for *Galvus*), *Exforge* and *Afinitor* were approved in Japan, the world s second-largest pharmaceutical market. Additional approvals include *Afinitor* (cancer) in the US and EU; *Ilaris* (CAPS), *Extavia* (multiple sclerosis), and combination products *Valturna*, *Exforge* HCT and *Rasilez* (all hypertension), in the US. Regulatory authorities are currently reviewing QAB149 for the treatment of chronic obstructive pulmonary disease, the highly innovative medicine FTY720 for treatment of multiple sclerosis and the novel vaccine *Menveo*.

Even in a difficult global economic environment we continue to extend our engagement in the area of corporate social responsibility. The current global economic situation is a litmus test for the social responsibility of companies: Who is taking action and who is merely talking? Since the founding of Novartis, we have always viewed social responsibility as an integral part of our corporate strategy and acted accordingly. In 2009 we spent about USD 1.5 billion (which is again 3% of our net sales) on programs aimed at providing patients in need with access to our medicines, and on research to discover new vaccines and medicines for developing countries.

I would like to emphasize that our primary purpose as a pharmaceutical company is to discover and develop effective medicines and successfully bring them to market. By doing this, we make an indispensable contribution to help alleviate suffering, improve patients quality of life and even save lives; we also make a major contribution toward lowering the direct and indirect cost of disease. It is the responsibility of governments, on the other hand, to provide for the welfare of their citizens including a functioning healthcare system. For this reason, we remain convinced that any access solution can only have a sustainable impact when governments, international organizations, local aid groups and the private sector collaborate - managing the complexity would be overwhelming for any one stakeholder.

Our engagement in malaria provides an example. We supply our malaria treatment Coartem to affected countries without profit, in cooperation with the World Health Organization (WHO), the United Nations Children s Fund (UNICEF), state health authorities and private aid organizations. To date, Novartis has supplied 300 million Coartem treatments, helping to save the lives of about 750 000 people suffering from malaria.

Since 2000 we have also supplied leprosy patients worldwide with the medicines they need free of charge in partnership with the WHO. Through the end of 2009, these donations, totaling USD 60 million, have cured more than 4.5 million patients.

The successful campaign against leprosy is a public health milestone. In the last two decades, more than 14 million people have been cured, resulting in a 95% decrease in leprosy cases worldwide. Novartis has played a crucial part in ensuring that this terrible disease, which has been the scourge of humankind for centuries, could be eradicated in the near future. Only three countries - Brazil, Timor-Leste and Nepal - have more than one in 10 000 people with leprosy.

Our associates are gratified by our contributions in the fight against leprosy and malaria, and of course, as our shareholders, you too can take pride in these achievements. These

10

Table of Contents

successes are acknowledged by the WHO, as well as many nongovernmental organizations that do not always view us favorably. These stakeholders also recognize our commitment to researching new medicines and vaccines for diseases common in developing countries, which is the goal of our nonprofit research institutes in Siena, Italy, and Singapore.

We also recognize our responsibility in environmental issues. In 2005 we were among the first signatories of the Kyoto Protocol, which established binding targets for reductions in CO_2 emissions. In environmental protection, Novartis pursues a dual strategy: On one hand, we consistently strive to improve energy efficiency - for example, five Novartis sites have used solar energy systems since last year - on the other hand, we take advantage of voluntary CO_2 offsetting - for example, by planting more than three million trees in northeast Argentina.

We regularly and critically assess our strategy, to ensure it remains relevant for the future. In the same manner, we must constantly review our organizational processes and improve their effectiveness and efficiency. Given the difficult market environment and rising research and development costs, it is essential that we continue to work as efficiently and productively as possible. This also means simplifying processes and creating leaner and flatter structures, so that we can work more quickly, in less complicated ways. Avoiding unnecessary costs enables us to invest more in research and to cope with pricing pressures. We initiated Project Forward two years ago with these objectives in mind. The program s goal was to implement productivity improvements and achieve savings of USD 1.6 billion within three years. After just two years, the project has already exceeded this target by 46%.

In the new, post-crisis reality, governments and the public have rightly raised the ethical bar for good corporate governance. At Novartis we have always been convinced that integrity and transparency are indispensable for a sustainable and successful business. Our Code of Conduct, which our associates must learn and apply in their daily work, builds on these values. We also decided last year to include long-term objectives in the employment contracts of our associates, and systematically implement clawback provisions for bonuses. In concrete terms, this means that action may be taken to reclaim bonuses if it later emerges that the bonuses were paid out based on false information or dishonest management. Setting clear boundaries should prevent our financial incentive programs from abuse.

Last year, the Board of Directors formed a new committee to ensure that risks in the company are properly analyzed and evaluated, and respective processes are followed.

In addition, the Board of Directors has decided to propose at the upcoming Annual General Meeting that you, our shareholders, may consultatively vote on our Compensation System in the future. This vote should take place before every significant change to the Compensation System, but at least every three years. We continue to believe that a vote on individual compensation does not increase the likelihood of achieving business objectives. Decisions on compensation are a key strategic management tool of the Board of Directors, and are based on clearly defined objectives and performance criteria, which are confidential for competitive reasons. For many years, Novartis has voluntarily exceeded the legally required disclosure level in reporting individual compensation of the Executive Committee.

Appointing outstanding leaders to positions of great responsibility is crucial to the sustainable success of our company. The timely planning of CEO succession was initiated in 2008 with the creation of a transitory COO position. Completing this process the Board of Directors accepted my request to hand over my CEO responsibilities and has decided to appoint Joe Jimenez as the new CEO effective February 1. I felt it was timely after 14 years that I concentrate on the duties of Chairman of the Board, and will henceforth focus on the strategic priorities of Novartis and the tasks which lie within the area of accountability of the Board. Joe Jimenez will be fully in charge of all aspects of the operational business.

At Novartis, the question of whether the functions of CEO and Chairman should be separated or not, will continue to be answered in a flexible manner, according to the company s strategic requirements. This will be decided in the future in the best interest of shareholders and will not be rigidly prejudged for formalistic reasons.

I felt that this was the right moment for a transition, as our full pipeline and the acquisition of Alcon marks a new growth phase. Our business portfolio has been transformed to exclusively focus on healthcare, our pipeline is highly valued, and our research organization is productive and greatly respected. Our leadership team is competent and motivated. Due to all these factors, today, Novartis is one of the most admired companies in the healthcare industry.

Over the last several years, Joe Jimenez has led our Pharmaceuticals business, our most important division, back to the road of success. In this process, he has distinguished himself as an excellent leader with a focus on clear objectives and impressive implementation skills. It is not just his energy, his self-discipline and his engagement that makes him an ideal appointment as CEO. At least as important is his poised composure, as well as his sense of humor, which is also a great asset in this job.

Table of Contents

Furthermore, Joe s international experience in several business sectors will allow him to move easily in different cultures and take on the responsibilities of a global leader implementing the Novartis strategy.

Joe Jimenez embodies two of the most important values in our corporate culture: a consistent focus on performance and a sense of responsibility towards patients and society. These two values have already shaped our predecessor companies Sandoz and Ciba-Geigy. Marc Moret never lost himself in theoretical reflection, but instead pursued his goals with energy and great determination, against all kinds of bureaucratic resistance which lurk in all big organizations. Alex Krauer was one of the first corporate leaders who understood that credibility and a holistic view are indispensable requirements for success in business. I owe a lot to my predecessors. It is with this in mind that I wish Joe Jimenez all the best as he assumes the responsibilities of his new position!

The Board appointed David Epstein as the new Head of our Pharmaceutical Division. Due to his great skills and sustained sense of continuity, David has led our oncology business to a thriving success.

In these times of leadership change, our finance department is not an exception. On February 1, 2010, Jon Symonds will take over as Chief Financial Officer (CFO) from Raymund Breu, who has reached the mandatory retirement age of 65. Since September 1, Jon Symonds has served as Deputy CFO of the Group and designated successor to Mr. Breu. Previously, Mr. Symonds was Managing Director, Investment Banking, with Goldman Sachs. Mr. Symonds experience in the pharmaceutical industry goes back many years. He was CFO with AstraZeneca for eight years and, prior to that, Finance Director at Zeneca.

I extend my heartfelt thanks to Raymund Breu for his outstanding contributions as CFO and for his exceptional achievements in management during his 35 years in the service of our company. He played a crucial role in the founding of Novartis and has been an invaluable partner for me and my colleagues. Novartis owes a great deal to his expertise and his sound judgment. I would also like to thank our COO, Joerg Reinhardt, who for many years successfully led our product development before he took over the responsibility for our vaccines and diagnostics business. He has now decided to leave our company to pursue new opportunities.

As shareholders you are obviously interested in the development of the value of our company. Our total shareholder return since the founding of Novartis amounts to 9% annually, including continuously increasing dividends and business divestments. Our total shareholder return surpasses not only that of the global market, but also the pharmaceutical industry index and share price performance of important competitors. This shows that we remain in demand as a safe stock with attractive long-term performance.

In 2010, we expect net sales to grow at a midsingle-digit percentage rate in local currencies and for further improvement in the Group s operating income margin.

Most critically, the Pharmaceuticals Division is equipped to manage the period of increasing generic competition for our best-selling product, *Diovan*. It is gratifying to note that the rest of our cardiovascular portfolio - including the innovative medicine *Tekturna/ Rasilez* and combination products - is growing dynamically, allowing us to most likely maintain our leading position in this therapeutic area. In addition, our broad product portfolio beyond pharmaceuticals offers further growth opportunities - not least in the field of eye care. But above all, at the start of this new decade, Novartis has a pipeline that is more promising than ever before in our corporate history.

I would like to thank all our associates for their ongoing engagement, commitment to Novartis, and determination in this challenging environment. I am especially pleased that our associates, in ever-changing conditions, have remained fully engaged and undeterred in contributing to a successful year. We should not take this for granted; it deserves our utmost respect.

Finally, I thank you, our shareholders, for the trust you continue to place in our company. I am pleased to propose an increase in the dividend to CHF 2.10 (+5%) at the next Annual General Meeting.

Sincerely,

/s/ Daniel Vasella
Daniel Vasella, M.D.
Chairman and Chief Executive Officer

Table of Contents

Table of Contents

Table of Contents

HEALTHCARE PORTFOLIO

Innovation is flourishing, bringing new effective treatments to patients. There are significant challenges, however, and the healthcare environment is undergoing unprecedented change.

The world s population is aging. Better healthcare treatments are needed, also prompting payors to manage costs aggressively. Advancing science and technology are enabling new drug discovery while increasing the cost of innovation. Economic growth in emerging countries is providing better healthcare access, but the poorest still lack basic medicines. Changing lifestyles are leading to higher prevalence of chronic and degenerative diseases.

Our strategy is to provide healthcare solutions that address the evolving needs of patients and societies worldwide.

CONTENTS

Table of Contents

EXCELLENT HEALTHCARE PORTFOLIO

Novartis has a well-positioned portfolio focused on broad areas of healthcare, and is the only company to have leadership positions in all of them.

PATIENT-CENTRIC PORTFOLIO

PHARMACEUTICALS

Novartis creates innovative patent-protected pharmaceuticals that save lives and enhance outcomes for patients and healthcare providers. Our medicines are concentrated in therapeutic areas that include cardiovascular, oncology, neuroscience and ophthalmics, respiratory and auto-inflammatory diseases.

SANDOZ

Sandoz is a global leader in generic pharmaceuticals, providing affordable, high-quality medicines that improve access for patients and healthcare systems worldwide. Beyond supplying traditional off-patent medicines, Sandoz stands out for developing and producing differentiated generics and biosimilars.

VACCINES AND DIAGNOSTICS

Novartis vaccines and diagnostic tools help prevent the spread of life-threatening bacterial and viral diseases. In 2009, we were a leader in the fight against the influenza A (H1N1) virus as well as seasonal flu, meningitis and other diseases. Our screening diagnostics help safeguard national blood supplies and ensure patient safety.

CONSUMER HEALTH

Novartis creates and markets a range of innovative products for empowered consumers. OTC (over-the-counter) treatments enable self-medication for common illnesses and conditions. Animal Health provides a range of products to care for pets and livestock. CIBA Vision provides contact lenses and lens care products.

LONG-TERM STRATEGIC INITIATIVES TO CREATE SUSTAINABLE GROWTH

Selectively strengthen portfolio Our businesses have excellent growth prospects. We constantly evaluate internal and external opportunities to improve their competitiveness and better position Novartis for success.

Step up innovation Focusing on unmet medical need inspires us to connect science with customer insights to develop new products. Novartis is reaping the benefits of long-term investments in innovation, achieving more than 30 major regulatory approvals in 2009.

Expand in high-growth markets We are growing in the developed markets of North America, Europe and Japan. At the same time, we are investing to capture attractive growth opportunities in the top emerging markets of Brazil, China, Russia, India, South Korea and Turkey.

Improve organizational efficiency Productivity is an ongoing process. We continuously seek to deliver the highest-quality results even faster, while also freeing up resources for investments in innovation and business expansion.

Sustain our performance-oriented culture We are proud of our inspiring and challenging work environment. We reward those who invest their talent and ideas to create value for patients and customers.

Table of Contents

HEALTHCARE PORTFOLIO OVERVIEW

NET SALES BY DIVISION
(Index: 2004 = 100%; Vaccines and Diagnostics since 2006 acquisition)

CORE (1) OPERATING INCOME BY DIVISION
(Index: 2004 = 100%; Vaccines and Diagnostics since 2006 acquisition)

2009 NET SALES BY DIVISION
(% and in USD millions)

2009 CORE (1) OPERATING INCOME BY DIVISION
(% and in USD millions)

2009 NET SALES BY REGION

(% and in USD millions)

(1) Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.

Table of Contents

EMERGING MARKETS

The Novartis Pharmaceuticals Division achieved robust growth during 2009 in six key emerging markets - China, Russia, Turkey, South Korea, Brazil and India. This dynamic performance reflected aggressive investments to step up research and development, as well as marketing and sales, in these emerging countries. An increasing number of collaborations with institutions in China and other key emerging countries is enabling Novartis to share both experience in drug discovery and the Group s world-leading development technology platform.

In November 2009, Daniel Vasella, M.D., Chairman and Chief Executive Officer of Novartis, announced plans to invest USD 1 billion over the next five years to step up research and development activities in China and significantly expand the existing China Novartis Institutes for BioMedical Research (CNIBR) in Shanghai.

We are confident that our expanded investment in research and development will result in innovative therapies for patients in China and other countries, nurtured by the growing scientific excellence in China, Dr. Vasella said. The Shanghai center was founded in 2006, and specializes in basic research and development of new drugs to treat diseases that are highly prevalent in China, including infectious causes of cancer and liver diseases.

CNIBR is expected to become the largest comprehensive research and development center in China, with a staff of about 1 000 people, an increase from 160 people today. The institute will extend its collaborations with institutions in China, sharing both the drug development experience and the development technology platform of Novartis.

Novartis has invested more than USD 250 million in a new global technical center in Changshu, China, focused on technical research, development and manufacture of active pharmaceutical ingredients. The center is expected to be a critical part of the Novartis global production and supply chain network.

YOUNGER PORTFOLIO

In addition, Novartis agreed to pay the equivalent of USD 125 million for 85% of Zhejiang Tianyuan Bio-Pharmaceutical Co., a privately owned Chinese vaccines company that has grown dynamically in recent years. The acquisition is part of a strategic initiative by Novartis to enhance the prevention of diseases and build a leading vaccines business in China. Tianyuan offers a range of marketed vaccine products and focuses research and development activities on viral and bacterial diseases.

Novartis broke ground on a new vaccines plant in Brazil late last year, yet another example of continued investment in global vaccines infrastructure and pipeline. The new plant, located in Pernambuco state, represents an investment of up to USD 500 million and is expected to be fully operational by the end of 2014.

In 2009, Dr. Vasella also concluded an agreement with the government of South Korea, broadening the program of clinical trials to be conducted locally by Novartis as well as venture capital investments in the country s fledgling biotechnology industry. We are no longer just a drug company in South Korea. We are an investor committed to innovation and the long-term development of a national biotechnology industry, said Peter Jager, Head of the Novartis Country Organization in South Korea.

The flurry of activity underscores dynamic growth by Novartis in six key emerging

Table of Contents

markets: Brazil, China, India, Russia, South Korea and Turkey. Net sales in these six countries rose 19%, to USD 2.6 billion, in 2009, representing about 8.9% of net sales by the flagship Pharmaceuticals Division. As a result of aggressive investments in these markets, that proportion is expected to double, to more than 20% of the division s net sales, by 2012.

In emerging countries, just as in developed markets, Novartis benefits from a younger product portfolio than rival pharmaceutical companies. Growth in emerging markets is driven by innovative medicines that provide value for patients and payors compared with older, mature products facing competition from generics.

We definitely have a younger portfolio in emerging markets, said Joe Jimenez, Head of the Pharmaceuticals Division and member of the Executive Committee of Novartis. For example, *Galvus* is already successful in some key emerging markets and Novartis is rolling out other new products launched in recent years.

In the long run, the pharmaceutical industry is about innovation, Mr. Jimenez added. Our research and development investment is at the high end of the industry, and we expect that to continue, to create a best-in-class pipeline over the next five years. We are not backing off that commitment to innovation one bit and that goes for our emerging-market strategy as well.

A common thread underlying Novartis strategy in emerging markets is expansion of local sales forces. These are open markets where the physician has a high level of autonomy to prescribe, Mr. Jimenez added. So you are going to see us invest in additional sales representatives in those countries.

While Novartis has extensive local manufacturing in Turkey and Brazil - as well as fledgling production facilities in China - broadening local production in emerging markets is another strategic priority. We re looking for ways to move production to China, South Korea and Russia to lower our cost structure further, Mr. Jimenez said.

At the same time, the Consumer Health Division also sees potential for significant growth in China, which is the world s second largest market for veterinary products. Novartis Animal Health has posted compound annual net sales growth approaching 20% in China over the past five years. That success has been based on a strategy focusing primarily on pig production. Key customer groups include both the most modern, integrated pig production companies in China, as well as specialized household farms, usually run by individual families, that comprise by far the biggest share of the market.

Expansion of the sales force has helped the Animal Health organization in China almost double sales over the past four years, and steadily increase market penetration of *Denagard*, an anti-infective from Novartis used by pig farmers. In the next phase of expansion, Novartis Animal Health is expected to step up ongoing efforts to broaden the product portfolio available to Chinese customers, and to expand sales force optimization programs.

MANAGING VOLATILITY

According to IMS Health, a consulting firm specializing in the pharmaceutical industry, the top seven emerging markets worldwide are expected to grow at an average rate of between 13% and 16% in the next five years.(1) That forecast is in sharp contrast to the historically sluggish average annual growth of 4% to 7% projected for worldwide pharmaceutical sales in the same period.

China stands in a class by itself. IMS Health forecasts that average annual growth of China s pharmaceutical market will exceed 20% over the next five years. Net sales growth in China for the Novartis Pharmaceuticals Division accelerated sharply, to more than 30% in 2009, from 15% two years earlier.

The other priority emerging markets comprise a heterogeneous group, subject to volatile shifts in economic conditions and healthcare policies. In Turkey, for example, the rate of net sales growth accelerated in 2009 to 19%, from 7% in 2007, enabling Novartis to gain market share. But a severe program of cost-containment measures in Turkey, triggered by the economic recession, is expected to cause a steep decline of both the overall pharmaceutical market as well as net sales by Novartis in 2010.

South Korea s economy also declined during 2009 but is expected to return to growth this year. The overall pharmaceutical market is expected to expand at high-single-digit rates but Novartis expects sales growth to exceed 20% in 2010.

Clearly, managing volatility is a critical success factor in emerging countries. To capture opportunities and handle risks, you have to be extremely flexible and quick because conditions can change virtually overnight, said Guldem Berkman, Head of the Novartis Country Organization in Turkey.

CHINA: HEALTHCARE REFORM

China is unique both in terms of the sheer potential of its pharmaceutical market and the exceptional rate of growth likely to be sustained over many years. Given the level of industrialization and urbanization in China today, there is still a long way to go, said Emmanuel Puginier, M.D., Chairman Greater China Region for Novartis.

A primary objective of the sweeping healthcare reform program announced by the Chinese government is to increase coverage, particularly in rural areas. The government s goal is to have 90% of China s population covered by health insurance by 2011. At the same time, China plans to strengthen and expand the primary care system by building or refurbishing tens of

(1) The seven emerging countries tracked by IMS Health are Brazil, China, India, Mexico, Russia, South Korea and Turkey.

Table of Contents

thousands of community health centers around the country.

Shoring up primary care is a priority because too many patients currently access China s healthcare system through large university hospitals, leading to bottlenecks and care that is unnecessarily expensive. The government believes a progressive shift of focus from university hospitals to community health centers will help to alleviate bottlenecks. But this isn t something that can be done overnight. It will be complex to implement, and a series of pilot programs in different provinces over the next three to five years will test how best to implement the government s high-level vision for health-care, Dr. Puginier cautioned.

There is a difference between China and other emerging countries in the sophistication of policymaking and discipline of execution, he added. Strategic investment by the government in education and infrastructure puts China in a completely different league. And the greater visibility and predictability allow us to deploy a strategy with a longer time horizon and greater confidence that investments will yield the expected return.

NEW OPPORTUNITIES

Novartis is working with these pilot programs to take advantage of new opportunities in China. The Novartis sales force has grown rapidly - driven in part by geographical expansion as health insurance coverage improves for China s inland provinces. A customer-centric commercial model will help Novartis target the unique needs of community health centers.

The Novartis portfolio has also widened as a result of recent reimbursement decisions by health authorities. In November 2009, the Ministry of Human Resources and Social Security released the first update of the National Reimbursement Drug List since 2004. Several Novartis medicines including *Aclasta*, *Comtan*, *Exelon*, *Myfortic*, *Sebivo* and *Trileptal* were granted reimbursement. This was a very important milestone that will fuel our growth until the next update of the reimbursement list, expected in 2012, Dr. Puginier said.

Meanwhile buildup of the primary care network in China, including new community health centers, will engender entire classes of new customers best served by key account teams. Key account management is an increasingly important global trend. Cross-functional key account teams from Novartis - reinforced with specialist medical and health economic expertise - offer a convenient, single point of contact for senior executives, medical directors and procurement specialists at payor organizations who wield increasing influence over the medicines patients ultimately receive.

It s interesting to see that the global capabilities we are developing for more mature markets are also relevant for China in the context of healthcare reform, Dr. Puginier mused.

Clinical development is another function heading for an overhaul. Development activities by Novartis in China traditionally have been dominated by studies needed to meet specific Chinese regulatory requirements after global development of a new medicine was already completed. As a result, new Novartis medicines have received approval in China up to six years later than initial approval in the United States or Europe.

That is changing, and China is rapidly becoming an integral part of global development programs. When we think about the profile of a new compound, we need to ensure that we incorporate input from China - from patients, the medical community and key customers - with similar input from the United States, Europe and Japan, Dr. Puginier said. Starting from Phase II,

Table of Contents

there will be a cohort of patients from China in all future global development activities so that we no longer need to do China-specific studies at the very tail end of the process.

TURKEY: DEMOGRAPHICS AND HEALTHCARE REFORM

Positive demographic trends and steady expansion of state health insurance coverage have fueled sustained, double-digit growth of pharmaceutical sales in Turkey in recent years. Since 2004, the number of people covered under government health-care insurance has increased to 60 million from 43 million. The improved coverage has been particularly significant in rural areas. Access to physicians and hospitals has also broadened for people covered under state health insurance, a break with the past when access to major hospitals was tightly restricted.

Novartis has expanded its General Medicines field force beyond urban centers to rural regions. At the same time, additional Novartis medicines have reached the market, despite increasingly stringent standards for regulatory approval and reimbursement. During the past two years, *Exforge*, *Xolair* and *Tobi* were approved and received reimbursement, and *Lucentis* was launched in January 2009, said Ms. Berkman, the Novartis Country Head in Turkey.

That period of steady growth will be interrupted in 2010. Cost containment measures imposed by the Turkish government are expected to diminish the overall market by USD 2.5 billion, leading to a projected decline of nearly 20% for the Turkish pharmaceutical market in 2010. The measures clearly will delay launches of new medicines and also could exacerbate unemployment already running at a rate of 15%, said Ms. Berkman, who has played a key role in negotiations with the government as co-chair of Turkey s national pharmaceutical industry association.

SOUTH KOREA: INCREASING VISIBILITY

In South Korea, aggressive investment programs and savvy partnerships in marketing, as well as research and development, underpinned a rapid acceleration of net sales growth in 2009. At the same time, however, market access is a major challenge in South Korea.

Harsh pricing and reimbursement regulations introduced in 2007 have slowed approvals of medicines by international companies to a trickle. Novartis has received approvals for *Exforge*, *Galvus*, *Exelon* Patch and *Lucentis* since the new rules took effect. *Sebivo*, a treatment for hepatitis B, was rejected twice by South Korean authorities but was finally approved, much delayed, in November 2009. Reimbursement applications are pending for *Xolair*, *Aclasta* and *Rasilez*, and discussions with the government are ongoing.

In addition to adding new sales representatives, Mr. Jager has stepped up investment in prelaunch activities for the new medicines to accelerate uptake following launch. When you introduce three to five new products in the same year the risk is that you dilute the investment behind each brand, he said.

Moreover, Novartis has established integrated account teams that represent a single, integrated interface with major customers. Key account management not only increases the visibility of Novartis, Mr. Jager added. We are achieving faster product listings, and see better return on our investments as a result of improved alignment of commercial and medical activities across business units and divisions. In the end, it s all about maximizing customer focus and becoming more patient-centric as an organization.

Table of Contents

Table of Contents

PHARMACEUTICALS OVERVIEW

KEY FIGURES

(In USD millions, unless indicated otherwise)

	2009	2008
Net sales	**28 538**	26 331
Operating income	**8 392**	7 579
Return on net sales (%)	**29.4**	28.8
Core operating income (1)	**9 068**	8 249
Return on core net sales (%) (2)	**31.8**	31.5
Research & Development	**5 840**	5 716
As % of net sales	**20.5**	21.7
Free cash flow	**9 170**	7 679
Net operating assets	**14 519**	14 812
Additions to property, plant & equipment (3)	**922**	1 115
Number of associates (FTE) (4) at year-end	**56 310**	53 632

(1) Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.
(2) In 2008 based on core sales of USD 26 227 million
(3) Excluding impact of business combinations
(4) Full-time equivalent positions at year-end

PORTFOLIO REJUVENATION

(% and total net sales in USD millions)

NEWS IN 2009

Dynamic underlying performance as the rapid growth of recently launched products transforms the portfolio and underpins double-digit expansion in all regions and therapeutic franchises.

Net sales rise 8% (+12% in local currencies) to USD 28.5 billion. Europe, the largest region, delivers solid performance, with improved results achieved in Japan, Latin America and Canada. The US returns to solid growth on the strength of new product launches.

Core operating income grows 10% to USD 9.1 billion on volume growth and productivity gains that support product launches and geographic expansion. Investments in R&D pipeline include the start of 14 Phase III trials in 2009. Core operating income margin improves to 31.8% of net sales from 31.5% in 2008.

Recently launched products (USD 4.7 billion, +81% lc) provide 16% of net sales, up from 10% in 2008. Key growth drivers among products launched since 2007 include *Lucentis*, *Exforge*, *Exjade*, *Exelon* Patch, *Reclast/Aclasta*, *Tekturna/Rasilez*, *Afinitor* and *Ilaris*.

Oncology (USD 9.0 billion, +14% lc) is the largest therapeutic franchise with 32% of net sales and four top-selling products, led by *Gleevec/Glivec* (USD 3.9 billion). Cardiovascular and Metabolism (USD 8.8 billion, +9% lc) builds on global leadership of *Diovan* (USD 6.0 billion) and momentum of new high blood pressure medicines *Exforge* and *Tekturna/Rasilez*.

Development pipeline achieves many positive regulatory decisions. *Afinitor* gains US and European approvals for kidney cancer, trials are underway in other cancers. *Onbrez Breezhaler* (chronic obstructive pulmonary disease) is approved in Europe and quickly launched in Germany. Other approvals include *Ilaris* (CAPS) and high blood pressure combination therapies *Valturna*, *Exforge* HCT and *Tekturna* HCT. FTY720 (multiple sclerosis) is submitted for US and European regulatory approvals.

23

Table of Contents

PIPELINE

Novartis is consistently rated as having one of the industry s most respected pipelines with 145 projects in clinical development. Several of these pharmaceutical projects, which include potential uses of new molecular entities as well as additional indications or new formulations for marketed products, are for potentially best-in-class medicines that would advance treatment standards.

The following table provides an overview of selected pharmaceutical projects.

Project/compound	Common name	Mechanism of action
ABF656	albinterferon alfa 2-b	Interferon alpha-type activity (direct antiviral and immunomodulatory)
ACZ885	canakinumab	Anti-interleukin-1ß monoclonal antibody
AEB071	sotrastaurin	Protein kinase C inhibitor
AFQ056		Metabotropic glutamate receptor 5 antagonist
AGO178	agomelatine	MT1/MT2(4) agonist and 5-HT2c(5) antagonist
AIN457		Anti-interleukin-17 monoclonal antibody
ASA404	vadimezan	Tumor vascular disrupting agent
Certican/Zortress	everolimus	Growth-factor-induced cell proliferation inhibitor
Diovan/Starlix NAVIGATOR	valsartan, nateglinide	Angiotensin II receptor antagonist and insulin secretagogue
EPO906	patupilone	Microtubule depolymerization inhibitor
FTY720	fingolimod	Sphingosine-1-phosphate receptor modulator
LBH589	panobinostat	Histone deacetylase inhibitor
LCI699		Aldosterone synthase inhibitor
LCZ696		Dual angiotensin II receptor antagonist and neutral endopeptidase inhibitor
Lucentis	ranibizumab	Anti-VEGF(6) monoclonal antibody fragment
Mycograb	efungumab	Antibody fragment vs. fungal HSP90(7)
NIC002		Nicotine Qbeta therapeutic vaccine
NVA237	glycopyrronium bromide	Long-acting muscarinic antagonist
PKC412	midostaurin	Signal transduction inhibitor
PRT128	elinogrel	P2Y12 inhibitor
PTK796		Inhibition of bacterial protein synthesis
PTZ601		Inhibition of bacterial cell wall synthesis
QAB149	indacaterol	Long-acting beta-2 agonist
QAX028		Long-acting muscarinic antagonist

(1) Refers to planned submission date for lead indication only

(2) Refers to current phase for lead indication only

(3) US submission done by Human Genome Sciences, Inc. (HGS)

(4) Melatonin receptor subtypes 1 and 2

(5) Serotonin receptor subtype 2c

(6) Vascular endothelial growth factor

(7) Heat shock protein 90

continued on next page

Table of Contents

Project/compound	Indication	Therapeutic area	Formulation	Planned submission dates (1)	Current phase (2)
ABF656	Chronic hepatitis C	Immunology and Infectious Diseases	Injection	Submitted EU, US (3)	Registration
ACZ885	Refractory gout (lead indication), systemic onset juvenile idiopathic arthritis, type 2 diabetes	Immunology and Infectious Diseases, Cardiovascular and Metabolism	Injection	2010	III
AEB071	Prevention of organ rejection	Immunology and Infectious Diseases	Oral	≥2013	II
AFQ056	L-dopa induced dyskinesia in Parkinson s disease	Neuroscience and Ophthalmics	Oral	2012	II
AGO178	Major depressive disorder	Neuroscience and Ophthalmics	Oro-dispersible	2012	III
AIN457	Uveitis (lead indication), psoriasis, rheumatoid arthritis	Neuroscience and Ophthalmics, Immunology and Infectious Diseases	Subcutaneous, Intravenous injection	2011	III
ASA404	Non-small cell lung cancer	Oncology	Intravenous infusion	2011	III
Certican/Zortress	Prevention of organ rejection	Immunology and Infectious Diseases	Oral	Submitted US (approved EU)	Registration
Diovan/Starlix NAVIGATOR	Prevention of new-onset type 2 diabetes, cardiovascular morbidity and mortality	Cardiovascular and Metabolism	Oral	2010	III
EPO906	Ovarian cancer	Oncology	Intravenous infusion	2010	III
FTY720	Multiple sclerosis	Neuroscience and Ophthalmics	Oral	Submitted US, EU	Registration
LBH589	Hodgkin s lymphoma (lead indication), multiple myeloma	Oncology	Oral	2010	II
LCI699	Heart failure	Cardiovascular and Metabolism	Intravenous infusion	≥2013	II
LCZ696	Heart failure	Cardiovascular and Metabolism	Oral	≥2013	III
Lucentis	Diabetic macular edema (lead indication), Retinal vein occlusion	Neuroscience and Ophthalmics	Intravitreal injection	Submitted EU	Registration
Mycograb	Invasive candidiasis	Immunology and Infectious Diseases	Intravenous infusion	≥2013	III
NIC002	Smoking cessation	Respiratory	Injection	≥2013	II
NVA237	Chronic obstructive pulmonary disease	Respiratory	Inhalation	2011	III
PKC412	Aggressive systemic mastocytosis (lead indication), acute myeloid leukemia	Oncology	Oral	2011	II
PRT128			IV, Oral	≥2013	II

	Acute coronary syndrome /Chronic coronary heart disease	Cardiovascular and Metabolism			
PTK796	Complicated skin and subcutaneous tissue infections	Immunology and Infectious Diseases	IV, Oral	2012	III
PTZ601	Staphylococcal skin and subcutaneous tissue infections /hospital-acquired bacterial infections such as pneumonia	Immunology and Infectious Diseases	Intravenous infusion	2012	II
QAB149	Chronic obstructive pulmonary disease	Respiratory	Inhalation	Submitted US (approved EU)	Registration
QAX028	Chronic obstructive pulmonary disease	Respiratory	Inhalation	≥2013	II

Table of Contents

GLOSSARY

Project /Compound Novartis brand name for marketed products (*in italics*) or project reference code (combination of three letters and three numbers) for compounds, that are individual molecular entities.

Common name The official International Non-proprietary Name (INN) for an individual molecular entity as designated by the World Health Organization (WHO).

Indication A disease or condition for which a compound or marketed product is in development and studied as a potential therapy.

Mechanism of action Specific biochemical interaction through which a drug substance produces its pharmacological effect.

Formulation The way in which a medicine is administered, such as via tablet, injection, skin patch, infusion or device.

Phase I First stage of testing in humans, which includes Proof-of- Concept trials conducted on a small group of homogenous patients to provide early insight into efficacy, safety and toxicity of a molecule in a given indication

Phase II Following successful Proof-of-Concept results, confirmatory trials are performed in larger patient groups to further assess the efficacy and safety of how well a compound works, including at various doses and in various indications.

Phase III Final clinical trials before regulatory submissions to test a compound against a placebo or another medicine to determine definitive efficacy and safety in patients.

Submitted Comprehensive data provided to various regulatory agencies for marketing approval.

Project/compound	Common name	Mechanism of action
QMF149	indacaterol, mometasone furoate	Long acting beta-2 agonist and corticosteroid
QTI571 *(Glivec)*	imatinib	Signal transduction inhibitor
QVA149	indacaterol, glycopyrronium bromide	Long-acting beta-2 agonist and long-acting muscarinic antagonist
RAD001 (*Afinitor*)	everolimus	mTOR (8) inhibitor

SBR759		Calcium-free polymeric iron (III)-based phosphate binder
SMC021	salmon calcitonin	Regulator of calcium homeostasis, inhibition of osteoclast activity
SOM230	pasireotide	Somatostatin analogue
Tasigna	nilotinib	Signal transduction inhibitor
Tekturna SPC (9)	aliskiren, amlodipine, hydrochlorothiazide	Direct renin inhibitor, calcium channel blocker and diuretic
Tekturna ASPIRE HIGHER trials	aliskiren	Direct renin inhibitor
TKI258	dovitinib lactate	VEGFR1-3, FGFR 1-3, PDGFR and angiogenesis RTK inhibitor
Xolair	omalizumab	Anti-IgE monoclonal antibody
Valturna/Rasival SPC	aliskiren, valsartan	Direct renin inhibitor and angiotensin II recpetor antagonist
Zometa	zoledronic acid	Osteoclast inhibitor

(8) Mammalian target of rapamycin protein

(9) Single-pill combination

Table of Contents

Project/compound	Indication	Therapeutic area	Formulation	Planned submission dates (1)	Current phase (2)
QMF149	Asthma, chronic obstructive pulmonary disease	Respiratory	Inhalation	≥2013	II
QTI571 *(Glivec)*	Pulmonary arterial hypertension	Respiratory	Oral	2011	III
QVA149	Chronic obstructive pulmonary disease	Respiratory	Inhalation	2012	II
RAD001 (*Afinitor*)	Neuroendocrine tumors (NET) (lead indication), Tuberous sclerosis complex, breast cancer, gastric cancer, Diffuse large B cell lymphoma	Oncology	Oral	2010	III
SBR759	Hyperphosphatemia	Immunology and Infectious Diseases	Powder for Oral suspension	2011	II
SMC021	Osteoarthritis (lead indication), osteoporosis	Immunology and Infectious Diseases	Oral	2011	III
SOM230	Cushing s disease (lead indication), acromegaly, refractory/resistant carcinoid syndrome	Oncology	Injection	2010	III
Tasigna	Newly diagnosed chronic myeloid leukemia (lead indication), First line metastatic gastrointestinal stromal tumor, Metastatic melanoma with c-KIT mutation	Oncology	Oral	Submitted US, EU	Registration
Tekturna SPC (9)	Hypertension	Cardiovascular and Metabolism	Tablet	2010	III
Tekturna ASPIRE HIGHER trials	Renal and cardiovascular events	Cardiovascular and Metabolism	Oral	2010	III
TKI258	Renal cell carcinoma	Oncology	Oral	2012	II
Xolair	Allergic asthma in patients age 6-12	Respiratory	Lyophilised powder for reconstitution as subcutaneous injection	Submitted US (approved EU)	Registration
Valturna/Rasival SPC	Hypertension	Cardiovascular and Metabolism	Tablet	Submitted EU (approved US)	Registration
Zometa	Adjuvant breast cancer	Oncology	Intravenous infusion	Submitted US, EU	Registration

27

Table of Contents

Table of Contents

PHARMACEUTICALS

Rejuvenation of the Pharmaceuticals Division s product portfolio accelerated during 2009. Medicines launched since 2007 generated net sales of USD 4.7 billion, 16% of the division s total net sales. Recently launched products - and innovative medicines approved during 2009 - are expanding options for patients in therapeutic areas in which Novartis already is an industry leader, as well as targeting other diseases with unmet medical need. Moreover, the division s strong, late-stage development pipeline benefited from positive regulatory decisions, underpinning prospects for continued growth.

Recently launched products are transforming the Pharmaceuticals Division and positioning Novartis as one of the industry s fastest growing companies.

Buoyant net sales of medicines launched since 2007 accelerated the ongoing portfolio rejuvenation, accounting for a strong and growing percentage of the division s growth. In 2009, all key therapeutic areas and regions expanded at double-digit rates.

The Pharmaceuticals Division s development pipeline realized excellent progress, with 25 regulatory approvals in the United States, European Union and Japan. Currently 145 projects are in clinical development.

Net sales in the top six emerging markets rose dynamically, with only limited signs to date of adverse impact from global economic conditions. These six markets - Brazil, China, India, Russia, South Korea and Turkey - represented a growing share of the Pharmaceuticals Division s net sales during 2009. (See Emerging Markets story, page 18.)

A rise in the division s operating income reflected dynamic business expansion and productivity gains that enabled significant investments to further bolster growth. Cost reductions not only help to improve profit margins but also ensure that we can continue to invest in research and development, as well as emerging growth markets, while showing good operating income progression, said Joe Jimenez, Head of the Pharmaceuticals Division and member of the Executive Committee of Novartis.

The fundamentals are strong, with multiple growth drivers, not one silver bullet, Mr. Jimenez added. These results underscore our solid foundation and robust growth as we approach a period during which we will lose sales due to the loss of patent protection on *Diovan* and other significant products.

RECENT LAUNCHES

Recently launched medicines fueled strong net sales growth by the Cardiovascular and Metabolism therapeutic franchise. *Tekturna/ Rasilez*, the first new class of high blood pressure medicine in more than a decade, is growing consistently.

Regulatory authorities in the United States and European Union have also approved single-pill combinations including aliskiren, the common name for *Tekturna/Rasilez*.

Galvus and *Eucreas*, oral treatments for type 2 diabetes, have been expanding rapidly in many European, Latin American and Asia-Pacific markets. Launched in 2008, *Galvus* is approved in 69 countries. *Eucreas*, a single-pill combination with the oral antidiabetes medicine metformin, is available in 50 countries.

Net sales rose at Novartis Oncology, the largest therapeutic franchise, fueled by double-digit growth of *Gleevec/Glivec*, a pioneering targeted treatment for chronic myeloid leukemia (CML) and other types of tumors. Expanding the CML franchise,

Table of Contents

Novartis has launched *Tasigna*, a therapy for patients who are resistant or intolerant to prior treatment including *Gleevec/Glivec*. The Oncology Business Unit was further strengthened by approvals in the United States and European Union of *Afinitor*, for use in treatment of patients with advanced renal cell carcinoma whose disease progressed on or after treatment with VEGF-targeted therapy.(1)

Other successful products include *Lucentis*, a biologic eye therapy that delivered robust performances in France, the United Kingdom, Australia and Japan. Approved in more than 80 countries, *Lucentis* is the only treatment proven to maintain and improve vision in patients with the wet form of age-related macular degeneration, a leading cause of blindness in people over 50. (Genentech holds the US rights to *Lucentis*.)

Exelon/Exelon Patch, a therapy for mild to moderate forms of Alzheimer s disease as well as mild to moderate dementia associated with Parkinson s disease, also grew strongly in 2009. More than half of net sales come from *Exelon* Patch, the novel skin patch launched in late 2007 and now available in more than 50 countries worldwide.

In Japan, the world s second-largest pharmaceuticals market, Novartis received approval for six new medicines during 2009, including *Rasilez* within the cardiovascular portfolio; *Tasigna* in oncology; *Lucentis;* and *Xolair*, a biologic treatment for severe persistent bronchial asthma. Regulatory applications are also pending for *Exforge* and *Galvus,* and approvals are expected to underpin momentum in the Japanese market.

These launches are really helping us to jump-start growth in Japan, Mr. Jimenez said.

(1) Vascular endothelial growth factor

DRIVING REJUVENATION

Medicines to treat cardiovascular disease and cancer epitomize the way innovation is driving rejuvenation of the Pharmaceuticals Division s portfolio.

Tekturna/Rasilez was approved during 2007 in both the United States and the European Union, and received approval from Japanese regulatory authorities in 2009 for treatment of high blood pressure, alone or in combination with other medicines. Regulatory agencies in the United States and the European Union also approved *Tekturna* HCT, a single-pill combination of aliskiren and the diuretic hydrochlorothiazide, one of the commonly used high blood pressure medications.

The US Food and Drug Administration, which had approved *Tekturna* HCT, broadened its indication last year to include initial therapy for patients likely to need multiple drugs to achieve their blood pressure goals. Other single pills with aliskiren are currently under development.

Novartis submitted the combination of aliskiren and amlodipine to regulatory authorities for approval in 2009. A calcium channel blocker, amlodipine is one of the world s leading high blood pressure medicines.

Combinations are important to help patients improve adherence to treatment of hypertension. Up to 65% of patients with high blood pressure do not have their condition under control and, if left untreated, hypertension increases the risk of stroke, heart attack and heart failure.

The majority of people with hypertension require more than one medication to control their blood pressure, said David Calhoun, M.D., Professor of Medicine, Vascular Biology and Hypertension Program, at the University of Alabama.

During 2009, the FDA also approved *Valturna*, a single-pill combination of aliskiren

Table of Contents

and valsartan, the active ingredient in *Diovan*. Along with the convenience of a single pill, *Valturna* offers significantly greater blood pressure reduction than either valsartan or aliskiren alone.

Further evidence of the commitment of Novartis to hypertension and *Tekturna/Rasilez* is the ASPIRE HIGHER clinical trial program, a cardio-renal outcomes program involving more than 35 000 patients in 14 clinical trials. The ASPIRE HIGHER program is studying the potential protective effects of direct renin inhibition in a variety of kidney and heart diseases, including diabetic kidney disease and heart failure.

STRIKING RESULTS

The development and launch of *Tasigna* represents an important advance for patients resistant or intolerant to *Gleevec/Glivec*. *Tasigna* drives home our commitment to develop compounds to fulfill unmet medical need by pursuing indications for patients with limited treatment options, said David Epstein, Head of Novartis Oncology and permanent attendee of the Executive Committee of Novartis.

Initial approvals of *Tasigna* were for treatment of patients with CML who failed to respond or were intolerant of *Gleevec/ Glivec*. Combined net sales of *Gleevec/Glivec* and *Tasigna* account for more than 90% of worldwide sales for treatments against CML.

Tasigna was designed to target Bcr-Abl more preferentially and potently than *Gleevec/Glivec*. Bcr-Abl is an aberrant protein, encoded by a defective gene, that drives uncontrolled proliferation of white blood cells, causing CML,

Results of the first key head-to-head comparison - a international study in newly diagnosed CML patients - showed *Tasigna* produced faster and deeper responses than *Gleevec/Glivec,* and was well tolerated. The results are striking, Mr. Epstein said.

We now know *Tasigna* reduces the level of Bcr-Abl faster and to a lower level than *Gleevec/Glivec* with profound implications for improving patients outcomes.

The study was the first to use molecular traces of key biomarkers specific to CML as a primary endpoint. Molecular monitoring enables clinicians to monitor residual disease that older methods cannot detect, Mr. Epstein added. A regulatory application for *Tasigna* was submitted to US authorities ahead of plan at the end of 2009.

The ability to identify biomarkers that can be used to select patients likely to respond to specific treatments represents an important step toward customized medicine. Another Phase III study with *Tasigna*, expected to begin in early 2010, will use a diagnostic test to select melanoma patients with a mutated form of the aberrant protein c-Kit who are considered most likely to respond to treatment. It s a form of cancer with huge unmet need, Mr. Epstein said.

The need to find surrogate endpoints and biomarkers has been well established in oncology, and Novartis has built a broad biomarker discovery program in recent years. We have biomarker discovery programs under way for the majority of medicines that we have in the clinic, Mr. Epstein said.

DEVELOPMENT MILESTONES

Important development milestones during 2009 included approval by regulators in the United States and the European Union of the anticancer medicine *Afinitor* (also known by the research number RAD001) as well as *Ilaris* (known by the research number ACZ885). *Ilaris* was approved for treatment of cryopyrin-associated periodic syndrome, or CAPS, a lifelong auto-inflammatory disease with debilitating symptoms and few treatment options.

RAD001 and ACZ885 exemplify another key Novartis strategy: exploring multiple disease indications. In addition to the initial approvals for treatment of patients with advanced renal cell carcinoma whose disease progressed on or after standard therapy, RAD001 is being studied in multiple cancer types, including neuroendocrine, breast and gastric carcinoma. Moreover, the active ingredient in *Afinitor*, known by the common name everolimus, was approved by the European Union in 2003 for the prevention of organ rejections in heart and kidney transplants, and is available in different dosage strengths outside the United States under the trademark *Certican*.

In the United States, everolimus is in registration for the prevention of organ rejection in kidney transplantation, under the brand name *Zortress*. The FDA issued a Complete Response letter in December 2009 requesting additional changes to proposed labeling and the proposed Risk Evaluations and Mitigations Strategies (REMS) for *Zortress*, as well as a safety update. But the FDA did not request additional clinical studies. Novartis will work with the FDA to address all additional issues to finalize FDA s review of the product. In 2008, Phase III development of everolimus was initiated worldwide for the prevention of organ rejection in liver transplantation.

ACZ885 is a fully human monoclonal antibody that blocks the action of the inflammatory protein interleukin-1 beta (IL-1 beta). Studies with ACZ885 are ongoing in other diseases in which IL-1 beta is believed to play an important role, from hard-to-treat gout, one of the most painful forms of arthritis, to systemic juvenile idiopathic arthritis (SJIA) and type 2 diabetes. Results from a Phase II study last year showed ACZ885 is significantly more effective than an injectable corticosteroid in reducing pain and preventing recurrent attacks, or flares, of chronic gout. Injectable corticosteroids have traditionally been given to

Table of Contents

hard-to-treat patients as a last resort against acute pain. Injectable corticosteroids are not appropriate for all patients, however.

Current treatments address symptoms of acute gout flares and do not achieve sustained suppression of inflammation or prevent recurrent flares. Phase III studies with ACZ885 in chronic gout began in both the United States and Europe during 2009. Phase III studies are also under way in SJIA, the most severe form of arthritis in children. ACZ885 has been designated as an orphan drug for treatment of SJIA in the United States, the European Union and Switzerland.

EMERGING RESPIRATORY PORTFOLIO

In December, the European Union approved *Onbrez Breezhaler*, a new once-daily maintenance bronchodilator treatment of airflow obstruction in adult patients with chronic obstructive pulmonary disease (COPD).

Also known by the research number QAB149, *Onbrez Breezhaler* is the first new inhaled compound for the treatment of COPD to be made available to EU patients in seven years. QAB149 was also filed with the FDA in late 2008. In October 2009, Novartis received a complete response letter in which the FDA requested additional information on the dosing proposed, which Novartis is working to address.

COPD is a progressive, life-threatening respiratory disease that impairs lung function, resulting in chronic breathlessness. COPD affects 210 million people worldwide and currently ranks 10th in overall disease burden, ahead of asthma and diabetes.

While incurable, COPD can be managed and improving airflow with the use of long-acting bronchodilators is central to symptomatic relief. Regulatory submissions by Novartis were supported by data from clinical studies involving more than 4 000 patients in 30 countries. Data on all evaluated doses of QAB149 show a good overall safety and tolerability profile. The most common adverse drug reactions - inflammation of the nasal passages, cough, upper respiratory tract infection and headache - were mild or moderate in the vast majority of cases and became less frequent when treatment was continued.

Improving the management of COPD is a priority focus for Novartis and *Onbrez Breezhaler* is the lead compound in an expected once-daily portfolio for treatment of this growing public health issue. Three other COPD treatments from Novartis are currently undergoing clinical testing as monotherapies - and as components in potential combination therapies.

TRANSFORMING TREATMENT OF MULTIPLE SCLEROSIS

Novartis also cleared key hurdles during 2009 for its emerging franchise in the treatment of multiple sclerosis. In August, the FDA approved *Extavia*, a new Novartis branded version of interferon beta-1b, the standard of care for relapsing forms of multiple sclerosis. Novartis gained approval for its own branded version of interferon beta-1b through agreements with Bayer Schering AG. Also available in Europe, *Extavia* is the

first in a new portfolio of medicines expected from Novartis to help patients manage this devastating disease.

Novartis also submitted regulatory applications in the United States and Europe for FTY720, a medicine with the potential to be the first multiple sclerosis treatment in a new class known as sphingosine 1-phosphate receptor modulators that act on inflammation and may have a direct beneficial effect on cells in the central nervous system.

Initial results from the two-year Phase III FREEDOMS study show that FTY720, known by the common name fingolimod, was significantly superior to placebo in reducing both relapses and disability progression in patients with relapsing-remitting multiple sclerosis. The results from FREEDOMS build

Table of Contents

on TRANSFORMS, a one-year Phase III study showing FTY720 at the 0.5 milligram dose reduced relapses by 52% compared with interferon beta-1a. FTY720 has a well-studied safety profile in clinical trials representing more than 5 300 patient years of exposure - including some patients now in their sixth year of treatment.

We are proud to have reached this critical milestone in the development of FTY720, a novel oral therapy that has the potential to transform the treatment of this ultimately disabling disease, said Trevor Mundel, M.D., Global Head of Development at the Pharmaceuticals Division.

The 0.5 milligram dose of FTY720 offers compelling efficacy on all relevant endpoints compared to both placebo and a standard of care, complemented by extensive safety data.

Multiple sclerosis is a chronic autoimmune disease in which the body s immune system attacks the myelin sheath, a protective tissue surrounding nerve fibers that carry electrical signals to the brain. Destruction of myelin causes problems with muscle control and strength, vision, balance sensation and mental function. Multiple sclerosis affects an estimated 2.5 million patients worldwide and is one of the leading causes of neurological disability in young adults.

Table of Contents

Table of Contents

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH

Nature is deeply conservative, and the same core signaling pathways are used time and time again across species in fundamental cellular processes as well as in the generation of organ systems. Defects in these signaling pathways are the underlying cause of disease, and scientists at the Novartis Institutes for BioMedical Research (NIBR) are racing to unravel pathways as a source of potential targets for drug discovery. Innovative technologies enable NIBR scientists to interrogate pathways in unprecedented ways, and new medicines such as the anticancer treatment *Afinitor* show how pathways are starting to yield to that approach.

Single proteins are the building blocks of life, assembled in core signaling pathways that regulate critical cellular functions and are conserved through evolution from fruit flies to humans in highly reproducible ways. Like the World Wide Web or other signaling networks, these are robust systems, but ones still vulnerable to attack at key nodes.

In the Novartis Institutes for BioMedical Research (NIBR), scientists are seeking ways to understand these pathways and their vulnerable nodes in great enough detail to provide new and proprietary targets for drugs. NIBR scientists have been successful in using this approach to discover treatments for disorders from cancer to degenerative diseases.

A shortage of validated targets remains a major challenge in drug discovery. Although the Human Genome Project was billed as a treasure trove of targets, reality has fallen short of expectations. The problem is that genes are not targets until they re related to a disease, said Mark C. Fishman, M.D., President of NIBR and member of the Executive Committee of Novartis. We don t yet know the function of the majority of human genes, or their role in disease. But we often do know which pathways are activated, especially in cancer.

NIBR s Developmental and Molecular Pathways platform (DMP) focuses on critical signaling pathways that play fundamental roles during embryonic development as well as later, in adult life. Our mission is to find new entry points in pathways that we can modulate to right the imbalance in a disease setting, said Jeffery Porter, Ph.D., Global Head of DMP.

The approval by regulatory agencies in the United States and the European Union of RAD001, also known by the common name everolimus, marks a breakthrough for the pathway-based research strategy. Approved in 2009 for treatment of patients with advanced renal cell carcinoma after failure of treatment with sunitinib or sorafenib, RAD001 works by inhibiting the protein mTOR. This protein is a master switch in cells that controls fundamental processes such as growth and proliferation.

Under the trademark *Certican*, everolimus has been approved as an immunosuppressant to prevent rejection of organ transplants in more than 40 countries outside the United States.(1)

It has taken decades, however, to unravel the complex connections between mTOR and cancer-related pathways. Novartis began parallel development of RAD001 in cancer in 2002.

Today RAD001 has found a place in the clinic for the treatment of patients with advanced renal cell carcinoma and mTOR has become a poster child, illustrating what

(1) For information about the everolimus transplantation regulatory status in the United States see page 31.

Table of Contents

we are trying to achieve on many levels, Dr. Porter said. We aspire to find more key nodes in fundamental signaling pathways like this one.

NEW FIELD OF MEDICINE

Developmental biology has been a critical influence in shaping the vision of drug discovery at NIBR. Dr. Fishman s career was influenced by pioneering experiments in the late 1970s that eventually earned Christiane Nuesslein-Volhard and Eric Wieschaus the 1995 Nobel Prize in medicine. They showed it is possible to understand complicated decisions of development in terms of the way single genes play out, Dr. Fishman explained.

Another seminal insight was that genes always acted in cascades, or pathways. Mutations in several different genes all led to a fruit fly without a wing, for example. Not only could you dissect development in terms of how single genes acted, you could get the same effect by hitting any of several components of a pathway, Dr. Fishman added.

Nature is deeply conservative, and the same fundamental pathways are used time and time again across species in fundamental cellular processes as well as in the generation of organ systems. Moreover, defects in those core signaling pathways are the underlying cause of disease. When I was given the opportunity to come to Novartis, a big part of what I set out to do was to invent a new field of medicine by developing therapeutics around these pathways, Dr. Fishman said.

A comprehensive account of that vision appeared in the scientific journal Nature, in a 2005 article co-authored by Dr. Fishman and Dr. Porter, a blueprint that defined the mission of the DMP group. We attempt to unravel pathways as a source of potential targets for drug discovery and to find pathway modulators new therapeutic entry points that we can exploit to correct a signaling imbalance, Dr. Porter said.

He compared initial stages of pathway mapping to analysis of a satellite photo. We first try to capture all components, and then zero in on key nodes and the ways that pathways are interwoven into networks, Dr. Porter said. To probe the function of potential targets, he added, We might introduce a mutant form of a key component; in effect, taking out a traffic light to see what happens.

Signaling pathways relay essential information about the external environment to a cell. They also transmit decisions about whether to grow or when to divide to key nodes that implement those decisions. There is a high degree of interdependence among pathways, and among components within the same pathway, however.

Backup systems and feedback loops normally compensate when the function of one target node is blocked, so it s really hard to turn a pathway completely off, Dr. Porter said. Sometimes, adjusting the strength of a signal up or down can be a more effective therapeutic approach.

I think of using medicines as dimmers as much as on-off switches, he added.

TRACKING mTOR

The mTOR pathway was one of the first Dr. Porter and his team studied. It took us awhile to appreciate all the places an mTOR inhibitor could be important, Dr. Porter said. Along with immunosuppression and treatment of cancer, RAD001 currently is in Phase III clinical trials for treatment of tuberous sclerosis, a genetic disorder in which tumors form in the brain and kidneys, leading to seizures and mental disabilities.

Normally mTOR is kept under tight control in the cell. But genetic mutations or other biological defects can jam the pathway in the on position, triggering uncontrolled growth and proliferation characteristic of cancer. In recent years, the mTOR program gradually converged with another NIBR

Table of Contents

program focusing on PI3 kinases, a large family of enzymes often linked with cancer.

Importantly, mTOR appears to be a node in the downstream branch of the PI3 kinase pathway. Novartis was the first major pharmaceutical company to develop medicines that target both the upstream and downstream branches of the pathway. Those programs reflect a central tenet of NIBR research: to attack multiple targets within a pathway believed to play a major role in a disease like cancer.

In a paper published last year in the scientific journal Cell, NIBR scientists reported breakthroughs in understanding yet another enigmatic branch of the mTOR pathway. Scientists have known for years that mTOR also is activated by nutrients yet the essential nodes in this nutrient branch of the pathway have remained elusive.

Curiously, while the PI3 kinase branch of the pathway has attracted growing interest in recent years, the nutrient branch of mTOR predates the PI3 kinase branch in evolutionary terms and has important implications for cancer research. Tumor metabolism potential differences in the way tumor cells take up and utilize nutrients versus normal cells is an area of intense research interest today, said Leon Murphy, Ph.D., head of the NIBR laboratory that worked on the nutrient branch of the mTOR pathway.

INTERROGATING THE Wnt PATHWAY

Another pathway of interest to NIBR is the so-called Wnt pathway. Wnt proteins are a large ancient family of signaling molecules and the pathway plays important roles in key developmental processes and possibly even self-renewal of embryonic stem cells and regeneration of many normal tissues. Deregulated activity of the Wnt pathway has been implicated in many cancers, making the pathway an attractive target for anticancer therapies. We ve known for 20 years that the Wnt pathway fires inappropriately in colon cancer because of the loss of a molecular brake on the system, Dr. Porter said.

Development of therapies, however, has been hampered by the limited number of druggable targets components in the Wnt pathway amenable to inhibition by traditional chemical drugs or biologic medicines. In search of new targets, Dr. Porter and his team have discovered more than 100 new proteins associated with the Wnt pathway. Not all of these will be therapeutic targets, but using modern tools we can begin to determine which ones might be critical for signaling, he added.

Two enzymes have emerged as promising targets, offering new avenues for potential therapies acting on the Wnt pathway. Normally, Wnt pathway activity is carefully controlled by cyclical fluctuations in a protein called beta catenin. When the pathway is dormant, beta catenin is held in check by a so-called destruction complex in the cell.

When the pathway is activated, however, the destruction complex is disabled, and levels of beta catenin rise, eventually activating genes that drive cell growth and proliferation. Mutations in a gene called APC also can activate the Wnt pathway, arresting the destruction complex and driving uncontrolled cell proliferation.

Using drugs that inhibit two enzymes known as tankyrase 1 and 2, NIBR scientists have mimicked the normal function of the destruction complex, restoring degradation of beta catenin and blocking the abnormal signaling through the Wnt pathway. Once control of beta catenin is lost, it becomes very important to look at backup systems, Dr. Porter said. By activating the backup system, it may be possible to bring things back into balance.

Initial experiments to inhibit the tankyrase enzymes were done with a so-called tool compound that can demonstrate the potential mechanism of action but lacks properties needed to win regulatory approval. Novartis scientists have optimized a portfolio of tankyrase inhibitors as potential development candidates. It s not limited to cancer, Dr. Porter added. There are other indications where even transient inhibition of the Wnt pathway could provide major benefits for patients.

The experiments that confirmed the role of tankyrase enzymes in the Wnt pathway epitomize the multidisciplinary approach adopted by the DMP group. We use a number of different technologies, the newest of which enable us to interrogate pathways in unprecedented ways, Dr. Porter said. And it s working. The pathways are starting to yield to our approach.

Table of Contents

Table of Contents

VACCINES AND DIAGNOSTICS OVERVIEW

KEY FIGURES

(In USD millions, unless indicated otherwise)

	2009	2008
Net sales	**2 424**	1 759
Operating income	**372**	78
Return on net sales (%)	**15.3**	4.4
Core operating income (1)	**719**	309
Return on core net sales (%) (2)	**29.7**	18.1
Research & Development	**508**	360
As a % of net sales	**21.0**	20.5
Free cash flow	**-82**	-226
Net operating assets	**5 583**	4 984
Additions to property, plant & equipment (3)	**437**	435
Number of associates (FTE) (4) at year-end	**5 416**	4 774

(1) Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.

(2) In 2008 based on core sales of USD 1 709 million

(3) Excluding impact of business combinations

(4) Full-time equivalent positions at year-end

VACCINES DEVELOPMENT PIPELINE

(1) Neisseria meningitidis bacteria serogroups A, C, W-135 and Y

(2) H5N1 vaccine intended for use before a pandemic outbreak

(3) Neisseria meningitidis bacteria serogroup B

(4) Intercell opt-in candidate

(5) Influenza cell culture

(6) Group B Streptococcus

(7) Cytomegalovirus, collaboration with AlphaVax

NEWS IN 2009

Novartis helps to address public health threat with major investments to rapidly deliver influenza A (H1N1) pandemic vaccines. Strong growth in emerging markets and regulatory approvals for *Ixario* (Japanese encephalitis vaccine) help expand global presence.

Net sales rise 38% (+39% in local currencies) to USD 2.4 billion. A rapid response after the outbreak of the A (H1N1) pandemic in April 2009 enables the delivery of more than 100 million vaccine doses to governments around the world. Pediatric and rabies vaccines and emerging markets help offset price pressure on seasonal influenza vaccines and decline in tick-borne encephalitis vaccines. Core operating income rises to USD 719 million despite significant investments in A (H1N1) vaccines.

Pioneering innovation: Novartis becomes the first company to produce A (H1N1) vaccines with modern cell-culture biotechnology that complements 50-year-old egg-based production. Looking to the future, Novartis opens the first large-scale US-based manufacturing facility for influenza cell-culture vaccines and adjuvants.

Menveo, a novel vaccine to protect against deadly meningococcal disease, progresses toward European regulatory approval, which is anticipated in early 2010 for initial use in adolescents and adults. A US regulatory decision is also expected in the first half of 2010. Trials for use in infants, most at risk for this disease, are underway. Global MenB vaccine, against B serogroup, also continues in clinical trials.

Targeted geographic expansion as Novartis offers its first vaccine in Japan and announces plans to acquire a majority interest in Chinese vaccines supplier Zhejiang Tianyuan.

Table of Contents

VACCINES AND DIAGNOSTICS

Following the declaration of the first influenza pandemic of the 21st century, associates at the Novartis Vaccines and Diagnostics Division surmounted extraordinary challenges to develop and deliver tens of millions of doses of vaccine against the influenza A (H1N1) 2009 virus, as well as seasonal flu vaccine. The pandemic campaign underscored the commitment by Novartis to respond to a worldwide public health challenge.

The virus writes the rules, and this one, like all influenza viruses, can change the rules, without rhyme or reason, at any time, warned Margaret Chan, M.D., Director-General of the World Health Organization, as she declared a pandemic on June 11, 2009. Just the next day, Novartis announced the successful production of the first batch of influenza A (H1N1) vaccine, weeks ahead of expectations, achieving global media coverage and a massive boost to the company s reputation for innovation and leadership.

Earlier in 2009, an influenza virus with pandemic potential had been discovered in Mexico and the United States, sparking a global race to develop a vaccine. Novartis scientists had gone to work immediately, and within days had analyzed the lineage and heritage of the virus, confirming the unique combination of genes in the new strain, known officially as influenza A (H1N1) 2009 virus. Working around the clock, Novartis scientists combined the protective antigens of the pandemic strain with a standard manufacturing strain, to make the world s first potential attenuated vaccine strain in just 17 days.

These were the first of repeated breakthroughs achieved by the Novartis Vaccines and Diagnostics Division against the backdrop of rapid spread of the virus.

Celtura, a Novartis vaccine derived from the cell-based manufacturing technology, was one of the first pandemic vaccines to begin clinical trials. So-called pilot trials gave regulatory agencies and prospective customers the first preliminary readout from human testing, indicating *Celtura* elicited a protective immune response, even at very low doses, paving the way for a larger global vaccine supply than otherwise would have been possible.

Positive results of a study conducted at the University of Leicester (England) were published in the prestigious New England Journal of Medicine in early September. In an accompanying editorial, Kathleen Neuzil, M.D., director of the influenza project at the Program for Appropriate Technology in Health, called the upbeat data eagerly anticipated as governments, public health officials and other stakeholders respond to the first influenza pandemic in over 40 years. The authors and their collaborators are to be commended for their prompt execution of the trials and rapid sharing of the results.

FULLY ENGAGED

To deliver millions of doses of vaccine in the months that followed, Novartis associates surmounted extraordinary challenges. When the initial cases of swine flu in the United States and Mexico were reported in April, the Vaccines and Diagnostics Division s major manufacturing sites were engaged with production of seasonal influenza vaccine. As the seasonal campaign continued

Table of Contents

through the summer, supply chain specialists raced to procure raw materials and supplies for the coming round of pandemic vaccine production.

There were additional challenges. The Vaccines and Diagnostics Division had invested more than USD 2 billion since 2006 to upgrade and expand production capacity as well as to accelerate development of novel vaccines, including the cell-culture technology used to manufacture *Celtura*. Virtually all of that new capacity, however, was due to come on stream in 2010 or later. The pandemic forced a dramatic acceleration of that timetable to make production of the A (H1N1) pandemic vaccines possible.

Along with bricks and mortar, additional production staff had to be found, and human resources specialists worked tirelessly to this end. In addition to contract staff hired by the sites, other Novartis divisions loaned hundreds of experienced employees, including supervisors, to reinforce the A (H1N1) production effort. It was like bringing on a whole new factory in three months, said Matthew Stober, Global Head Technical Operations at the Vaccines and Diagnostics Division.

But it wasn t just a matter of finding people and telling them to show up, Mr. Stober added. Our Human Resources team did a great job in obtaining visas and work permits, arranging housing, and all kinds of other things that had to be done before those additional employees could walk in the door. Then we had to train them so they could do the job right the first time. Every drop of vaccine was like gold.

In early October, Novartis announced that it had completed delivery of 27 million doses of seasonal flu vaccine to the United States ahead of schedule. Parallel production of pandemic vaccine had been under way for weeks, and the first shipments of influenza A (H1N1) vaccine arrived in the United States on September 27, less than four months after the WHO declared the pandemic.

It is an extraordinary achievement to complete deliveries of seasonal influenza vaccine early, while working hard to produce large quantities of A (H1N1) pandemic vaccines at the same time, said Andrin Oswald, M.D., Head of the Vaccines and Diagnostics Division and permanent attendee of the Executive Committee of Novartis. This should help physicians and public health officials better prepare for the upcoming flu season and balance the needs for pandemic and seasonal vaccination.

UNIQUE PORTFOLIO

Uniquely for any manufacturer, Novartis developed three different A (H1N1) pandemic vaccines. An A (H1N1) vaccine produced in Liverpool, England, using traditional egg-based technology and the Novartis seasonal influenza vaccine *Fluvirin* platform, was earmarked for the United States.

Governments outside the United States were able to purchase *Focetria*, an egg-based vaccine manufactured in Siena, Italy, or *Celtura*, produced in Marburg, Germany. Both *Focetria* and *Celtura* contain *MF59*, a proprietary adjuvant, or additive that can enhance the ability of the immune system to elicit a protective immune response in those people being vaccinated. Adjuvanted vaccines like *Focetria* and *Celtura* require smaller doses of antigen and elicit an enhanced immune response, helping to stretch scarce vaccine supplies to meet global demand. The US government opted against using adjuvanted vaccines in its national vaccination program but placed orders worth USD 483 million with Novartis for a bulk supply of *MF59* for the national stockpile of pre-pandemic avian influenza vaccines.

This broad Novartis portfolio of pandemic vaccines reflected a longstanding commitment to influenza at a time when many rivals had abandoned the field. The genesis of cell-culture technology dated from the 1980s, but Novartis guided the process through a marathon of testing to win European Union approval for the cell-based seasonal flu vaccine *Optaflu* in June 2007.

Influenza vaccines have been produced in chicken eggs since the 1950s, but growing the virus in cell culture can offer more flexibility and speed compared with egg-based production. It s a switch from using tens of millions of eggs as small, individual fermenters to much larger artifical fermenters in which vaccine can be produced in a contained system, says Rino Rappuoli, Ph.D., Head Vaccines Research at the division.

We ll continue to live with egg-based vaccines for some time, but Novartis Vaccines is the only company that has approved, adjuvanted vaccines produced in cell culture.

Underscoring the strategic importance of cell-based production, Novartis and the US government are sharing the cost of a new factory under construction in Holly Springs, North Carolina. The Novartis Holly Springs facility was officially inaugurated in November 2009. If licensed in an emergency, the facility will be ready to respond to a pandemic as early as 2011. The plant is planned to be running at full-scale commercial production in 2013.

When fully operational, the Holly Springs site will be a key link in the US pandemic preparedness program, with potential capacity to produce 50 million doses of seasonal influenza vaccine each year and targeted capacity to produce 150 million doses of adjuvanted avian pandemic influenza vaccine within six months of declaration of a pandemic.

US government policy calls for establishing domestic capability to produce up to 600 million doses of avian pandemic vaccine within six months of a pandemic outbreak.

Table of Contents

The Vaccines and Diagnostics Division actually launched development of pandemic flu vaccines in 1997, the year that a highly virulent avian H5N1 strain first appeared in humans in Hong Kong. During the outbreak of avian flu in 1999, a field trial of the first H5N1 pandemic vaccine candidate in combination with *MF59* adjuvant elicited robust immune responses in people vaccinated. Lessons from that earlier development program gave Novartis a head start on the A (H1N1) program.

Our job is to be prepared for whatever the influenza virus is going to throw at us, and that s exactly what we have been doing, Dr. Rappuoli said. We have solutions for society to face the pandemic that we didn t have a few years ago and we are using them.

STEPPING FORWARD

Procurement was a formidable hurdle for the pandemic vaccine program. With several companies embarking on development of A (H1N1) vaccines, speed was critical, and management at the Vaccines and Diagnostics Division quickly approved significant investments. We had to do a whole lot of things at risk, recalled Mr. Stober. We had limited contracts and if no customers actually ordered vaccine, we would have been crushed commercially. But we felt we had to step forward to ensure the public was protected.

The division s procurement function scrambled to redesign the whole sourcing process for the coming six months at a point when there was no visibility in terms of the volumes that ultimately would be needed. Supply specialists faced three primary challenges: eggs, syringes and multidose vials.

The general rule of thumb in production is that one egg is needed to grow enough virus for each dose of vaccine. Hundreds of millions of doses required hundreds of millions of pathogen-free eggs, purchased from a limited number of qualified, audited farmers in Europe with facilities meeting stringent standards of quality and hygiene.

You can t double production by just pushing a button, said Gianluca Filacchione, Head of Procurement at Novartis Vaccines. To be sure, farmers were able to redirect some eggs being sold to retail food channels. But the division normally secured egg supplies well in advance to expand production. It takes more than a year for a new flock to reach the maturity necessary to produce the right number of eggs with the quality that we are asking for, added Mr. Filacchione. But in the first week after the outbreak of swine flu, we rolled the dice and locked down all the eggs we could find in the market.

Syringes posed another challenge. There is a small number of companies that manufacture syringes worldwide, and meetings with their senior executives revealed they needed at least a year to significantly ramp up production. The companies adopted a straightforward approach to customers: first come, first served. Timing was everything, and we got there first, Mr. Filacchione said.

Multidose vials hold enough vaccine for about 10 vaccinations and make it possible for companies to make more vaccine available than in single-dose syringes in a relatively short period of time. As governments and health authorities wrangled over the design of vials they preferred, Novartis hedged its bets by purchasing supplies of glass and reserving production capacity with vial producers. Mr. Filacchione also bought cardboard and capacity at printing firms for packaging. We wanted to make sure nothing would hold us up, he added.

That commitment rubbed off on some suppliers. One packaging firm promised to give priority treatment to orders from Novartis for pandemic vaccine packaging and slashed the normal delivery time from nine weeks to only two. Firms selling boxes,

Table of Contents

or eggs, or plastic bags for a chemical process don t have the same commitment to health as a pharmaceutical company, Mr. Filacchione observed. But when we reminded them why this project was so important, many of our suppliers responded to the challenge.

SHORT NOTICE

At the Liverpool site, 2009 was a pivotal year when production of *Fluvirin*, a seasonal influenza vaccine from Novartis, would move to a new, highly automated plant, replacing older manufacturing facilities. The transition was carefully planned to avoid disruptions in manufacture of seasonal flu vaccine.

Suddenly along came swine flu, said John Sullivan, Head of the Liverpool site. Novartis couldn t afford to lose production capacity so we continued operations at our old facility to fulfill the contract for A (H1N1) vaccine that we had received from the US government. At the same time, we accelerated operational readiness of the new facility by several months to be able to run both facilities as near to capacity as possible.

To underpin parallel production, it was necessary to bring in about 300 additional production workers, the equivalent of a complete new work force, Mr. Sullivan said. There was an additional stumbling block: limited capacity for pre-incubation, a process required to prepare eggs for production. We put together a plan for a second incubation center, representing a significant investment, on very short notice over a weekend, really, he added. My management team said typically they would need 10 months to get the new facility qualified and ready to go. Instead, we got the project done in five months.

At the same time, the management team was scrambling to prepare the new facility, known as Site 4, for regulatory inspections by the US Food and Drug Administration. A critical step in the approval process is a pre-approval inspection, conducted by four FDA inspectors over a 10-day period. Originally the pre-approval inspection for Site 4 had been scheduled for October, paving the way for final approval of the site shortly before year s end. Novartis suggested to the FDA that we move up the inspection to August, which meant bringing forward all of our readiness planning, Mr. Sullivan recalled.

It played havoc with other plans, but the team at Site 4 really stepped up to the challenge, and the inspection was very successful. The FDA granted final approval of Site 4 on October 9, 2009.

The Marburg, Germany, site pioneered cell-culture technology and was gradually increasing production capacity for *Optaflu*, a cell-based seasonal flu vaccine, as well as *Celtura*. The expansion program shifted into high gear in May. Two additional production lines for *Celtura* were brought on stream as well as a third production line for *MF59*.

EXPANDED SECONDARY MANUFACTURING

Following the initial bulk manufacturing process, vaccines proceed to secondary production and are filled in final dosage forms, syringes or multidose vials. In yet another challenge for the Vaccines and Diagnostics Division, however, capacity for secondary production of A (H1N1) vaccines fell far short of demand.

Seasonal influenza vaccines are trivalent, comprising three separate strains that are blended together before filling in a final dosage form. All A (H1N1) vaccines are monovalent, consisting of a single strain.

We needed three times as much secondary manufacturing capacity for A (H1N1) vaccines to match our bulk production, Mr. Stober said.

Sandoz, the generics division of Novartis, cleared a production line at a plant in Ljubljana, Slovenia, to fill *Celtura* in multidose vials. Third-party suppliers provided added filling capacity for *Focetria* and some of the A (H1N1) vaccine made in Liverpool.

There was a huge amount of regulatory work especially completion of process validation to gain approval for all these new secondary suppliers, Mr. Stober said. Bringing on a third party normally takes up to a year. We did it in less than half the usual time.

BOOSTING YIELDS

Every year, mutations in the influenza A and B virus strains circulating in humans transform key surface proteins enough to elude destruction by natural antibodies built up by people who have had influenza or have antibodies generated through vaccination. Vaccine producers try to keep pace by shuffling the strains in a vaccine as often as the virus itself changes.

That makes for hectic production cycles and close cooperation between vaccine manufacturers and health authorities. After analyzing circulating viral strains collected by dozens of specialized laboratories in its global surveillance network, the WHO recommends the strains to be included in seasonal flu vaccines for the coming year. Then a few government-sponsored labs incorporate those viral strains into fast-growing hybrid seed strains that are distributed to vaccine manufacturers globally.

Manufacturers of seasonal influenza vaccines turn the hybrid viral seed into working seed used to inoculate hundreds of millions of eggs. Growing the very small amounts of the raw material you get from the laboratories into an approved and qualified working seed takes several weeks and involves quite a lot of testing as well, Mr. Sullivan explained.

For production of A (H1N1) vaccine, the egg-based seed virus from the US Centers for Disease Control and Prevention reached manufacturers around mid-July. Once

Table of Contents

in production, however, it proved a big challenge. Initial yields languished at about a third of levels expected from a seasonal H1 strain, reducing the number of doses per egg and delaying vaccination programs planned by public health authorities worldwide.

To mitigate the impact, production of *Focetria* vaccine in Italy as well as the A (H1N1) vaccine from Liverpool changed quickly to different seed strains. When you make this strain change, there is a huge development program and lots of regulatory work that has to be done, Mr. Stober said. The key worry was the risk of a supply gap because of the time required to develop reagents and do calibration standards.

Following changes to the seed virus strains, production climbed steadily through the final months of last year. By late October, deliveries were under way in both the United States and Europe, and net sales of pandemic vaccines in 2009 reached USD 1 billion.

REAL-TIME DATA

Novartis initiated testing of its A (H1N1) pandemic vaccines under intense time pressure to ensure licensure as quickly as possible. We started 12 clinical trials in more than 9 000 people in all age groups within three months of the A (H1N1) virus being identified, said Ralf Clemens, M.D., Ph.D., Head Global Development at Novartis Vaccines. Further studies have been initiated since then and the entire A (H1N1) program will comprise 27 clinical trials and two observational studies including almost 75 000 people.

Studies progressed in close collaboration with health authorities. Dr. Clemens and his team held weekly meetings with officials from the FDA, the European Medicines Agency (EMEA), as well as regulators from Germany and Italy.

Novartis adopted some innovative features in the initial trials of A (H1N1) vaccines to provide regulators a rapid readout on efficacy of the new vaccines. The first pilot trial of *Celtura* was conducted at the University of Leicester. Results were relayed to regulators on both sides of the Atlantic prior to publication in the New England Journal of Medicine.

Cell-culture technology enabled us to produce and develop *Celtura* faster than egg-based vaccines, Dr. Clemens said. That s why we were first.

In Costa Rica, Novartis also conducted a pilot trial of the Liverpool-made vaccine involving more than 1 000 elderly people, adults and children. We were the first company to have data with a vaccine for the United States, Dr. Clemens added. Results were collected weekly, and the analysis shared immediately with FDA officials. It was unusual but it gave them real-time data that were helpful in their own internal decision making, Dr. Clemens said.

Earlier studies of a Novartis candidate vaccine against avian flu in 2007 provided a head start in development of the A (H1N1) pandemic vaccines. That study indicated that a pandemic and a seasonal vaccine could be administered simultaneously. We could see there was no interference, Dr. Clemens said. That observation looms large for plans to include A (H1N1) as a component of future seasonal influenza vaccine.

Following the pilot trial of *Celtura*, a pivotal trial was conducted in Germany, the Netherlands, Switzerland and Belgium. Results showed that *Celtura* generated a protective immune response after a single 3.75-microgram antigen dose in most age groups. That was a fraction of the 15-microgram dose required for unadjuvanted vaccines.

A pivotal study with *Focetria*, the adjuvanted egg-based pandemic vaccine, was conducted in the same centers as *Celtura*. There was such demand from people wanting to be vaccinated that we decided to simply keep the ball rolling with *Focetria*, Dr. Clemens said.

The FDA approved the A (H1N1) vaccine made in Liverpool in mid-September. Approval of *Focetria* by the EMEA followed in late September, and *Celtura* was approved by German regulatory authorities at the beginning of November. These approvals, however, were accompanied by significant requirements for post-marketing surveillance. In Europe we are planning for observational studies involving 45 000 volunteers who will be followed up on a monthly basis for any serious adverse event, Dr. Clemens said. This is a huge undertaking.

COLD CHAIN

Stringent logistical requirements for shipping pandemic vaccines around the world were equally daunting. All vaccines are sensitive biologic substances that progressively lose potency, but the loss of potency occurs faster when a vaccine is exposed to temperatures outside a recommended storage range. Any loss of potency is permanent and irreversible.

Temperature control is critical, said Stuart Dickson, Global Head Supply Chain at the Vaccines and Diagnostics Division. The vaccines must be kept between 2 degrees Celsius and 8 degrees Celsius at all times it s part of the quality of the product. That means we have to assure control in the distribution, and the receiving warehouse has to be quality approved, receive these goods quickly and have the technical skill to handle cold chain.

In Europe, temperature-controlled trucks have been the prime vehicle for distribution. The Liverpool-made A (H1N1) vaccine, however, was shipped from Liverpool to the United States by air in special containers. Distribution of seasonal influenza vaccines usually requires about 700 of these containers. For A (H1N1) pandemic vaccine, at least twice that number was needed.

Table of Contents

Table of Contents

A lot of people have worked their hearts out supporting this endeavor, Mr. Dickson added. It s like a polar expedition. You know where you re trying to go, and you know that it s going to be tough. We re still in the middle of our journey and totally dedicated to succeed.

RETHINKING INFLUENZA

Last July, with preparations for production of pandemic vaccines in full swing, Novartis assembled a select group of influenza experts in Siena for a conference called Rethinking Influenza. Participants ranged from senior executives from the Vaccines and Diagnostics Division and prominent academics to public health officials at the epicenter of the pandemic, including Robin Robinson, Deputy Assistant Secretary for Preparedness and Response within the US Department of Health and Human Services, and Professor David Salisbury, Chair of the WHO s Strategic Advisory Group of Experts (SAGE), the principal advisory group to the WHO for vaccines and immunization.

In October, eight participants including Dr. Rappuoli of Novartis, Dr. Robinson and Dr. Salisbury summarized their deliberations in an article in the journal Science. Although the pandemic has the potential to cause a social and economic emergency, they wrote, It also provides an opportunity to rethink our approach to influenza virus disease, and to develop more effective vaccines and economically sustainable solutions for developing and developed countries.

The article summarized swings in market conditions for seasonal influenza vaccines, from a low point around the year 2000 when major manufacturers abandoned the field, to a resurgence in 2003 through 2005 sparked by outbreaks of avian flu caused by H5N1, a potential pandemic virus. Between 2006 and 2008, global manufacturing capacity surged to 750 million doses per year from 400 million, and development of both adjuvants and cell-culture production technologies made major strides.

Those preparations left the world better prepared to face the A (H1N1) virus than any previous pandemic. But Dr. Rappuoli pointed to major problems that remained unsolved. We still don t have enough capacity to produce enough pandemic vaccine for developed countries, and certainly not for developing countries, he said at the conference. The present model for influenza vaccination is not sustainable to support pandemic preparedness.

In the Science article, the authors cited other lessons from the A (H1N1) outbreak. Until A (H1N1) the scientific community believed that a pandemic strain could only arise from a strain that had not previously been widely disseminated in humans, they noted. A (H1N1) showed, however, that human varieties may follow separate lines of evolution and generate potentially pandemic strains within an existing influenza strain. The authors called for epidemiological studies to include developing countries, humans, their livestock and wild animals to be able to map the diversity and circulation of the virus.

They emphasized that most knowledge of influenza virus is based on data accumulated in developed countries, leaving an incomplete and sometimes inaccurate view of virus spread and its global impacts. Improved influenza surveillance in developing countries is needed and it seems appropriate to add influenza to the vaccines recommended by the Expanded Program for Immunization, the authors said. The increase in vaccination would be based on excess manufacturing capacity for seasonal vaccines, and would encourage both international and local vaccine manufacturers to invest in additional capacity so as to sustain the surge capacity that is necessary in case of a pandemic.

Failure to act on those recommendations would be costly, Dr. Rappuoli had warned during the conference. If we don t change the game, we ll just go from one panic to the next, increasing capacity one day but shutting it down the next, he said. And that means never seeing global implementation of vaccination programs, so people will continue to die.

As Klaus Stohr, Ph.D., Global Head of Influenza Strategy Liaison at Novartis Vaccines and Diagnostics, added: Before joining Novartis, when I was leading the Global Influenza Program at the WHO including pandemic preparedness, we had gone some way to put the structures and processes in place to respond to a pandemic. Experience in 2009 has demonstrated that we need to prepare even better for the future. An effective response requires governments, vaccine manufacturers and other stakeholders to work closely together, in an uncertain environment, at top speed. Novartis has certainly played its full part in tackling this pandemic, and we can be proud of that.

Table of Contents

Table of Contents

Table of Contents

SANDOZ OVERVIEW

KEY FIGURES

(In USD millions, unless indicated otherwise)

	2009	2008
Net sales	**7 493**	7 557
Operating income	**1 071**	1 084
Return on net sales (%)	**14.3**	14.3
Core operating income (1)	**1 395**	1 421
Return on core net sales (%)	**18.6**	18.8
Research & Development	**613**	667
As a % of net sales	**8.2**	8.8
Free cash flow	**1 841**	1 066
Net operating assets	**15 151**	13 948
Additions to property, plant & equipment (2)	**282**	422
Number of associates (FTE) (3) at year-end	**23 423**	23 146

(1) Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.

(2) Excluding impact of business combinations

(3) Full-time equivalent positions at year-end

2009 NET SALES - ESTABLISHED VS. EMERGING/UNTAPPED MARKETS

(In %)

(1) 2009 Sandoz net sales growth in local currencies vs. 2008

NEWS IN 2009

Building a solid base for future growth as a global leader in generic pharmaceuticals: Steady improvement in 2009 led by turnaround in the US and contributions from all regions as well as important progress in differentiated generics.

Net sales slip 1% to USD 7.5 billion, but rise 5% in local currencies. German retail generics and biosimilars (+4% lc) solidify leadership position in a challenging market. US retail generics and biosimilars (+5%) helped by 25 new product launches, up from 17 in 2008. Sandoz continues to expand in Asia-Pacific, Russia and other markets with high growth potential.

Core operating income declines 2% to USD 1.4 billion. Improved underlying business expansion and benefits of productivity gains are more than offset by adverse currency impact. Core operating margin declines 0.2 percentage points to 18.6% of net sales.

Sandoz acquires EBEWE Pharma s specialty generics business for USD 1.3 billion in September, creating a new global growth platform in generic oncology injectables. EBEWE offers more than 15 marketed products and a strong pipeline with many potential near-term launches.

A pioneer in developing biosimilars, or generic biotechnology drugs, Sandoz is positioned to provide cost savings and improved access. Filgrastim, a third biosimilar, is launched in Europe, while somatropin becomes the first-ever biosimilar approved in Japan and Canada.

Serving areas with 90% of the world s population, Sandoz generates 40% of net sales from emerging and untapped generics markets. Targets for expansion include emerging markets and countries with low generic utilization, such as Japan and some European markets.

Table of Contents

SANDOZ

The acquisition of EBEWE Pharma GmbH, a specialist in generic oncology injectables, places Sandoz, the generics division of Novartis, among the top five global manufacturers in the expansive global market for injectable generics. Injectables underpin the Sandoz portfolio of differentiated generic products that are more difficult to develop, manufacture and market - but offer higher growth and profitability. Along with 15 marketed products, EBEWE brings Sandoz a deep development pipeline including more than 20 distinct molecules.

Sandoz, the generics division of Novartis, reinforced a key growth platform in 2009 by acquiring the specialty generic injectables business of EBEWE Pharma GmbH in a USD 1.3 billion transaction.

EBEWE, based in Unterach, Austria, specializes in generic oncology injectables. Together with existing businesses in retail generics, anti-infectives and biosimilars, the acquisition places Sandoz among the top five global manufacturers of injectable generics, a dynamic market with more than USD 10 billion in annual sales.

Biosimilars are follow-on versions of existing biologic medicines that have lost patent protection a promising market niche in which Sandoz is the pioneer and global leader.

Injectables underpin the Sandoz portfolio of differentiated generic products that are more difficult to develop, manufacture and market - but offer higher growth and profitability than more commoditized generics. This will greatly enhance our range of differentiated, affordable, high-quality generic medicines, said Jeff George, Head of Sandoz and permanent attendee of the Executive Committee of Novartis. Together with EBEWE, we will improve access to affordable cancer drugs for patients worldwide.

EBEWE brings Sandoz a portfolio of 15 marketed injectable anticancer products as well as a deep development pipeline including more than 20 distinct molecules. Launch opportunities are expected to sustain dynamic growth. Moreover, access to the global sales and marketing organization of Sandoz could fuel growth of EBEWE products in North America, Latin America and Japan, markets in which the firm has not traditionally had a strong presence.

Oncology is the biggest therapeutic area in the pharmaceutical industry today and the global market for cancer medicines is expected to grow at an annual rate of 12% to 15%, reaching USD 80 billion by 2012. According to IMS Health, a consulting firm specializing in the pharmaceuticals industry, up to 30 new anticancer agents are expected to be approved from 2008 to 2012. Generic manufacturers are also poised for growth; injectable oncology medicines with worldwide annual sales of USD 9 billion are set to lose patent protection by 2015.

BEYOND THE TRADITIONAL APPROACH

The purchase of EBEWE was a logical step, as Sandoz was the Austrian company s biggest single customer and links had become increasingly close in recent years. Hexal AG, the German generics giant acquired by Sandoz in 2005, had a longstanding relationship with EBEWE, and licensed marketing rights to oncology products as well as innovative packaging technology.

Sandoz built on that foundation as well as a growing commitment to the field of

Table of Contents

oncology, according to Friedrich Hillebrand, Ph.D., EBEWE s former Chief Executive Officer and Head of the new Oncology Injectables business at Sandoz . It became clear that if we ever decided to look for a potential partner to acquire EBEWE, Sandoz would be our first choice, Dr. Hillebrand said.

Following the acquisition, EBEWE was designated a new business center of excellence for oncology injectables within the Sandoz organization. Dr. Hillebrand has joined the Sandoz executive management committee. Sandoz has treated our employees very well, Dr. Hillebrand added. It has been the best outcome in all respects.

Like other generic manufacturers, EBEWE strives to claim coveted first-to-market positions by challenging patents on originator compounds. But EBEWE also goes beyond this traditional approach and offers customers additional features and benefits few rivals can match.

Anticancer medicines traditionally have been delivered to hospitals in vials or ampoules containing a lyophilized, or essentially freeze-dried, powder with a texture similar to instant coffee. This powder must be mixed with liquid by doctors or nurses immediately before administration. EBEWE, however, delivers the vast majority of its products in ready-to-use solutions - a safety bonus for healthcare professionals who administer the treatments. These substances are highly toxic and it is a competitive advantage to really understand how they are used in hospitals, Dr. Hillebrand said. We have focused on helping the entire delivery chain - from our factory to the patient.

One example of ready-to-use innovation is EBEWE s gemcitabine, a generic version of the blockbuster anticancer medication marketed by Eli Lilly & Co. under the brand name Gemzar®. While the originator medicine is available in a lyophilized form, EBEWE and Sandoz have jointly launched a more convenient, ready-to-use formulation in Europe.

Another innovative step by EBEWE is the development of specialized packaging techniques to increase safety in the transportation and handling of toxic anticancer medicines. The company s unique Onco-Safe system involves a polymer coating on individual vials and ampoules to prevent breakage and surface contamination.

We have to stay ahead of rival generics companies, Dr. Hillebrand said. But we try to avoid competing primarily on price. We want to talk to customers about other parts of the value chain and how our products can help address their needs.

SHARED DISTRIBUTION CHANNELS

Pooling sales and marketing acumen could provide significant benefits because injectable oncology products, anti-infectives and even biosimilars cater primarily to hospitals and often share distribution channels. Global reach helps you to build the kind of robust supply chain required in the unforgiving hospital environment, said Ernst Meijnders, Head of Anti-Infectives at Sandoz. And once the infrastructure is established, you want to ensure that you have a broad range of products.

As a leading global manufacturer of anti-infectives, Sandoz offers both the injectable formulations used inside the hospital to treat acute infections plus oral formulations - capsules and pills - that are more convenient for patients who continue treatment after being discharged. Traditionally, however, the Sandoz sales force hasn t focused on decision makers that EBEWE sales representatives see regularly on critical-care wards and in chemotherapy departments. Now that comes together around common customers as they are all heavily hospital-driven, Mr. George said.

Individual countries are at such different stages of evolution in treatment of cancer that it isn t yet possible to implement a uniform global marketing strategy, Dr. Hillebrand added. We tailor our approach country by country, according to market dynamics.

Moreover, despite the flood of new targeted anticancer medicines expected to reach the market in the next five years, Dr. Hillebrand insists affordable, generic versions of established chemotherapy regimens in broad use today will remain the foundation of treatment. These are the medicines we have in our existing portfolio, as well as our development pipeline, he said.

PIONEERING BIOSIMILARS

Injectable generics provide a bridge to biosimilars - large molecules in injectable dosage forms that in some cases also must be self-injected by patients. Sandoz is the only company to gain marketing authorization of three biosimilar products, and the division has a comprehensive biosimilar pipeline with numerous projects at various stages of development.

In regulatory breakthroughs in 2006, the recombinant human growth hormone *Omnitrope* became the first biosimilar product to receive regulatory approval in the United States and the European Union. During 2009, regulatory authorities in Japan and Canada granted approval of *Omnitrope* as the first biosimilar to reach patients in both countries.

Complementing *Omnitrope*, *Binocrit*, a biosimilar epoetin alfa used to regulate the formation of red blood cells, was approved by the European Union in 2007.

Breaking new ground again last year, Sandoz received approval from the European Union for a third biosimilar: *Zarzio*, known by the common name filgrastim and based on Neupogen® from Amgen Inc. *Zarzio* is indicated for treatment of neutropenia, a condition characterized by a lack of one of the most common types of infection-fighting

Table of Contents

white blood cells and often associated with chemotherapy or bone marrow transplants, as well as advanced HIV infections.

The biosimilar program at Sandoz is based on more than 25 years of experience in development and production of biologic medicines. Sandoz codeveloped and manufactured interferon alpha in the 1980s, and currently manufactures more than a dozen recombinant proteins on behalf of other companies in addition to the Novartis Pharmaceuticals Division and Vaccines and Diagnostics Division.

Like EBEWE, Sandoz also has developed delivery systems that enhance convenience for patients. *Omnitrope* was originally launched in a lyophilized form. But regulators in the United States and the European Union subsequently approved a new, more patient-friendly liquid pen form in which *Omnitrope* is marketed in a ready-to-use cartridge that can be loaded into the pen for injection.

Biopharmaceuticals offer real therapeutic hope to patients suffering from the most complex diseases of modern society, Mr. George said. Biosimilars, pioneered by Sandoz, increase access to these essential drugs, lowering treatment costs and saving money for patients and healthcare systems more broadly.

TIGHT COST CONTROL

While differentiated generic products generate a steadily increasing proportion of net sales, more commoditized generics still account for more than two-thirds of net sales at Sandoz. Commoditized generics are fiercely competitive, with annual price erosion of about 10%.

To offset that price erosion we have to recreate half our operating profit - well over USD 500 million per year - through a combination of increased volume, product introductions and cost reductions, Mr. George said.

Tight cost control is critical for success, but at times, Sandoz has faced challenges. Operating costs rose significantly faster than sales in 2008, which led Mr. George to initiate a broad operating improvement program known as Project Compete that reduced annual costs by more than USD 300 million in 2009. Of those savings, more than 80% were unrelated to employee head count. We re finding ways to become more efficient and continuously improve the way we work, Mr. George said.

In 2009, Sandoz management also completed a comprehensive remediation program at a production site in Wilson, North Carolina. In August 2008, Sandoz received a Warning Letter from the US Food and Drug Administration (FDA) regarding deviations from Good Manufacturing Practices (GMP) at the Wilson site. Sandoz subsequently initiated voluntary recalls of a number of products.

The remediation program at the Wilson site addressed specific validation and documentation issues cited by the FDA, and Mr. George replaced top management at the US unit of Sandoz as well as management at the North Carolina plant. A reinspection by FDA officials in August confirmed that issues identified in the Warning Letter had been resolved, the site was back in GMP compliance, and a stay on new

product approvals from the Wilson site was lifted.

Table of Contents

Table of Contents

Table of Contents

CONSUMER HEALTH OVERVIEW

KEY FIGURES

(In USD millions, unless indicated otherwise)

	2009	2008
Net sales	**5 812**	5 812
Operating income	**1 016**	1 048
Return on net sales (%)	**17.5**	18.0
Core operating income (1)	**1 118**	1 125
Return on core net sales (%)	**19.2**	19.4
Research & Development	**346**	313
As a % of net sales	**6.0**	5.4
Free cash flow	**1 139**	995
Net operating assets	**3 168**	3 179
Additions to property, plant & equipment (2)	**164**	160
Number of associates (FTE) (3) at year-end	**12 539**	13 014

(1) Core operating income eliminates the impact of acquisition-related factors and other significant exceptional items. These adjustments are explained in detail on page 151.

(2) Excluding impact of business combinations

(3) Full-time equivalent positions at year-end

2009 CONSUMER HEALTH MARKET INFORMATION

	OTC	Animal Health	CIBA Vision
Novartis net sales in USD millions	2 997	1 101	1 714
Novartis sales growth (lc) (1)	5.2%	3.8%	5.4%
Market segment growth (2)	3.4%	-1.4%	2.0%
Novartis market share (2)	3.2%	7.0%	21.4%
Global industry rank (3)	4	6	2

(1) 2009 local currency growth vs. prior year

(2) MAT Q3 2009, local currency; sources (OTC: Nicholas Hall, Animal Health: Internal analysis; CIBA Vision: Internal Analysis)

(3) MAT Q3 2009, local currency; sources (OTC: Nicholas Hall; Animal Health: Vetnosis; CIBA Vision: Internal Analysis)

NEWS IN 2009

Consumer Health provides access to trusted brands for healthy lifestyles. Three business units - OTC, Animal Health and CIBA Vision - are building globally competitive positions through innovative products and geographic expansion.

Net sales (USD 5.8 billion, 0% in USD; +5% in local currencies) show improved underlying results as all businesses outgrow their markets despite challenging conditions. Adverse currency impact more than offsets underlying improvements in core operating income, resulting in the core operating income margin falling slightly to 19.2% of net sales.

OTC expands global presence with brands serving self-care needs in gastrointestinal, analgesics, cough, cold, allergy, skin care and smoking cessation. The US launch of *Prevacid24HR* in November offers consumers the first and only OTC version of a proton pump inhibitor for treatment of frequent heartburn in its original formulation.

Animal Health expands companion-animal presence with focus on key countries and new products such as *Onsior* for pain relief in cats and dogs. Despite global farming crisis, advances are made in antiparasitics for livestock and vaccines for aquaculture.

CIBA Vision, the industry s fastest-growing contact lens and lens care company, benefits from new product launches in the US and Europe. New product enhancements for healthy vision include breathable lenses and color contacts.

Table of Contents

CONSUMER HEALTH

Prevacid24HR, a new over-the-counter (OTC) treatment for frequent heartburn pain, is expected to become the latest addition to the portfolio of Consumer Health Division brands with annual sales exceeding USD 100 million. The Consumer Health Division is also driving growth by rejuvenating regional OTC brands, launching new contact lens products and expanding the Animal Health development pipeline in close cooperation with other Novartis divisions.

In 2009, 15 brands at the Novartis Consumer Health Division posted sales of more than USD 100 million, and 12 of those brands gained market share during the year.

The latest addition to the roster of important consumer brands is expected to be *Prevacid24HR*, a new over-the-counter (OTC) version of prescription *Prevacid*, the widely prescribed proton pump inhibitor. *Prevacid24HR* treats frequent heartburn pain for a full 24 hours.

Novartis acquired the rights to commercialize *Prevacid24HR* in the United States in 2005 and the OTC Business Unit has made meticulous preparations for its biggest launch in years. This opportunity is massive, and we re making major investments to build the brand, said George Gunn, MRCVS, Head of the Consumer Health Division and permanent attendee of the Executive Committee of Novartis.

At the same time, the Consumer Health Division is driving growth by rejuvenating existing brands at OTC as well as the other two business units. Successful OTC brands such as *Savlon* in the United Kingdom, *Fenistil* in Germany and *Otrivin* in Scandinavia gained market share through line extensions and strong marketing support.

Innovation has helped rejuvenate the brand portfolio at the CIBA Vision Business Unit, a global leader in contact lenses and lens care products. Under its two master brands, *Air Optix* and *Dailies*, CIBA Vision has launched new lenses to improve comfort, correct astigmatism and alleviate presbyopia, the age-related inability of the eye to focus on close objects.

New product launches enabled the Animal Health Business Unit to continue its record of faster-than-market increases of net sales since 2004. Over that six-year period, Novartis Animal Health also built a deep development pipeline with a distinctive strategy emphasizing close cooperation with other Novartis divisions.

Because a modest research budget in Animal Health was unlikely to produce repeated breakthrough discoveries from its own labs, we set out to look at the innovation we have across the whole Novartis Group, said Dr. Gunn, who heads Animal Health in parallel with the Consumer Health Division. Today, the Animal Health development pipeline includes more than 50 projects in areas ranging from dermatology and cardiorenal disease to obesity and lactation. More than half of these projects trace their origin across other Novartis divisions, and a number of new veterinary medicines have reached the final, pivotal stage of clinical testing.

Dr. Gunn plans to apply the same pragmatic approach more broadly. We have many good assets, and we need to produce more value out of them, he said. The first step in that effort is making the most of what we ve got.

Table of Contents

DYNAMIC PORTFOLIO

OTC brands improve access to treatment by giving consumers the option of self-medication at a reasonable cost. More Americans are taking greater ownership of their health-care decisions today, said Dirk Van de Put, Global Head of the OTC Business Unit. Providing broad access to *Prevacid24HR*, this very effective treatment for frequent heartburn, is a milestone in the over-the-counter medicine category.

Digestive health is the fourth-biggest OTC category in the United States, growing at a rate of about 4% per year. *Prevacid24HR* augments a dynamic portfolio of digestive health brands at Novartis, ranging from *Benefiber*, a bulk fiber supplement, and the antacid *Maalox*, to *Gas-X*, a remedy to ease the bloating and discomfort of gas, available in multiple formats, including liquid gels, chewable tablets and thin strips that melt in the mouth.

Prevacid24HR was approved by the US Food and Drug Administration in the form of 15 milligram delayed-release capsules for treatment of frequent heartburn, defined as occurring two or more days per week. A proton pump inhibitor, *Prevacid24HR* works by reducing the amount of acid produced in the stomach, limiting the potential for acid to back up into the esophagus to cause heartburn.

The *Prevacid24HR* launch by Novartis represents one of the biggest prescription-to-OTC switches in recent years. The prescription medicine achieved peak annual sales exceeding USD 3 billion prior to loss of patent protection, and more than 21 million patients were prescribed *Prevacid* to treat their acid-related disorders.

Novartis Consumer Health has extensive experience in taking prescription products over-the-counter, enabling more patients to get access to medicine they need to treat appropriate symptoms. *Voltaren*, *Lamisil* and *Nicotinell* - three of the biggest global switches by the OTC Business Unit - originated as prescription medicines discovered and developed by Novartis.

The success of *Prevacid24HR* built on that in-depth experience, combined with meticulous planning. Initial demand is notoriously difficult to forecast, and supply glitches - limiting product availability at the crucial early stages of a launch - had burdened many previous prescription-to-OTC switches. The supply chain for *Prevacid24HR* averted shortages through a strategy allowing a rapid increase of output in response to sudden peaks in demand.

OTC established cross-functional teams to promote *Prevacid24HR* to large retail customers including national pharmacy chains. In the United States, both Wal-Mart Stores Inc. and Walgreen Co. jointly developed TV commercials and other advertising with Novartis. *Prevacid24HR* was the first OTC product displayed in the food sections as well as pharmacies in Wal-Mart stores. It was a breakthrough, said Jeanne Bennett, Vice President OTC Marketing.

Meanwhile, CVS Caremark Corp. packed its pharmacies around the United States with special in-store displays introducing *Prevacid24HR*. These activities all strengthened the strategic nature of our relationship with these retailers, Ms. Bennett added.

A DIFFERENT TWIST

In 2009, the Animal Health Business Unit launched two new products that underscored complementary approaches to research and development it has undertaken in recent years.

Zolvix is a breakthrough treatment for control of parasitic worms in sheep, including worms resistant to previously available treatments. Resistance is a significant problem for sheep farmers worldwide, and *Zolvix* represents the first new class of worm control therapy to reach the market in more than two decades.

Scientists at Animal Health identified the active ingredient in *Zolvix* after testing hundreds of chemically related molecules. The drug works by targeting a newly identified receptor found only in parasitic worms. That selective mode of action also helped establish a robust safety profile for *Zolvix* during clinical studies.

Onsior, a new painkiller for cats and dogs launched across the European Union last year, exemplified a different path: borrowing discoveries from other Novartis divisions. Just as with prescription-to-OTC switches, development of veterinary versions of human medicines is a familiar formula. *Onsior*, however, gave that formula a different twist.

This is not your classic switch of a successful human product where you have enough data on safety to take the product into OTC, or perhaps into another species, said Fabian Kausche, Dr. med.vet., Head Research and Development at Novartis Animal Health. The active ingredient in *Onsior*, known by the common name roben-acoxib, was discovered by the Novartis Pharmaceuticals Division but never became a serious candidate for development as a human medicine. It s an example of how we work systematically today, looking at early-stage compounds that may be of no interest to other divisions, Dr. Kausche added. It s creating value for Animal Health but also value for Novartis.

Ironically, the *Onsior* program was galvanized by the success of *Deramaxx*, a painkiller approved in the United States for treatment of pain in dogs. Both *Onsior* and *Deramaxx* are coxibs, drugs that selectively target an enzyme family that causes pain but don t affect a closely related family of enzymes that can trigger unwanted side effects.

Deramaxx was licensed from Pfizer Inc. under an agreement that ultimately restricted possibilities of expanding use of the drug into additional indications, species and

Table of Contents

geographic markets. Unencumbered by such constraints, *Onsior* is the first and only coxib approved for the relief of pain and inflammation in both cats and dogs. Moreover, Novartis Animal Health has developed two formulations - a convenient injectable version for veterinary surgery and tablets for ongoing pain control outside the clinic. *Onsior* tablets are flavored, and the cat formulation is designed to have an attractive taste for finicky felines.

EXCHANGE OF DISCOVERIES

Development of *Onsior* was under way when Dr. Gunn took the helm at Animal Health in 2004 and immediately embarked on improving cross-divisional collaboration in research programs. Working closely with peers from Pharmaceuticals, scientists from Animal Health trawled through mountains of data, searching for mechanisms or compounds with potential veterinary indications. For example, certain animals have receptor systems similar to humans, and a chemical with activity against these receptors in humans would be of potential interest in animals, as well.

In year one, our target was to identify three leads for Animal Health development programs, Dr. Gunn recalled. We actually got several times that number.

Subsequently, collaborations between Animal Health and the rest of Novartis have expanded. Synergies continue to emerge, particularly with the Vaccines and Diagnostics Division where the exchange of discoveries runs in both directions. When Novartis raced to develop a pandemic vaccine against the influenza A (H1N1) virus in 2009, Animal Health was able to help. We had 13 isolates of swine flu virus from pigs that we gave the Vaccines Division immediately, and we also did some serum testing for their pandemic vaccine project, Dr. Gunn said.

Novartis Animal Health has even enlisted the services of the Pharmaceuticals Division s Modeling and Simulation function. Normally we take animal data and try to humanize it, but the reverse is also possible, said Donald R. Stanski, M.D., Head of the Modeling and Simulation group. We are going to reverse-engineer some of our platforms modeling hypertension and other diseases to help Animal Health understand clinical pharmacology in dogs, cats, cattle and fish. They are going to pick out the molecules but it s important to get the dose and duration right.

CIBA VISION

Recently launched products enabled CIBA Vision to accelerate growth and gain global market share in 2009. Products introduced during the past two years underscored a strong focus on innovation and portfolio renewal.

CIBA Vision has a full portfolio of products that meets all vision correction needs including spherical astigmatism, a subtle difference in the shape of the cornea that blurs vision, and presbyopia, gradual loss of the eye s ability to focus on close objects. The products are offered under two master brands: *AirOptix* and *Dailies*.

The *AirOptix* family of products achieved buoyant double-digit net sales growth as a result of successful launches of innovative contact lenses. *AirOptix* contact lenses are made of silicone hydrogel, a patented lens technology that helps maintain moisture by minimizing the rate of lens dehydration. This allows more oxygen to be transmitted through the lens when compared with traditional contact lenses, resulting in a healthy, natural feeling. Oxygen and moisture are increasingly important with advancing age and waning supplies of natural tears to keep the eyes moist.

AirOptix for astigmatism contact lenses provide excellent overall fitting predictability and comfort to consumers with a subtle difference in the shape of their cornea. An estimated 40% of people who wear soft contact lenses have astigmatism but only 28% wear toric lenses, indicating a significant market opportunity. In recent years, the toric lens segment has grown at nearly triple the rate of the overall contact lens market.

AirOptix Multifocal contact lenses address the needs of consumers who have presbyopia. The condition usually begins around age 40 and causes many wearers to abandon contact lenses due to dissatisfaction with vision and comfort. *AirOptix* Multifocal lenses offer clear vision at all distances, helping consumers through the different stages of presbyopia. As much as 57% of the vision-corrected population is eligible for a presbyotic correction, but only 7% currently wear multifocal contact lenses, leaving a significant untapped market potential.

The *Dailies* family of contact lenses complements CIBA Vision s product portfolio, offering comfort and flexibility in a daily disposable modality. *Dailies AquaComfort Plus* contact lenses, the flagship product of the *Dailies* portfolio, continue to be a main driver of the business. In 2009, CIBA Vision announced extended parameters for *Dailies Toric* lenses (for people with astigmatism), enabling eye care practitioners to fit the majority of patients with astigmatism who desire the convenience, comfort and health provided by a daily disposable lens.

Table of Contents

Table of Contents

Table of Contents

CORPORATE CITIZENSHIP

Corporate Citizenship at Novartis is an integral part of how we operate and a key to our success.

Our Corporate Citizenship commitment rests on four pillars:

Patients

Novartis seeks to ease suffering and enhance the quality of life for patients, including those who cannot afford treatment.

People and Communities

We strive to provide our associates with the safest possible workplaces, and to promote their health and well-being. We are an integral part of the communities that host our operations.

Environment

Careful stewardship of natural resources - particularly tight control of waste, greenhouse gas emissions and energy efficiency - is important to Novartis.

Ethical Business Conduct

We strive for high performance with integrity.

CONTENTS

61

Table of Contents

CORPORATE CITIZENSHIP KEY PERFORMANCE INDICATORS

Indicator (1)	2009	2008	2007	2006	2005
Economic (2)					
Net sales in USD billions	**44.3**	41.5	38.1	34.4	29.4
Net income in USD billions, *% of net sales*	**8.5, *19%***	8.2, *20%*	6.5, *17%*	6.8, *20%*	5.8, *20%*
Research & Development in USD billions, *% of net sales*	**7.5, *17%***	7.2, *17%*	6.4, *17%*	5.3, *15%*	4.8, *16%*
Purchased goods and services (3) in USD billions, *% of net sales*	**21.3, *48%***	20.3, *49%*	19.4, *51%*	15.8, *46%*	13.3, *45%*
Personnel costs in USD billions, *% of net sales*	**10.9, *25%***	10.6, *25%*	9.9, *26%*	8.7, *25%*	7.5, *25%*
Taxes in USD billions, *% of net income before taxes*	**1.5, *15%***	1.3, *14%*	0.9, *13%*	1.2, *15%*	1.0, *14%*
Dividends in USD billions, *% of net income*	**4.6, *55%***	3.9, *48%*	3.3, *51%*	2.6, *38%*	2.0, *35%*
Cash returned to shareholders via share repurchases in USD billions, *% of Group total net income*	**0.0, *0%***	0.3, *0%*	4.7, *39%*	0.0, *0%*	0.5, *8%*
Share price at year-end (CHF)	**56.50**	52.70	62.10	70.25	69.05
Patients					
Access to medicine (4): value in USD millions	**1 510**	1 259	937	755	696
Access to medicine (4): number of patients reached [million]	**79.5**	73.7	65.7	33.6	6.5
People and Communities					
Number of full-time equivalent positions	**99 834**	96 717	98 200	100 735	90 924
Resignations (incl. retirements), separations, hiring (% of associates)	**-8, -3, 14**	-10, -5, 14	9, 4, 17	8, 4, 19	8, 4, 16
Women in management (5): % of management, % of Board of Directors	**35, 16.9**	37, 8.3	35, 8.3	31, 0.0	28, 0.0
Number of associate nationalities	**144**	143	139		
Lost-time injury and illness rate (LTIR) (6) [per 200 000 hours worked] (2)	**0.22**	0.34	0.42	0.45	0.51
Total recordable case rate (TRCR) (6),(7) [per 200 000 hours worked] (2)	**0.94**	1.09	1.41	1.43	1.34
Transportation-related injuries leading to lost time (2),(6)	**58**	77	92		
Environment (2),(8)					
Contact Water use (excludes cooling water) [million m3]	**15.0**	15.1	15.4	15.2	15.0
Energy use [million GJ], on site and purchased	**17.0**	16.8	16.7	16.4	15.3
Emission CO2/GHG, Scope 1: Combustion and processes [1000 t]	**400**	404	408	408	383
Emission CO2/GHG, Scope 1: Vehicles [1000t]	**177**	184	198	187	202
Total operational waste not recycled [1000 t], hazardous and non-hazardous	**164**	165	177	156	115
Ethical Business Conduct					
Number of associates trained on Code of Conduct (e-learning courses) (9)	**29 493**	15 990	16 697	14 574	33 000
Managers completing certification on Code of Conduct	**26 300**	26 750	27 000	23 000	20 000

Cases of misconduct reported/substantiated (10)	**913/240**	884/374	906/421	651/326	442(11)/241(11)
Dismissals/resignations (related to misconduct) (10)	**155**	217	249	154	131(11)
Number of suppliers	**206 155**	228 769	228 558		
Number of suppliers informed of Novartis Third-Party Guidelines (Annual sales of more than USD 10 000)	**45 858**	28 792	61 715	42 200	39 000
Number of suppliers to confirm key standards (12) (self-declaration)	**842**	1 157	1 377	8 600	5 500

(1) Data reported in the Ethical Business Conduct (except Number of suppliers items) and Health, Safety & Environment sections include the entire Group; Data reported in Number of suppliers items excludes the Vaccines and Diagnostics Division
(2) Years 2005 to 2007 have been adjusted to exclude the Consumer Health Division Nutrition operations divested in 2007, unless otherwise stated
(3) As included in the Group s Value Added Statement
(4) See table on page 72 (Access-to-medicine table)
(5) Management defined locally; the actual reporting relationship of these executives is to executives and/or the boards of directors within the companies that employ them
(6) Excludes data for contractors
(7) Includes all work-related injury and illness, whether leading to lost time or not
(8) Details see: www.corporatecitizenship.novartis.com/environmental-care
(9) 2009 figure includes new associates and other associates not previously trained
(10) Figures of previous years have been updated to reflect completion of outstanding investigation
(11) From April to December 2005
(12) In 2007 Novartis modified financial requirements for self-declarations by suppliers, focusing on suppliers with the highest business volumes and resulting in a significant decline in the number confirming key standards

Table of Contents

NEWS IN 2009

PATIENTS	Treatments worth USD 1.5 billion are contributed through Novartis access-to-medicine programs in 2009, reaching 79.5 million patients in need. Deliveries of the pioneering antimalarial medicine *Coartem* climb 14% to 84 million treatments. By the end of 2009, 300 million *Coartem* treatments have been delivered without profit since 2001, saving an estimated 750 000 lives. Following initial approval in late 2008 by Switzerland s regulatory agency, Swissmedic, the new pediatric formulation *Coartem* Dispersible receives marketing authorization in 25 malaria-endemic developing countries. The Novartis Vaccines Institute for Global Health, a research institute with a nonprofit mission to focus on development of vaccines for diseases of the developing world, is awarded a grant from the Wellcome Trust to develop a bivalent vaccine for typhoid fever, a disease that affects more than 21 million people worldwide every year. Novartis announces the official extension of its tuberculosis (TB) drug donation to Tanzania, committing to deliver a further 250 000 treatments over the next three to four years. Between 2005 and 2008, Novartis delivered 250 000 TB treatments to Tanzania.
PEOPLE AND COMMUNITIES	Novartis conducts the first Global Employee Survey, aiming to understand key drivers of engagement for associates. The response rate is a stellar 90%, signaling a high level of involvement as well as a broad-based commitment to making Novartis an even stronger company.
ENVIRONMENT	Underscoring the voluntary commitment by Novartis to the Kyoto protocol, solar energy systems have been installed to date at five sites around the world. Group-wide solar electricity capacity is tripled in 2009 by completion of a 1-megawatt solar power system at a Pharmaceuticals Division site in Vacaville, California.
ETHICAL BUSINESS CONDUCT	Novartis abides by the highest standards of animal welfare and ensures that the same high standards are maintained in Novartis-sponsored studies performed with external partners. Nevertheless, Novartis associates have been subjected to an increasingly violent campaign of harassment and intimidation by animal rights extremists using illegal methods to pursue their objective of stopping the use of animals in research.
RANKINGS	Novartis again achieves top-level positions in influential rankings and is named one of the leaders in the pharmaceutical sector of the Dow Jones Sustainability Index; ranks number two in Fortune magazine s list of World s Most Admired Companies in the pharmaceutical industry; is named one of the top 20 companies in DiversityInc s Top 50 Companies for Diversity and, for the third year, is recognized as a top pharmaceutical company in the 2009 World s Most Ethical Companies list from Ethisphere Institute.

Table of Contents

Table of Contents

CORPORATE CITIZENSHIP

Innovation is the essence of the mission of Novartis, underpinning a uniquely broad range of healthcare solutions that address the evolving needs of patients and societies worldwide. While Corporate Citizenship begins with the success of the core business, attaining those objectives with integrity and in an environmentally sustainable manner is essential to maintain a high level of employee engagement.

During 2009, medicines and vaccines from Novartis were used to treat and protect more than 930 million people around the world, according to internal estimates.

That contribution reflects a consistent strategy of focused diversification in health-care and a uniquely broad range of health-care solutions addressing the evolving needs of patients and societies worldwide. Innovation is the essence of the mission of Novartis. Investment in research and development by Novartis ranks among the highest in the pharmaceutical industry, measured as a percentage of sales. Focusing on unmet medical need inspires Novartis associates to connect science with customer insights to develop new medicines and vaccines.

Corporate Citizenship at Novartis begins with the success of the core business and growth generated by a constant stream of new products, improving access to treatment as well as prevention of disease. At the same time, Novartis associates strive to create value beyond business success and to operate in a manner that is environmentally sustainable and responsible to an increasingly diverse array of stakeholders. Those aspirations are reflected in the four pillars underpinning Corporate Citizenship: Commitment to Patients, Commitment to People and Communities, Commitment to the Environment, and Commitment to Ethical Business Conduct.

Drug discovery at Novartis is driven by unmet medical need, combined with strong scientific rationale for addressing that need worldwide. The uniquely long development and commercialization cycles in the pharmaceutical industry mean that selection of research projects must take into account future trends in demographics and disease.

In coming decades, the world s population will age, and population growth increasingly will come in Asia and Africa while flattening in developed countries in North America and Europe. The Pharmaceuticals Division is expanding rapidly in emerging markets, and in November 2009 Novartis announced a USD 1 billion investment to expand research and development activities in China over the next five years. The investment builds on the establishment of the China Novartis Institutes for BioMedical Research in Shanghai in 2006, and will extend and increase collaboration with institutions in China.

An initial focus of research at the Shanghai institute has been infectious causes of cancer, an area of unmet need in the Asia-Pacific region and China in particular. Liver cancer is a common complication of infection by the hepatitis B virus that kills an estimated 300 000 people in China each year.

Table of Contents

ACCESS TO MEDICINE

Through access-to-medicine programs, Novartis also is helping poor patients in the developing world benefit from the revolution in biomedical science and technology that underpins the Group s commercial research. Treatments worth USD 1.5 billion were contributed through access-to-medicine programs in 2009, reaching 79.5 million patients in need.

For almost a decade, Novartis has helped transform treatment of malaria through a partnership with the World Health Organization (WHO), providing the pioneering medicine *Coartem* at no profit for public sector use by countries in sub-Saharan Africa. By the end of 2009, almost 300 million *Coartem* treatments had been delivered, saving an estimated 750 000 lives in more than 50 malaria-endemic countries, the vast majority in Africa. During 2009, Novartis and partner Medicines for Malaria Venture introduced *Coartem* Dispersible, a new child-friendly formulation that eases administration and enables accurate dosing for children, the most vulnerable group of malaria patients.

Since 2000, Novartis has provided free treatments for all leprosy patients worldwide, as well as fixed-combination tablets to treat tuberculosis patients in the world s poorest countries under separate collaborations with the WHO. In addition, research centers funded by Novartis have nonprofit missions to discover medicines and vaccines against diseases of the developing world.

EMPLOYEE ENGAGEMENT

Creating a diverse and inclusive working environment is critical to success and Novartis strives to sustain a high level of employee engagement that fosters high achievement and employee satisfaction. In 2009, Novartis conducted a global employee survey to measure engagement and capture feedback from associates about their experience of working at Novartis. The high score received for Integrity and Social Responsibility was particularly important because that category is the top driver of engagement for employees at Novartis.

The Group s Diversity & Inclusion initiative is increasingly important at a time of changing global workforce dynamics. A focus on culture, talent and marketplace generates value by effectively optimizingthe share of available talent, consolidating competitive advantage for Novartis and serving customers with excellence. Special programs implemented in China and Russia have led to significant decreases in turnover and higher engagement for associates in those markets.

ENERGY AND SAFETY

In 2005, Novartis voluntarily committed to the Kyoto protocol, the international agreement that sets binding targets for reducing greenhouse gas emissions by 2012. Programs to improve energy efficiency and reduce emissions continued to make progress during 2009.

Energy Excellence Awards introduced in 2004 showcase the progress of the energy efficiency strategy and reduction of emissions. To date, Novartis has invested about USD 43 million in projects recognized with Energy Excellence Awards and the simple payback was just 11 months. Taken together these projects have reduced energy consumption by 7% and greenhouse gas emissions by 4.5%. Moreover, significant progress was achieved in generating renewable energy from locally available biofuels during the year.

During 2009, the Group-wide lost-time injury and illness rate (LTIR) decreased from 0.34 in 2008 to 0.22, or 222 incidents where associates were unable to come to work for a least one day. Underscoring the steady decline of the LTIR in recent years, the Executive Committee of Novartis set a midterm target for 2012 of reducing the accident rate to 0.2, or approximately 200 accidents per year. However, due to substantial progress this year in reducing the LTIR by 35 % to 0.22, a target of 0.20 has been set for 2010, i.e., two years in advance of the original target.

ANIMAL WELFARE

Animal experimentation is a mandatory part of modern discovery and development of innovative medicines. Novartis is required by law and regulation in countries around the world to conduct animal testing to confirm the efficacy and safety of medicines.

We do so with the utmost sensitivity, however, abiding by the highest standards of animal welfare and using the most advanced technology to reduce animal testing where possible, through alternative methods including testing in cells or computer modeling, said Paul Herrling, Ph.D., Head of Corporate Research at Novartis.

During the past year, however, Novartis associates have been subjected to an increasingly violent campaign of harassment and intimidation by animal rights extremists using illegal and terroristic methods. Novartis has implemented additional security measures to protect the health and safety of associates, and is working closely with law enforcement authorities at the local, regional and national levels to investigate these crimes and bring those responsible to justice.

Table of Contents

CORPORATE CITIZENSHIP: TARGETS AND RESULTS FOR 2009 AND TARGETS FOR 2010

UN GLOBAL COMPACT

Targets 2009	Results 2009	Targets 2010
Participate in the Human Rights Working Group of the UN Global Compact to advance thinking on compliance assessments for human rights as well as concepts for access to medicine.	Supported the Human Rights Working Group. Launched a comprehensive project to review human rights due diligence activities, based on the human rights assessment tools currently available.	Compile the learnings of the four pilot applications of the Human Rights Compliance Assessment tool in order to further integrate it into existing management systems.

RESPECT FOR HUMAN RIGHTS

Targets 2009	Results 2009	Targets 2010
Test the tool for assessing human rights compliance in a fourth country and continue to facilitate the development of a pharma-specific version by sharing the pioneering experience. Test the Business Leadership Initiative on Human Rights (BLIHR) matrix tool for a cross-check of the company s main policies regarding the completeness in terms of human rights.	Tested a draft version for the pharmaceutical industry of the Human Rights Compliance Assessment tool with Novartis Indonesia. In April 2009, hosted the final BLIHR conference to follow up on BLIHR s work aimed at integrating human rights into business activities.	Participate in the Human Rights Working Group and publish another Communication on Progress report acknowledged as notable by the Global Compact Office.

TRANSPARENT REPORTING

Targets 2009	Results 2009	Targets 2010
Release the 2008 Communication on Progress on the 10 principles of the UN Global Compact. Continuously update Citizenship@Novartis.	2008 Communication on Progress released in January.	Release 2009 Communication on Progress. Continuously update Citizenship@Novartis.

GOVERNMENT RELATIONS/LOBBYING

Targets 2009	Results 2009	Targets 2010
Publish additional position papers about healthcare topics of interest to external stakeholders. Continue improving Public Affairs skills in all markets.	Published or updated Novartis perspective on six key topics. (See page 93 for link to Perspectives on Key Issues.) Expanded worldwide training for Public Affairs staff. In 2009, Novartis spent USD 29 million in	Continue to identify and publish Novartis perspectives on healthcare issues.

support of major international, US and pan-European trade associations.

FINANCIAL COMMUNITY

Targets 2009	Results 2009	Targets 2010
Release 2008 Global Reporting Initiative (GRI) report using the third generation guidelines (G3) and maintain ranking. Strive to maintain a top industry rating for corporate citizenship engagement.	2008 Novartis GRI report used the GRI G3 sustainability reporting guidelines at an application level of A+, checked and confirmed by the GRI. In 2009, Novartis continued to achieve high ratings in several corporate citizenship industry rankings. (For more on rankings, see page 63.)	Release 2009 Novartis GRI report at an application level of A+. Strive to maintain high ratings on key industry corporate citizenship rankings.

Table of Contents

Table of Contents

Table of Contents

COMMITMENT TO PATIENTS

Access-to-medicine programs at Novartis target diseases from malaria and leprosy to tuberculosis and cancer. Moreover, Novartis finances research institutes with nonprofit missions to discover new medicines and vaccines specifically tailored to the needs of developing countries. During 2009, Novartis access-to-medicine programs reached 79.5 million patients in need, through contributions valued at USD 1.5 billion.

For more than 20 years, Philip Thuma, M.D., has divided his time between caring for patients and conducting malaria research in Macha, a rural farming district in the Southern province of Zambia.

His father was an American physician and missionary who established the Macha Mission Hospital in 1957. Dr. Thuma grew up in Macha and returned after earning a medical degree in the United States. Macha Mission Hospital serves the local population of more than 160 000 people, and during the peak malaria transmission period from December through June, the disease traditionally caused more than 1 400 pediatric admissions and the deaths of about 60 children per year.

In 2003, Zambia introduced *Coartem*, the breakthrough antimalarial medicine developed by Novartis and Chinese partners, as first-line therapy, replacing chloroquine, a drug rendered ineffective by the emergence of drug-resistant malaria parasites. Novartis provides *Coartem* at no profit for public sector use in developing countries under a partnership with the World Health Organization (WHO) and other United Nations agencies.

In 2004, reflecting the introduction of *Coartem*, the number of pediatric admissions at Macha Mission Hospital declined to 423 from more than 1 400 the previous year, and the number of deaths halved, to 18. In 2005, pediatric admissions fell further, to 123, and the number of deaths declined to six.

Dr. Thuma acknowledged that changes in hospital-based data may not always reflect what is happening in the community. But other preventive measures such as indoor residual spraying and insecticide-treated bed nets weren t widely used in the Macha area until 2007. And when *Coartem* wasn t available during the 2006-2007 malaria transmission season because of supply problems within Zambia s state health service, both the number of children admitted to Macha Mission Hospital with malaria and the number of deaths quadrupled.

We believe that the introduction and widespread use of *Coartem* contributed to the reduction in malaria case load seen at Macha Mission Hospital, Dr. Thuma said. And the improvement has been sustained with a record low number of pediatric inpatient malaria cases during 2009.

CHANGE IN POLICY

Macha Hospital is not an isolated success story. The number of malaria-related deaths across Zambia has declined by 70% since *Coartem* was adopted as first-line therapy. We are beginning to see that the change in policy has really helped our country, said Elizabeth Chizema-Kawesha,

M.D., Director Technical Support Services at Zambia s Ministry of Health and formerly Head of the National Malaria Control Program.

Table of Contents

While Zambia was the first country in Africa to adopt *Coartem* as first-line therapy, demand has surged as other countries revised national malaria treatment guidelines and replaced older, failing medicines with artemisinin-based combination therapies (ACT), the new class of antimalarial medicines pioneered by *Coartem*. Zanzibar, Ethiopia and Rwanda have also achieved reductions of more than 60% in deaths of children under the age of 5, the group most vulnerable to malaria.

During 2009, the *Coartem* program passed several major milestones. Deliveries during the year climbed 14% to 84 million *Coartem* treatments, a 20-fold increase from only 4 million treatments as recently as 2004. Sourcing and manufacturing effeciencies enabled Novartis to reduce prices by 52% from an average price per treatment of USD 1.57 in 2005 to USD 0.76 in 2009 facilitating access to treatment for patients. From 2001 through 2009, 300 million *Coartem* treatments had been delivered, saving an estimated 750 000 lives in more than 60 malaria-endemic countries the vast majority in Africa.

In 2009, *Coartem* became the first ACT approved by the US Food and Drug Administration, making the United States the latest of more than 80 countries in which *Coartem* is available.

In addition, Novartis and Medicines for Malaria Venture, a nonprofit foundation based in Switzerland, developed *Coartem* Dispersible, a new pediatric formulation that is sweet tasting and designed to disperse quickly in small amounts of water. Novartis began to roll out *Coartem* Dispersible and delivered 15 million treatments during 2009. Countries receiving early deliveries ranged from Zambia, Mozambique, Tanzania and Mali to Nigeria, Uganda, Myanmar, Togo and Niger.

Coartem Dispersible tablets contain the same amounts of active ingredients and work the same way to cure malaria as the regular *Coartem* tablet, but represent an attractive alternative for babies and children who find it difficult to swallow crushed or bitter tablets. Crushing tablets is an inefficient procedure that can result in loss of drug and ingestion of a reduced dose of the drug.

We see the launch of *Coartem* Dispersible as a solution to save the lives of our children, Dr. Chizema-Kawesha said. You can imagine the agony of a mother or health worker trying to crush the regular tablet to treat a child with malaria. The new *Coartem* Dispersible tablet is easily dispersed in water and provides more time for health workers to do other things once the child has been able to swallow the medicine, she added.

I m sure that if we gave an opportunity to our children to be on therapeutic committees, they would opt for a medicine that is sweet tasting and easy to swallow.

Following approval by Switzerland s regulatory agency, Swissmedic, *Coartem* Dispersible has received marketing authorization in 25 countries, and the new formulation accounted for 49% of *Coartem* treatments delivered for children since launch. In January 2010, Novartis began deliveries to Nigeria, which purchased 13 million *Coartem* Dispersible treatments in the biggest order received for the new formulation to date.

VISIONARY LEADERSHIP IN MALI

The launch of *Coartem* Dispersible underscores the contribution of another small but visionary African village in the battle against malaria. Kolle is a dusty farming village with roughly 2 500 residents located about 60 kilometers southwest of Bamako, the capital of Mali.

During early months of the year, fields surrounding the village are baked by temperatures that frequently exceed 40 degrees Celsius. With the onset of the rainy season in June and July, however, those same fields become breeding grounds for mosquitoes spreading the deadly Plasmodium falciparum form of malaria.

Endemic village malaria is the leading cause of morbidity and mortality in Mali. On average, each of the 2 million children under age 5 undergoes two episodes of malaria per year. In Kolle, three or four yearly episodes aren t unusual.

As in most traditional Malian villages, a council of elders provides local leadership. In a visionary decision, elders in Kolle consented to construction of a local health clinic, one of only a dozen nationwide, and then vigorously promoted participation of residents in clinical studies.

In 2006, children in Kolle took part in a multinational study comparing *Coartem* Dispersible with conventional *Coartem* tablets. During the clinical study, each child with malaria appearing at the health center was randomly assigned treatment with either regular *Coartem* tablets or the new dispersible formulation. All children remained at the center for three days of treatment, and then returned for follow-up clinical and blood tests coordinated by Hamma Maiga, M.D., part of a team of physicians and technicians from the Malaria Research and Training Center (MRTC) at the University of Bamako, led by Issaka Sagara, M.D. MRTC staff were present in Kolle for the duration of the study and Dr. Sagara emphasized, Support from the elders and parents who brought their children back to the health center for follow-up visits was critical.

During a visit to Kolle last year, Silvio Gabriel, Executive Vice President and Head of Malaria Initiatives at Novartis, praised the foresight of the elders that has placed the village on the world map of malaria research. Kolle was the best center we had in Africa in terms of speed of recruitment and quality of data in our study, Mr. Gabriel added. The

Table of Contents

NOVARTIS ACCESS-TO-MEDICINE PROJECTS 2009

Project	Objective	Target region	Value (USD millions)	Patients
Malaria/WHO (1)	Provide *Coartem* at cost for public sector use	Africa, Asia, Latin America	299	75 000 000
Leprosy/WHO (2)	Eliminate leprosy by providing free medications to all patients worldwide with WHO	Global	5	282 000
Tuberculosis (2)	Donation of fixed-dose combinations	Tanzania	2	73 000
Fasciolasis (3)	Providing free of charge *Egaten* to treat patients that are infected with Fascioliasis	Bolivia, Peru, Yemen	0.3	387 000
Novartis Foundation for Sustainable Development (NFSD) (4),(5)	Improve health and quality of life of poor people in developing countries through think tank, policy and project work	Developing countries	9	3 628 000
Novartis Institute for Tropical Diseases (NITD) (4)	Discover novel treatments and prevention methods for major tropical diseases; NITD discoveries to be available in poor endemic countries without profit	Developing countries	14	
Novartis Vaccines Institute for Global Health (NVGH) (4)	To develop effective and affordable vaccines for neglected infectious diseases of developing countries	Developing countries	5	
US patient assistance program (PAP) (2) (excl. *Gleevec*)	Assistance to patients experiencing financial hardship, without third-party insurance coverage for their medicines	United States	136	100 000
Gleevec US PAP (2)	Within capability of Novartis, continue to ensure access for patients in the US who cannot afford the drug	United States	96	5 000
Glivec Global PAP/ *Tasigna* Global PAP (2),(6),(7)	Within capability of Novartis, continue to ensure access for patients outside the US who cannot afford the drug	Global (excluding US)	912	33 000
Together Rx Access	Discount program for the uninsured	United States	0.3	5 000
Emergency relief & other product donations	Support to humanitarian organizations	Global	32	
Total			**1 510**	**79.5 million**

(1) During 2009, 75 million *Coartem* treatments reached patients based on a preliminary analysis of local distribution. Of these, 33.9 million treatments came from shipments completed in 2008, and 41.1 million from the total shipment of 84 million completed in 2009. The value of the *Coartem* program in 2009 was calculated using the number of treatments shipped in 2009 and the ex-factory price of *Coartem* to private-sector purchasers in malaria-endemic developing countries, minus payments to Novartis to cover costs under terms of the public-private partnership with the WHO. These payments were received through the WHO, UNICEF and other procurement agencies, acting on behalf of governments and other public sector institutions in developing countries eligible to receive *Coartem* at the not-for-profit price.

(2) Ex-factory price to private market

(3) Manufacturing costs

(4) Novartis operating costs

(5) Patients reached include beneficiaries of NFSD healthcare-related services such as patients, healthcare professionals and students

(6) Value and number of patients reached include donations under shared contribution and co-pay models

(7) US *Tasigna* donations are included in US patient assistance program

Table of Contents

225 children from Kolle enrolled in the study represented about 25% of total participants.

The study, published last year in the prestigious British medical journal Lancet, showed that *Coartem* Dispersible provides a high cure rate of 97.8%, comparable to the 98.5% cure rate of conventional *Coartem* tablets. Investigators also reported that the new *Coartem* formulation had a favorable safety profile.

PATIENT IMPACT

The declining number of malaria cases in countries with successful control programs has prompted another change in policy: widespread use of rapid diagnostic tests to confirm a diagnosis of malaria prior to treatment of adults. Because infants and young children are exceptionally vulnerable to malaria, physicians still treat virtually all cases of fever in children under the age of 5 pre-emptively, with antimalarial drugs.

But in a study in two health districts in Ethiopia with a combined population of 200 000 people, only 10% of preliminary diagnoses of malaria in adults were confirmed by use of rapid diagnostic tests. Indeed, with almost 90% of initial diagnoses actually proving negative, use of rapid diagnostic tests more than covered their cost in the study by reducing waste in terms of inappropriate use of *Coartem*. The major finding here is that use of rapid diagnostic tests pays, said Gebre Ab Barnabas, M.D., Head of the Health Bureau in Tigray, Ethiopia s northernmost region.

With effective treatment now readily available in most urban centers, leading countries are turning their attention to improving access to effective treatment in remote rural areas. Because of the limited number of healthcare professionals, community health workers are spearheading improved access to malaria treatment in rural areas.

We decided that before deploying diagnostic tests and ACTs, it was important to provide training, and determine whether community health workers could make a correct diagnosis of malaria and then treat patients correctly, Dr. Chizema-Kaweshi said. Results of pilot studies in 14 of Zambia s 72 health districts have been positive. and use of diagnostic tests by community health workers was expanded to 28 districts by the end of 2009.

LEPROSY: A TRAVELING CLINIC IN BRAZIL

Since 2000, Novartis has provided free treatment for all leprosy patients worldwide in a collaboration with the WHO. Novartis is taking that commitment a step further in Brazil, one of the few countries globally that hasn t yet achieved the WHO s leprosy elimination target.

With an estimated 40 000 new cases of leprosy reported annually in Brazil, the challenge is to further increase diagnosis so that patients with leprosy can receive treatment, said Alexander Triebnigg, Head of the Novartis Country Organization in Brazil. Today, up to 8% of all new leprosy cases are children under the age of 15.

In partnership with Morhan, a nongovernmental organization dedicated to the elimination of leprosy, Novartis has financed a mobile leprosy clinic and laboratory that will travel to regions where the disease is still prevalent, particularly poor areas in Northern Brazil. Doctors and nurses will be provided by local branches of Brazil s Unified Health System (SUS, the national health service) under an agreement reached with the National Association of Municipal Health Secretariats and local governments hosting the mobile clinic.

We announce and promote the arrival of the mobile leprosy unit in small and medium cities, as well as remote towns, Mr. Triebnigg added. The aim is to increase awareness so that people across all age groups with possible symptoms can see a doctor and, if diagnosed, receive immediate treatment.

COMBATING INFECTIOUS DIARRHEA

Novartis has established not-for-profit research institutes focusing on discovery and development of medicines and vaccines against neglected diseases that take a heavy toll in developing countries. Yet scientists in mainstream commercial research also help address these diseases sometimes. A research program targeting cystic fibrosis, one of the most common genetic diseases among people of European descent, alerted scientists at the Novartis Institutes for BioMedical Research (NIBR) to a potential application in secretory diarrhea, a scientifically related disorder of even greater unmet medical need.

Cystic fibrosis is caused by mutations that cripple the function of an ion channel known as CFTR that also plays a key role in controlling intestinal secretions, including severe diarrhea induced by the cholera toxin and other pathogens. In 2007, NIBR initiated a research program aiming to discover treatments for infectious diarrhea.

Last year, NIBR established a collaboration and licensing agreement with the Institute for One World Health, a nonprofit company based in the United States. Under the pact, NIBR will deliver a development compound to the Institute for One World Health that will conduct clinical trials and, if successful, distribute the new medicine in developing countries.

We are committed to reducing morbidity and mortality from infectious diarrhea, said Mark C. Fishman, M.D., President of NIBR and member of the Executive Committee of Novartis. More children die of these disorders than malaria, tuberculosis and AIDS combined.

Table of Contents

COMMITMENT TO PATIENTS: TARGETS AND RESULTS FOR 2009 AND TARGETS FOR 2010

STAKEHOLDER ENGAGEMENT

Targets 2009	Results 2009	Targets 2010
Continue to embed patient advocates as partners in advising on drug development and launch plans. Further collaborate on projects with major international patient groups to help raise awareness on burden of disease and patient needs. Continue involvement of Novartis in civil society debate on critical topics with relevant stakeholders.	Reflecting ongoing R&D programs targeting polycystic kidney disease, Novartis convened global meeting of patient groups to define needs in preparation for clinical studies. Worked with diabetes patient groups in national meetings, aiming to improve patient care. Piloted Corporate Citizenship communications with EU institutions, NGOs, patients and healthcare professionals.	Further develop links with patient groups in strategic disease areas for Novartis (MS, COPD). Support efforts by patient advocates to define disease burden and help improve treatment outcomes. Expand Corporate Citizenship dialogue with stakeholders.

ACCESS TO MEDICINE

Targets 2009	Results 2009	Targets 2010
Launch pediatric dispersible formulation of *Coartem.* Pursue efficient production of *Coartem* with uninterrupted supply. Collect data on the experience of using the new pediatric dispersible formulation of *Coartem* in endemic countries. Expand the Indian pilot of Arogya Parivar business model, that provides health education and makes quality medicines accessible and affordable to underserved rural regions.	By the end of 2009, 300 million *Coartem* treatments had been delivered, saving an estimated 750 000 lives. New pediatric formulation, *Coartem* Dispersible, now approved in 25 malaria-endemic developing countries, with deliveries to 18 countries during 2009. According to customer feedback, *Coartem* Dispersible is the pediatric formulation of artemether/lumefantrine preferred by mothers and caregivers. *Coartem* is the first artemisinin-based combination therapy approved by the US Food and Drug Administration. Arogya Parivar expanded to increase accessibility of health education, and products, for 32 million predominantly underprivileged people in India.	Continue rollout of *Coartem* Dispersible. Complete first deliveries of *Coartem* and *Coartem* Dispersible under phase one of the Affordable Medicines Facility for malaria meant to serve underpriviliged malaria patients. Extend reach of Arogya Parivar in India to 50 million people and initiate similar programs in China and sub-Saharan Africa.

NOVARTIS INSTITUTE FOR TROPICAL DISEASES

Targets 2009	Results 2009	Targets 2010
Translate preclinical study findings in dengue fever, tuberculosis and malaria into strategic clinical development programs.	Dengue research progressed with series of preclinical compounds tested in vivo. Tuberculosis research, in collaboration with	Continue progression of dengue and malaria development candidates and selection of drug candidates active against multi-drug

Continue expansion of pipeline in all three disease areas. Maintain dynamic teaching and training activities, as well as significant scientific international presence in tropical disease research and development.	Grand Challenge 11, led to identification of candidate compounds against anaerobic bacteria. NITD hosted more than 30 students during 2009.	resistant and extensively drug-resistant tuberculosis bacterial strains.

NOVARTIS VACCINES INSTITUTE FOR GLOBAL HEALTH

Targets 2009	Results 2009	Targets 2010
First vaccine (a conjugate for typhoid fever) enters pilot-scale GMP (good manufacturing practices) production. Prepare start of clinical trials in 2010. Develop process for pilot-scale GMP production in 2010 for vaccines for paratyphoid in Asia and non-typhoid Salmonella in Africa.	Plans in place to begin clinical trials of typhoid vaccine. Manufacturing process established and clinical grade material available. Manufacturing methods also demonstrated on laboratory scale for additional vaccines against paratyphoid fever, nontyphoid Salmonella and Shigella.	Start Phase I and Phase II of typhoid vaccine trials in Europe and India. Launch pilot scale manufacture of the paratyphoid vaccine. Develop pilot scale process for nontyphoid Salmonella and Shigella vaccines.

Table of Contents

Table of Contents

Table of Contents

COMMITMENT TO PEOPLE AND COMMUNITIES

The broad portfolio of healthcare businesses at Novartis offers ample opportunities to foster strong employee engagement. During 2009, almost 300 Novartis associates from other divisions volunteered for temporary assignments with the Vaccines and Diagnostics Division to support production of pandemic influenza vaccines. It s the latest example from Novartis operations around the world showing that enhanced employee engagement can translate into improved productivity, profitability and customer focus.

Maurizio Spatano is a supervisor with more than two decades of experience in Chemical Operations at the Novartis Pharmaceuticals Division.

During 2009, he moved from a position at the new development and manufacturing plant in Changsu, China, to a special cross-divisional assignment in Marburg, Germany, to support production of a novel Novartis vaccine against pandemic influenza. As a shift supervisor, he was tasked to lead a team of eight associates and help bring a new production line on stream. Although he had never been to Marburg before agreeing to the six-month assignment, Mr. Spatano said he jumped at the chance to join such a special project and help literally millions of people depending on the Novartis vaccine to protect their health.

Meanwhile, Brad Booth relocated to pandemic vaccine production in Liverpool, England, from the Broomfield, Colorado, manufacturing site of Sandoz, the generics division of Novartis. In Liverpool, Mr. Booth serves as a microbiology compliance officer a prize catch because potential recruits with experience in either microbiology or quality assurance have been in particular demand.

What we are trying to do in this project is awe-inspiring, he said. There is a global spotlight on us, and everyone has had to take a lot on themselves to make it happen. But I feel that Novartis has put a lot of faith in me, and it s exciting to be here.

In a striking example of employee engagement, almost 300 Novartis associates including some retirees are shoring up pandemic vaccine programs in Marburg and Liverpool. Human Resource teams at both sites with support from corporate headquarters in Switzerland - worked overtime conducting interviews, securing work permits for assignees, arranging accommodation, and even designing shuttle-bus services for associates working late shifts.

The Liverpool site accelerated commissioning of a new vaccine factory and extended production at an aging plant scheduled for closure. Parallel production at the old and new plants means that we had to import almost a complete separate work force, said Liverpool s site head John Sullivan.

External hires account for about two-thirds of the reinforcements, but about 70 Novartis associates have moved to Liverpool from other sites in the United Kingdom and Ireland - as well as Romania, India, Canada and the United States.

Marburg has borrowed experienced Novartis associates from German sites operated by the Pharmaceuticals Division, as well as Sandoz. Other Novartis divisions have done a great job of stepping in and supporting us, said Matthew Stober, Global Head Technical Operations at the Vaccines and Diagnostics Division. (See Vaccines and Diagnostics story, page 40.)

Table of Contents

GLOBAL EMPLOYEE SURVEY

It is easy to understand why associates would respond to the challenge of a public health emergency like pandemic influenza. But fostering employee engagement is a critical competitive factor for a global enterprise like Novartis.

Academic research defines engagement as high enjoyment and motivation when employees feel empowerment, the ability to make a meaningful contribution through their work and opportunities for personal growth. Importantly, research has established that a high level of employee engagement can enhance profitability of an enterprise. Moreover, high levels of engagement are closely linked with increased employee retention, productivity and customer focus.

In 2009, Novartis completed its first-ever Global Employee Survey across the entire organization. The Global Employee Survey aimed to understand what drives engagement for associates at Novartis. The response rate was a stellar 90%, signaling a high level of involvement as well as a broad-based commitment to making Novartis an even stronger company.

The survey pointed out several areas in which Novartis excelled. Associates showed a high level of recognition of the company s values, with 88% of respondents declaring they fully support the values for which the organization stands. In addition, 79% of respondents gave Novartis positive scores for integrity and social responsibility; 87% of associates indicated they were willing to go beyond what is required to help Novartis succeed; and 81% said their Novartis manager encourages associates to come up with new and different ways of doing things. Each of these scores ranked above the Global Pharmaceutical Companies Index, an industry benchmark.

At the same time, Novartis associates highlighted several areas where there is room for improvement. To improve understanding of employee engagement, divisions, units and departments analyzed more than 3 500 result reports to understand their engagement picture. These reports were used to communicate and discuss results, and to identify priority areas. In turn, each division and unit formulated and implemented action plans to improve engagement, retention and overall performance based on their own results.

The survey has not only been an important tool to better understand what engages employees, but also to assess strategic and managerial implications for the company. Most companies spend only a fraction of the effort to understand the views of their employees compared with those of their customers. The survey has provided Novartis with input from associates around the world, better enabling the company to respond successfully to changing commercial models, new ways of working, and sharper focus on innovation and customers.

CAREER DEVELOPMENT

The healthcare industry offers opportunities for associates to combine professional advancement, with a positive impact on society and human health.

That s particularly true of emerging markets that are expected to be a driving force in future growth at Novartis. Recruiting local executives with the international experience, language and other skills needed to work successfully in a global company has become increasingly competitive. However the global organization and diverse portfolio of healthcare businesses at Novartis provide opportunities to gain broad experience, paving the way to rapid career development.

For China and Russia, two highly dynamic markets, special retention programs have been put in place, leading to significant decreases in employee turnover. The Beijing International MBA program and the Novartis Business Academy program in Russia were expanded in 2009 to become the

ASSOCIATES BY REGION AND DIVISION AS OF DECEMBER 31 (1)

	United States		Canada and Latin America		Europe		Asia/Africa/ Australasia		Total	
	2009	**2008**	**2009**	**2008**	**2009**	**2008**	**2009**	**2008**	**2009**	**2008**
Pharmaceuticals	13 504	13 546	4 351	4 391	25 073	24 044	13 382	11 651	56 310	53 632
Vaccines and Diagnostics	1 322	1 018	64	8	3 792	3 578	238	170	5 416	4 774
Sandoz	1 222	1 161	2 597	2 594	15 286	15 021	4 318	4 370	23 423	23 146
Consumer Health	3 687	3 812	1 423	1 447	4 735	4 651	2 694	3 104	12 539	13 014
Corporate Research & Shared Services	677	681	22	24	564	568	159	154	1 422	1 427
Corporate	113	111	20	23	544	527	47	63	724	724
Total	**20 525**	**20 329**	**8 477**	**8 487**	**49 994**	**48 389**	**20 838**	**19 512**	**99 834**	**96 717**

(1) Full-time equivalent positions

Table of Contents

Novartis corporate universities in China and Russia, respectively. Increased investment in the programs is expected to further enhance the personal and career development of associates, as well as to improve engagement and retention.

DIVERSITY AND INCLUSION

Established by Novartis in 2006, the Diversity and Inclusion Advisory Council (DIAC) includes 11 academics, business leaders, consultants and journalists who help identify challenges, barriers and opportunities that the various businesses face toward the advancement of diversity and inclusion at Novartis. All Novartis divisions have appointed their own Diversity and Inclusion leaders; defined a strategy to support a well-defined business case; and introduced metrics to measure progress over time.

DIAC member Vinita Bali, Managing Director of Kolkata, India-based Britannia Industries Ltd., told Novartis associates last year that major progress had been achieved. She emphasized that the Diversity and Inclusion initiative is a business imperative that will provide differentiation and competitive advantage for Novartis.

Ms. Bali also cited major market initiatives where diversity and inclusion is a key part of divisions segmentation strategy as well as their go-to-market strategy. This is an important area and one in which the DIAC will continue to work with the divisions and the functions to add value.

DIVERSE AND INNOVATIVE

A diverse organization is more likely to be a creative one. Healthcare offers a unique platform to attract new associates from geographies where Novartis has a growing presence. And by forging closer links with local communities and patients, Novartis can better focus research on areas of unmet medical need.

One example is Julia Hatto, a chemist at a Novartis research site in Horsham, England, who was awarded the 2009 Inspiration and Industry Award by the UK s Royal Society of Chemistry. Ms. Hatto was recognized for a series of initiatives that helped build strong partnerships with primary and secondary schools in England and have given hundreds of students hands-on experience with chemistry and principles of science.

At the Novartis Institutes for BioMedical Research (NIBR), selection of research projects takes into account major trends in demographics and disease as well as scientific rationale. I think we should be treating the whole world, said Mark C. Fishman, M.D., President of NIBR and member of the Executive Committee of Novartis. Looking ahead to 2050, population growth will come in Africa and Asia but flatten in Europe and North America. In the beginning of the 20th century, Europe was 25% of the world s population. By 2050, it will be 7%.

In 2006, NIBR established the China Novartis Institutes for BioMedical Research (CNIBR), a new research and development center in Shanghai. The center provides an opportunity to recruit among a wave of outstanding scientists who trained in Europe or the United States but now have a strong desire to return home to China. In November 2009, Novartis announced plans to invest USD 1 billion over the next five years to step up research and development activities in China, and significantly expand CNIBR. The Shanghai institute is expected to become the largest comprehensive research and development center in China with a staff of about 1 000 people, an increase from 160 people today. We see an opportunity to network with local academic institutions to expand our intellectual base in China beyond what we could bring in ourselves, Dr. Fishman said.

Scientists in the Shanghai center are focusing on disorders that affect predominantly the Chinese, and more broadly, the Asian population. Liver cancer, for example, is a common complication of infection by the hepatitis B virus. About half the estimated 500 million people worldwide chronically infected with hepatitis B live in China, where the virus kills more than 300 000 each year. We want to focus on liver cancer, while also building broad expertise about other forms of liver disease that we plan to work with in the future, said En Li, Head of the Shanghai research center.

While its worldwide staff includes scientists from almost 50 countries, NIBR is stepping up activities aimed to recruit qualified women and members of minority groups at its global headquarters in Cambridge, Massachusetts, and other sites around the world. A fellowship program established in recent years helped to double the number of women chemists, and a global diversity council has been established including NIBR scientists as well as representatives from staff functions - to promote similar initiatives.

Table of Contents

Table of Contents

COMMITMENT TO PEOPLE AND COMMUNITIES: TARGETS AND RESULTS FOR 2009 AND TARGETS FOR 2010

LIVING WAGES

Targets 2009	Results 2009	Targets 2010
Continue using established processes to update living wage levels annually and adjust salaries of associates that are below those levels.	For the first time since the program began, no salaries were found below living wage levels (2005: 93, 2006: 21, 2007: 11, 2008: 3).	Continue to update living wage levels annually and adjust salaries of associates that are below those levels.

GLOBAL EMPLOYEE SURVEY

Targets 2009	Results 2009	Targets 2010
Administer the Novartis Global Employee Survey in March 2009. Communicate findings to associates and implement follow-up actions.	Response rate of 90% was achieved; 87% of Novartis associates said they are willing to work beyond what is required to help the company succeed, and 88% said they fully support Novartis values. Results of survey have been communicated to all associates and follow-on analysis and actions are planned.	Continue implementation of Group-wide, division and local follow-on actions to further improve employee engagement and retention.

DIVERSITY AND INCLUSION

Targets 2009	Results 2009	Targets 2010
Leverage Diversity and Inclusion (D&I) initiative to enhance marketing effectiveness, improve integration of diversity and inclusion in talent development, and improve training programs on diversity and inclusion. Further implement employee resource groups; diversity-specific mentoring programs; and awareness training programs. Establish training for fair and objective recruitment.	Created Group-wide D&I vision, focusing on culture, talent and markets. Developed global Employee Resource Group guideline to support divisions and units. Launched formal D&I Leadership Network to foster strategies and action plans. Continued implementation of mentoring and development program. Further challenge and guidance from Diversity and Inclusion Advisory Council for senior Novartis leadership on D&I strategy and results.	Create divisional D&I action plans based on Global Employee Survey results. Establish Group and divisional D&I goals. Establish Inclusive Leadership metrics linked to the Performance Management process. Develop internal and external staffing strategies to further improve diversity.

LOST-TIME INJURY AND ILLNESS RATE (LTIR)

Targets 2009	Results 2009	Targets 2010
Reduce LTIR to 0.31.	0.22	Reduce LTIR to 0.20.

TOTAL RECORDABLE CASE RATE (TRCR)

Targets 2009	Results 2009	Targets 2010
Improvement of 10% by end of 2009, based on 2008 data.	0.94	Annual improvement of 10% while ensuring uniform measurement across the Group.

Table of Contents

Table of Contents

COMMITMENT TO THE ENVIRONMENT

Novartis seeks to reduce energy consumption by improving efficiency of energy use in existing operations, adopting renewable energy sources where economically attractive and undertaking carbon offset projects to complement internal initiatives. In 2009, solar energy systems achieved major gains.

In 2005, Novartis voluntarily committed to the Kyoto protocol, the international agreement that sets binding targets for reducing greenhouse gas emissions.

For an expanding company like Novartis, cutting carbon emissions is a challenge, especially because healthcare is not an energy-intensive industry. Nevertheless, Novartis is on track to achieve its 2012 target of reducing greenhouse gas emissions by 5% against 1990 levels. This is equivalent to a reduction of about 25% of the Group s actual greenhouse gas emissions.

We have a dual strategy for reducing energy consumption, said Keith Saveal, Head Corporate Health, Safety, Environment and Business Continuity Management. The primary focus is to improve the efficiency of energy used in existing operations and to adopt renewable energy sources wherever it makes economic sense to do so. The second track is to undertake carbon offset projects to complement internal initiatives to reduce greenhouse gas emissions.

Today Novartis is generating renewable energy from locally available biofuels at a number of sites, a result of initiatives implemented in recent years. At a production facility in Mahad, India, boilers used to generate steam are powered by bagasse, fibrous waste remaining after sugar cane stalks are crushed to extract their juice. Installation of the bagasse-fired boilers, replacing earlier generation equipment that consumed fuel oil, also enabled the Mahad site to eliminate emissions of sulfur dioxide that represented one-sixth of the Group s total annual emissions of the gas when it was installed in 2003.

In Wehr, Germany, a boiler providing plant steam supply was converted from natural gas to a sustainable supply of wood chips readily available from the nearby Black Forest. Using locally available wood chips today provides 70% of Wehr s fuel needs and has increased Group-wide use of renewable energy from biomass by 50%. Use of wood chips is expected to eliminate 3 400 tons of carbon dioxide emissions per year by the Wehr site, which represents about 1% of all on-site Scope 1 greenhouse gas emissions at Novartis.(1) Moreover, by using wood chips, the Wehr site can benefit from more stable energy prices in the future.

SOLAR POWER SYSTEMS

Solar energy systems have been installed at five Novartis sites to date, ranging from the US headquarters of the Pharmaceuticals Division in East Hanover, New Jersey, to CIBA Vision s main European production facility in Grosswallstadt, Germany, and the Vaccines and Diagnostics Division s site in Rosia, Italy.

(1) For definitions of Scope 1 and Scope 2, see The Reporting Process on page 86.

Table of Contents

Group-wide solar electricity capacity was tripled in 2009 by the biggest single solar installation at Novartis to date, a 1-megawatt solar power system at the Pharmaceuticals Division facility in Vacaville, California. The Vacaville system began generating power in September.

In addition to supplying 20% of the site s electricity needs, the solar energy system is expected to reduce greenhouse gas emissions by 1 400 metric tons of carbon dioxide per year. The site also expects to save more than USD 200 000 a year in electricity costs and collect annual rebates of USD 450 000 during the first five years of operations.

The Vacaville project reflects the importance of tailoring renewable energy solutions to local conditions. Vacaville has 25% more sunny days per year than the national average for the United States, according to Diane Johnson, Head of Engineering at the Vacaville site. We have a lot of very sunny, cloudless days, which make Vacaville a prime location for solar, Ms. Johnson added.

Since 2004, the annual Novartis Energy Excellence Awards have recognized projects delivering substantial energy savings and reductions of greenhouse gas emissions. The 250 projects submitted for the Energy Excellence Awards program are forecast to save USD 80 million in energy costs and reduce carbon dioxide emissions by more than 300 000 tons per year. Projects submitted for the awards in 2009 alone are expected to provide cost savings of USD 24.5 million.

The Vacaville solar power system earned honorable mention in 2006 and won a 2009 Energy Excellence Award, underscoring the enterprise as well as the tenacity of local champions of the project. The Vacaville system isn t a project with an attractive payback, Mr. Saveal said. It required value engineering and tenacity to get the project to pay back within its lifetime, and gain formal management approval.

FERMENTING IDEAS

Vacaville is a microbial bulk fermentation facility, one of the pharmaceutical industry s most energy-intensive manufacturing processes. Electricity was one of the biggest items in the site s annual operating budget, and Matthew Mitchell, Vacaville s Facility Supervisor, was an early proponent of tapping solar power to save costs.

In 2006, when Mr. Mitchell and Todd Johnson, Utility Engineer for the Vacaville Site, submitted the solar project for the Energy Excellence Awards, their objective was unorthodox. We weren t looking for recognition; we hoped the Energy Excellence Awards could help us get our project approved, Mr. Mitchell said. Securing honorable mention in the contest was an important step toward ultimate success of the project.

In 2007, Mr. Saveal met with Vacaville Site Head Rob Carter and together they developed a strategy to make the dream of a solar power system reality. Ms. Johnson took the lead in implementing that strategy but there were significant hurdles. A lot of companies install solar panels on roofs, but with a limited number of buildings at the Vacaville site, we knew we couldn t get anywhere near the energy capacity needed, Mr. Mitchell recalled.

Early proposals failed to justify the high capital costs but prospects brightened in 2008. Improvements in solar panel efficiencies - combined with renewal of financial incentives for solar energy in the US government s economic stimulus package - allowed the Vacaville team to create a more viable proposal. Potential rebates from the California Solar Initiative complemented benefits of federal tax credits in the revised project plan and, coupled with savings on electricity costs for the site and environmental benefits, tipped the balance in favor of the USD 7 million investment.

Due to the timing of the decision, however, the team faced further challenges. We were

Table of Contents

racing to meet a rebate expiration deadline, which forced us to come up with an innovative way to install the solar panels, said Jaime Romo, Project Manager for the solar power system. Ultimately the project was finished almost a month ahead of schedule.

Vacaville s solar power system comprises more than 4 000 photovoltaic panels covering about 20 000 square meters. A tracking system keeps the panels optimally aligned to the sun throughout the day to maximize power generation. As summer temperatures in Vacaville routinely exceed 35 degrees Celsius, the site has its highest energy demand for cooling at midday, the same time the solar array is generating at maximum capacity.

Before going solar we normally had our peak power draw from the grid around noon during the summer, Ms. Johnson said. But since we turned our solar system on, midday has become the lowest point in our power usage.

CARBON-FREE CAMPUS

Novartis is relying exclusively on renewable energy in the transformation of its corporate headquarters with more than 10 000 associates in Basel, Switzerland, to a carbon-free campus. Each new office building on the redeveloped St. Johann campus uses only about a third of the energy required by average office buildings. Renewable energy sources will be used: 80 kilowatts of solar panels have been installed on the new Human Resources building designed by Canadian architect Frank Gehry.

Heating for new campus buildings is derived from waste burned in an incineration plant from which Novartis will purchase carbon dioxide-free steam. The Rhine River, which flows past the campus, will be the primary energy source for cooling campus buildings.

Cooling water from the Rhine is distributed through a closed circulation system and ultimately channeled back into the river. The net effect will be a minimal difference in water temperature returned to the Rhine.

Ground water or Rhine water also is being used for cooling processes at other sites. The new Novartis data center located at the production site in Stein, Switzerland, 30 kilometers from Basel, is cooled with ground water of about 12 degrees Celsius.

Whether it is a forest, waste sugar cane or solar power, we look for sustainable solutions based on renewable resources that are available locally, Mr. Saveal said. Using water from the Rhine to cool buildings is one of the big steps for renewable energy in the campus project.

SEQUESTERING CARBON DIOXIDE

Carbon offset projects also are needed to enable Novartis to reach its voluntary Kyoto target for reduced on-site greenhouse gas emissions. As the Group has expanded its operations, annual greenhouse gas emissions have risen to about 25% above the 1990 baseline. From the current level, emissions must decline by about 100 000 tons of carbon dioxide equivalent to meet the benchmark level set by the Kyoto protocol. While on-site emissions at Novartis have declined slightly since 2006, carbon offsetting will provide further help toward achieving the target.

The first Novartis carbon offset project involves creation of a new natural forest on a 34-square-kilometer parcel of former grazing land in northeastern Argentina. The project already has resulted in the planting of about 3 million trees. Through the project, Novartis will collect an estimated 125 000 tons of carbon dioxide equivalent from 2007 to 2012, and up to 3 million tons by 2040. A wood products business based on environmentally sound forest management practices will enable the forest to serve as a sustainable carbon sink while creating jobs and bolstering the local economy.

Carbon sequestration, the uptake of carbon dioxide by trees as they grow and mature, is a cost-efficient and environmentally benign alternative to many emission-reduction measures. Novartis is one of a handful of organizations - and the first healthcare company - to undertake establishment of a new forest as a project eligible for certification by the Clean Development Mechanism, a scheme initiated by the United Nations agency overseeing the Kyoto protocol.

The Novartis project in Argentina received Forest Stewardship Council certification in 2008, the most recognized label for wood products that confirms compliance with standards of sustainable forestry. Approval of the new forest project by the government of Argentina and qualification by the required independent validator are progressing. Both steps must be finalized before the project can be submitted to the United Nations for accreditation.

Novartis has initiated a second carbon offset project in the West African republic of Mali, consisting of the plantation of jatropha bushes and the transformation of their fruits into a renewable biofuel. Plantations have reached to more than 1 800 hectares, and first steps of biofuel generation are under way.

Table of Contents

NOVARTIS HEALTH, SAFETY AND ENVIRONMENT (HSE) DATA 2009

	Novartis Group (1)		Pharmaceuticals (excl. Research)		Novartis Research (2)		Vaccines and Diagnostics		Sandoz		Consumer Health	
	2009	**2008**	**2009**	**2008**	**2009**	**2008**	**2009**	**2008**	**2009**	**2008**	**2009**	**2008**
Employees												
HSE personnel (number of associates working at least 50% for HSE)	**467**	491	**200**	216	**24**	26	**34**	37	**157**	147	**50**	65
Health/Safety												
Lost-time injury and illness rate (LTIR) [per 200 000 hours worked]	**0.22**	0.34	**0.24**	0.37	**0.24**	0.26	**0.16**	0.51	**0.22**	0.41	**0.16**	0.15
Total Recordable Case Rate (TRCR) [per 200 000 hours worked]	**0.94**	1.09	**0.97**	1.20	**1.68**	1.38	**0.40**	1.52	**0.80**	0.99	**0.90**	0.71
Production												
Total production (1000t = metric tons)	**161**	164	**24**	28	**0**	0	**0.7**	0.3	**87**	84	**50**	51
Resources												
Contact Water use (million m3)	**15.0**	15.1	**4.3**	4.2	**0.4**	0.4	**1.0**	1.0	**7.8**	8.0	**1.6**	1.6
Energy use (million GJ)	**17.0**	16.8	**5.6**	5.6	**1.1**	1.0	**1.3**	1.2	**7.4**	7.4	**1.5**	1.5
Emissions into water												
Effluent discharge (million m3)	**15.0**	15.1	**3.9**	4.1	**0.4**	0.4	**1.1**	1.0	**7.7**	7.8	**2.0**	1.7
Chemical oxygen demand (COD) (1000t)	**3.3**	3.6	**0.3**	0.6	**0.0**	0.0	**0.0**	0.0	**2.8**	2.7	**0.2**	0.2
Emissions into air												
Sulfur dioxide SO2 (t)	**75**	64	**7**	6	**0**	0	**0**	0	**65**	57	**2**	1
Nitrogen oxide NO2 (t)	**290**	302	**110**	119	**8**	8	**25**	19	**127**	134	**20**	22
Volatile organic compounds (VOC) halogenated (t)	**211**	238	**4**	10	**10**	12	**0**	0	**197**	216	**0**	0
Volatile organic compounds (VOC) non-halogenated (t)	**1 529**	1 630	**236**	313	**33**	37	**2**	2	**1 161**	1 209	**97**	70
Emissions CO2/GHG												
Scope 1, Combustion and process (1000t)	**400**	404	**154**	157	**10**	11	**29**	29	**178**	179	**29**	27
Scope 1, Vehicles (1000t)	**177**	184	**129**	135	**0.2**	0.2	**3**	2	**27**	26	**14**	15
Scope 2, From purchased energy (1000t)	**916**	926	**220**	239	**76**	68	**83**	77	**390**	391	**146**	151
Waste												
Non-hazardous operational waste not recycled (1000t)	**53**	44	**8**	8	**2**	2	**29**	20	**9**	9	**6**	6
Hazardous operational waste not recycled (1000t)	**112**	122	**53**	58	**1**	1	**1**	1	**55**	59	**2**	2
Non-hazardous operational waste recycled (1000t)	**33**	31	**10**	10	**1**	1	**2**	2	**14**	12	**6**	6
Hazardous operational waste recycled (1000t)	**39**	30	**26**	21	**0**	0	**0**	0	**13**	9	**0**	0

(1) Novartis Group including Novartis International AG, which is not listed separately

(2) HSE data for Novartis Research includes NIBR and Corporate Research

THE REPORTING PROCESS

The HSE Data Management System and data collection process are key elements of Corporate Citizenship Management at Novartis. The data describes our major material flows across company boundaries and environmental impacts originating from our own operations (Scope 1), as well as greenhouse gas emissions (GHG) from the generation of purchased energy (Scope 2). We do not monitor environmental impacts from the manufacture and delivery of purchased goods and services, nor the use of resources and other related emissions for activities outside company boundaries (Scope 3), such as GHG emissions from transportation by third parties.

HSE data is collected and reviewed on a quarterly basis. The 2009 environmental and resource data published in the Annual Report and on our website are actual data for the period from January through September and best estimates for the period October through December, which will be updated with actual data in the first quarter of 2010. Significant deviations will be reported on our website and restated in next year s Annual Report. The Empoyees and Health/Safety data are actual from January through December 2009.

Table of Contents

Table of Contents

COMMITMENT TO THE ENVIRONMENT: TARGETS AND RESULTS FOR 2009 AND TARGETS FOR 2010

ENERGY-EFFICIENCY IMPROVEMENT

Targets 2009	Results 2009	Targets 2010
10% by end 2010, based on 2006 level.	16% improvement.	Final year of the four-year target to improve energy efficiency by 10% based on 2006.

CONTACT-WATER-EFFICIENCY IMPROVEMENT

Targets 2009	Results 2009	Targets 2010
10% by end 2010, based on 2005 level.	35% improvement.	Final year of the five-year target to improve water efficiency by 10% based on 2005.

VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS HALOGENATED

Targets 2009	Results 2009	Targets 2010
Decreased to 220 tons.	211 tons.	Decrease to 200 tons by 2010.

VOLATILE ORGANIC COMPOUNDS (VOC) NON-HALOGENATED

Targets 2009	Results 2009	Targets 2010
Decrease to 1 550 tons.	1 529 tons.	Decrease to 1 500 tons by 2010.

CO_2 FROM VEHICLES

Targets 2009	Results 2009	Targets 2010
Decrease 10% by end 2010, based on 2005 level.	12% improvement.	Final year of the five-year target to improve CO_2 emissions from vehicles by 10% based on 2005.

SCOPE 1 GHG EMISSIONS FROM OPERATIONS

Targets 2009	Results 2009	Targets 2010
Decrease 5% below 1990 level by 2008-2012.	400 kilotons.	Decrease 5% below 1990 level of 308 kilotons by 2012, including carbon offsetting.

HAZARDOUS WASTE EFFICIENCY IMPROVEMENT

Targets 2009	Results 2009	Targets 2010
Stabilize efficiency of hazardous waste not recycled by 2010, then improve by 10% on 2008 baseline by 2012.	11% improvement.	Stabilize efficiency of hazardous waste not recycled.

NON-HAZARDOUS WASTE EFFICIENCY IMPROVEMENT

Targets 2009	Results 2009	Targets 2010
Stabilize efficiency of non-hazardous waste not recycled	17% decrease in efficiency.	Stabilize efficiency of non-hazardous waste not recycled.

by 2010, then improve by 20% on
2008 baseline by 2012.

Table of Contents

Table of Contents

COMMITMENT TO ETHICAL BUSINESS CONDUCT

Dozens of Novartis associates have been subjected to an increasingly violent campaign of harassment and intimidation by animal rights extremists attempting to stop the use of animals in research. Animal experimentation, however, is a mandatory part of discovery and development of innovative medicines. Novartis abides by the highest standards of animal welfare - and ensures that the same high standards are maintained in Novartis-sponsored studies performed with external partners.

Over the past year, Novartis associates have been subjected to an increasingly violent campaign of harassment and intimidation by animal rights extremists using illegal and terroristic methods to pursue their objective of stopping the use of animals in research.

The incidents span several countries and have affected dozens of associates. Cars of associates in Switzerland and Germany have been damaged, incendiary devices have been placed under parked vehicles, and threatening slogans have been spray painted on homes. A fire was set at a sports club used by Novartis associates in Huningue, France, near corporate headquarters in Basel, Switzerland.

Extremists also burned a vacation home in Austria owned by Daniel Vasella, M.D., Chairman and Chief Executive Officer of Novartis. In a particularly repugnant incident, the graves of Dr. Vasella s family were desecrated and the urn containing the remains of Dr. Vasella s mother was stolen. Novartis is working closely with law enforcement authorities at the local, regional and national levels to investigate these crimes and bring those responsible to justice. Additional security measures have been implemented to protect the health and safety of associates.

The goal of the animal rights extremist movement is to stop all research using animals, said Andrew Jackson, Head of Corporate Security at Novartis. Their campaigns of harassment and intimidation target most research-based pharmaceutical companies, academic institutions and other industries perceived to have links to the animal research industry.

Animal experimentation, however, is a mandatory part of modern discovery and development of innovative medicines. Moreover, Novartis is required by law and regulation in countries around the world to conduct animal testing to confirm the efficacy and safety of medicines.

We do so with the utmost sensitivity, however, abiding by the highest standards of animal welfare and using the most advanced technology to reduce animal testing where possible, through alternative methods including testing in cells or computer modeling, said Paul Herrling, Ph.D., Head of Corporate Research at Novartis.

Requirements and responsibilities relating to animal welfare in Novartis-sponsored studies are outlined in the Novartis Animal Welfare Policy approved by the Executive Committee of Novartis in 2005. At the same time, a global Animal Welfare organization was established under the leadership of Dr. Herrling. About 40 Animal Welfare Officers who are deployed around the world also ensure that the same standards are maintained in Novartis-sponsored studies performed by external partners.

90

Table of Contents

MANDATORY AUDITS

Prior to initiation of any external study sponsored by Novartis, third parties must be audited for compliance with national and international regulations, and Novartis animal welfare standards. National regulations apply whenever they exceed Novartis standards.

Obligatory minimum standards established by Novartis go beyond current laws and regulations on animal experimentation in the United States. For example, Novartis policy applies the same high standards to vertebrate species such as rodents and birds that are exempted from current US legislation. In addition, a special committee has been established by Novartis to evaluate and oversee experiments involving non-human primates.

Since the audit requirements were adopted in 2005, Novartis Animal Welfare Officers have conducted about 250 audits of third parties, Dr. Herrling said. Third parties were rated excellent by Novartis in 5% to 10% of audits and good or acceptable in about 85% of audits - but animal welfare standards were found to be unacceptable at between 5% and 10% of third parties. When the audit rating is unacceptable, proposed studies are put on hold until remedial action plans are developed and implemented - or collaborations are discontinued. Cases of noncompliance are rare but they do occur, he added.

Often, third parties are initially skeptical about audit requirements from Novartis. But during the audit they often realize that we can actually help them and they take advantage of our knowledge, Dr. Herrling said.

In 2008, a contract research organization in Japan failed a Novartis audit because of substandard housing of dogs used in experiments. The result posed a dilemma because the firm was the only one offering the expertise needed to conduct a study requested by Japanese regulatory authorities. Despite the need for significant investments, the president of the Japanese firm agreed to upgrade standards for housing of dogs and actually traveled to Switzerland with members of his senior management team to study local standards. When Novartis Animal Welfare Officers conducted a follow-up inspection late last year, the Japanese firm had built an exact replica of Swiss-standard dog housing, and passed the audit with high marks.

In another example, a contract research organization in a region with minimal legal requirements for animal experimentation was audited by Novartis Animal Welfare Officers and asked to broaden the interaction with the aim of raising standards in laboratories as well as animal housing. By meeting Novartis standards, this firm secured a key quality reference it could use in contacts with other international pharmaceutical companies. It shows how we can also play an indirect role and help improve the lot of experimental animals by spreading the word, Dr. Herrling observed.

Having said that, Novartis is a big organization and we work with more than 600 partners. We do our best and we have developed one of the best animal welfare systems in the pharmaceutical industry - but it s not perfect, he added. There is always some likelihood that compliance problems can arise.

Parallel with internal company standards and international certification agencies, national governments also impose stringent regulations to ensure use of animals in experiments is absolutely necessary and that any suffering is reduced to an absolute minimum. Legislation is evolving continuously and the European Union is currently finalizing stringent new animal welfare guidelines expected to be introduced in 2010. The European guidelines set new standards in cage sizes as well as group housing of social animals. The new China Novartis Institutes for BioMedical Research (CNIBR) in Shanghai will conform to the new European guidelines.

In addition, China introduced animal welfare legislation for the first time in 2009. In some cases, such as the size of cages for mice and rats, China s standards are tougher than existing ones in the United States or Europe. On the other hand, rabbit cages under the new Chinese standards are smaller than existing rules in other major countries. At CNIBR, just as with all of the Novartis research centers, our goal is to adopt the same high standards for each species, Dr. Herrling said.

Table of Contents

COMMITMENT TO ETHICAL BUSINESS CONDUCT: TARGETS AND RESULTS FOR 2009 AND TARGETS FOR 2010(1)

MANAGEMENT FRAMEWORK

Targets 2009	Results 2009	Targets 2010
Implement new policies. Conduct regional work-shops to strengthen application of program.	Policies refined for senior management approval. Conducted three regional workshops with 70 participants and focus on managing key drivers of ethical business conduct, as well as promotional practices.	Strengthen organizational processes that foster key drivers of ethical business conduct. Improve responsible leadership skills through further integration of integrity into leadership training.

CODE OF CONDUCT

Targets 2009	Results 2009	Targets 2010
Update Code of Conduct to include additional key behavioral standards (examples: innovation, customer focus, diversity). Roll out new leadership training for all levels of management.	As part of the new policy framework, the Code of Conduct was further prepared for senior management approval. New leadership training programs developed, piloted and launched. Interactive, online training program for integrity management rolled out to multiple audiences.	Drive cross-divisional organizational development (develop career path for integrity managers, leadership, talent management). Strengthen cross-divisional organizational cooperation.

FAIR MARKETING PRACTICES

Targets 2009	Results 2009	Targets 2010
Review codes in all divisions for inclusion of non-promotional activities, where relevant.	Divisional promotional codes updated where relevant, and training conducted. Divisional Compliance Committee also established in Sandoz, Consumer Health, and Vaccines and Diagnostics.	Strengthen clearance and self-monitoring processes within divisions.

THIRD PARTY MANAGEMENT

Targets 2009	Results 2009	Targets 2010
Design and pilot local supplier information programs to foster social responsibility initiatives. Audit additional 150 third parties from high-risk countries.	Piloted a roundtable in India to better understand experiences of suppliers with CC5 compliance Conducted 156 supplier audits in 2009 in countries ranging from	Optimize current approach to third party management to improve quality and effectiveness by focusing on key risks in the supply chain.

		Argentina, Brazil and China to Colombia, India and Mexico.

ANIMAL WELFARE

Targets 2009	Results 2009	Targets 2010
Monitor the implementation of animal-welfare-related processes in new facilities (Shanghai, Tokyo, Siena). Promote best animal welfare practices in third-party facilities by auditing facilities in countries with weak laws and regulations, and continuously upgrade contractual study conditions to the highest standards. Organize an animal welfare forum to align the global animal welfare community. Create a 3Rs Award (Reduce, Refine, Replace) at Novartis.	Implementation monitored and nearly completed in Shanghai, Tokyo, and Siena. Third-party auditing included more than 70 audits, of which more than 20 in countries with weak laws and regulations. Four audited sites judged unacceptable for Novartis studies. Third parties coached on Novartis standards; quality of study protocols improved at several sites. Global Animal Welfare Forum was attended by about 50 participants. Highlight of the Forum: first Novartis 3Rs Award, recognizing projects at NIBR and Vaccines and Diagnostics Division.	Continuous risk assessment of internal animal experiments based on internal rules and Standard Operating Procedures (SOPs). Promote and monitor in-house animal welfare compliance. Continuous risk assessment of thirdparty providers based on Novartis Standards and SOPs. Promote best animal welfare practices at third parties. Continuous monitoring of animal welfare-related processes at Novartis facilities in Asia. Promote the 3Rs within Novartis and assign Novartis 3Rs Award.

(1) Product stewardship issues are referred to in the current Form 20-F on file with the US Securities and Exchange Commission.

Table of Contents

FURTHER INFORMATION

Topic	Website Information
OVERVIEW	
Corporate Citizenship at Novartis	http://www.novartis.com/corporatecitizenship http://www.corporatecitizenship.novartis.com
Perspectives on Key Issues	http://www.corporatecitizenship.novartis.com/perspectives-key-issues
UN Global Compact	http://www.corporatecitizenship.novartis.com/un-global-compact
Global Reporting Initiative (GRI)	http://www.corporatecitizenship.novartis.com/gri-report
COMMITTMENT TO PATIENTS	
Overview: Patient initiatives	http://www.corporatecitizenship.novartis.com/patients
Novartis Foundation for Sustainable Development (NFSD)	http://www.novartisfoundation.org
Novartis Insitute for Tropical Diseases (NITD)	http://www.nitd.novartis.com
Novartis Vaccines Institute for Global Health (NVGH)	http://www.nvgh.novartis.com
COMMITTMENT TO PEOPLE AND COMMUNITIES	
Diversity and Inclusion	http://www.corporatecitizenship.novartis.com/diversity-inclusion
COMMITTMENT TO ENVIRONMENT	
Overview: HSE performance	http://www.corporatecitizenship.novartis.com/environmental-care
COMMITTMENT TO ETHICAL BUSINESS CONDUCT	
Overview: Ethical business conduct	http://www.corporatecitizenship.novartis.com/business-conduct
Novartis Code of Conduct and Policy on Corporate Citizenship	http://www.corporatecitizenship.novartis.com/code-of-conduct

Table of Contents

Table of Contents

INDEPENDENT ASSURANCE REPORT ON THE NOVARTIS CORPORATE CITIZENSHIP REPORTING

To the Audit and Compliance Committee of Novartis AG, Basel (Novartis).

We have performed assurance procedures to provide limited assurance on the following aspects of the 2009 Corporate Citizenship (CC) reporting of Novartis.

SUBJECT MATTER

Data and information disclosed with the CC reporting of Novartis and its consolidated subsidiaries, for the business year ended December 31, 2009 on the following aspects:

- The management and reporting processes with respect to the CC reporting and CC key figures as well as the control environment in relation to the data aggregation of these key figures; and

- The CC key performance indicators on page 62, and the Novartis access-to- medicine projects 2009 figures on page 72 published in the Novartis Annual Report 2009 .

CRITERIA

- The CC Policy including the CC Guidelines and the Code of Conduct prepared by Novartis, the CC and the compliance annual reporting guidance; and

- The defined procedures, by which CC and Health, Safety and Environment (HSE) data is gathered, collated and aggregated internally.

RESPONSIBILITY AND METHODOLOGY

The accuracy and completeness of CC and HSE indicators are subject to inherent limitations given their nature and methods for determining, calculating and estimating such data. Our Assurance Report should therefore be read in connection with Novartis guidelines, definitions and

procedures on the reporting of its CC and HSE performance.

The Board of Directors of Novartis AG is responsible for both the subject matter and the criteria. Our responsibility is to provide a conclusion on the subject matter based on our assurance procedures in accordance with the International Standard on Assurance Engagements (ISAE) 3000.

MAIN ASSURANCE PROCEDURES

Our assurance procedures included the following work:

- **Evaluation of the application of Group guidelines:**

Reviewing the application of the Novartis internal CC reporting guidelines;

- **Site visits:**

Visiting the Pharmaceuticals and Sandoz global headquarters, selected country and business-unit headquarters in China, Ger-many, Poland, Russia, Switzerland, the United Kingdom and the United States and an external supplier in France. The selection was based on quantitative and qualitative criteria; Interviewing personnel responsible for internal reporting and data collection at the sites we visited and at the Group level;

- **Review of** the **documentation and analysis of relevant policies and basic principles:**

Reviewing the relevant documentation on a sample basis, including group CC policies, management and reporting structures and documentation;

- **Assessment of the processes and data consolidation:**

Reviewing the appropriateness of the management and reporting processes for CC reporting; and

Assessing the consolidation process of data at the Group level.

CONCLUSIONS

Based on our work described in this report and the assessment of criteria, nothing has come to our attention that causes us to believe that the data and information mentioned in the subject matter and disclosed with the Corporate Citizenship reporting does not give a fair picture of Novartis performance. Additionally, nothing has come to our attention that causes us to believe that the management and reporting processes as defined under the subject matter above are not functioning as designed, in all material respects.

Basel, January 25, 2010

PricewaterhouseCoopers AG

/s/ Thomas Scheiwiller	/s/ Thomas Frei
Dr. Thomas Scheiwiller	Thomas Frei

Table of Contents

Table of Contents

CORPORATE GOVERNANCE REPORT

Novartis strives to create sustainable value. Our corporate governance framework is designed to support this. While it complies with all applicable laws and implements best corporate governance standards, it is tailor-made for Novartis.

CONTENTS

Table of Contents

INTRODUCTION

The corporate governance framework of Novartis reflects a system of checks and balances between the powers of the shareholders, the Board of Directors and the management with the goal to safeguard the interests of Novartis and its shareholders while creating sustainable value.

Since the creation of Novartis in 1996, the Board of Directors continuously improved the corporate governance framework of Novartis by proactively implementing emerging best corporate governance standards long before these were embedded in the Swiss Code of Best Practice for Corporate Governance (the Swiss Code) or in the law.

In 1999, Novartis established the new position of Lead Director as a check and balance following the election of Chief Executive Officer Daniel Vasella, M.D., to the additional post of Chairman. Moreover, three new Board committees the Compensation Committee, the Audit and Compliance Committee and the Corporate Governance and Nomination Committee were created, composed exclusively of independent Directors.

In 2002, five years before legislation came into force in 2007, requiring companies to disclose the total compensation of their executive management group as well as the highest compensation attributed to a member of the executive management, Novartis had already implemented even more rigorous disclosure standards by reporting the individual annual compensation of all members of the Executive Committee.

In 2004, two years earlier than required for non-US corporations, Novartis complied with the challenging certification requirements under the US Sarbanes-Oxley Act, in particular Section 404 of this Act.

In 2009, in the latest example of proactively implementing best corporate governance standards, the Board of Directors established a new Risk Committee that oversees the Group s enterprise risk management of the Group, strengthening the Board of Directors supervisory function over management in this critical area. While fostering a culture of risk-adjusted decision making, the Risk Committee ensures that reasonable risk-taking and innovation are not constrained.

There is no single model for good corporate governance. An effective corporate governance framework depends on the history of a company, its culture, business, management, stakeholders and shareholders.

Even the most stringent rules and regulations are no guarantee against abuse, as has been demonstrated by corporate scandals and the failure of risk management systems at major financial institutions in recent years. Moreover, forcing all companies into one and the same corporate governance scheme is counterproductive

Table of Contents

and disregards the need to tailor the governance along the specifics of each company at a given time.

The uniform call for a separation of the chairman and chief executive officer roles is a good example, particularly as split roles did not prevent many of the corporate scandals in recent years. Ethos Foundation, together with ten other shareholders, has filed a shareholder proposal at the Novartis Annual General Meeting to be held in February 2010 seeking a mandatory separation of the dual roles of Chairman and Chief Executive Officer currently held by Dr. Vasella. The Board of Directors regularly reviews the position of the Chairman and Chief Executive Officer and has put into place adequate control mechanisms as recommended by the Swiss Code. In the past, the Board of Directors was of the opinion that it is in the best interests of Novartis and its shareholders that Dr. Vasella serves in both roles. This may change in the future. It is in the interests of shareholders and stakeholders, however, for the Board of Directors to maintain flexibility and not to implement what at a particular time is deemed to be fashionable in corporate governance.

At the heart of good corporate governance lies a strong Board of Directors and the professionalism and integrity of management, creating the foundation for sustainable value. While the size, composition and structure of the Board of Directors are easy to describe and can easily be checked from the outside, it is difficult to demonstrate that the core processes like information flow and decision making are state-of-the-art. It is even more difficult, if not impossible, to describe the prevailing board culture, although the latter is essential for its effective function. Novartis aims to foster an atmosphere in which Directors can pose challenging questions, voice dissenting views and secure access to independent information through extensive contacts with senior Novartis executives inside and outside the boardroom. Diversity of a Board of Directors is a critical success factor for its work. The Novartis Board of Directors today is diverse in terms of background, interests and skills.

At a time of increased investor activism in markets around the world, shareholders are pressing for a shift of power from the board of directors to the shareholders. However, some shareholders are represented by professional asset managers who, being evaluated and rewarded primarily on the basis of their short-term performance, often have a corresponding time horizon and seek to maximize the short-term value of their investments. Moreover, shareholders have neither a duty of loyalty nor a duty of care to the company and can pursue their own interests that may or may not be that of the company or other shareholders. In contrast, the majority of the more than 150 000 Novartis shareholders expect the Board of Directors to create sustainable value, and these are the shareholders that the Board of Directors has in mind when designing the best corporate governance framework.

OUR CORPORATE GOVERNANCE FRAMEWORK

LAWS AND REGULATIONS

Novartis is subject to the laws of Switzerland, in particular Swiss company and securities laws, and to the securities laws of the United States as applicable to foreign private issuers of securities.

In addition, Novartis is subject to the rules of the Swiss Stock Exchange (SIX Swiss Exchange), including the Directive on Information relating to Corporate Governance.

Novartis is also subject to the rules of the New York Stock Exchange (NYSE) as applicable to foreign private issuers of securities. The NYSE requires Novartis to describe any material ways in which its corporate governance differs from that of domestic US companies listed on the NYSE. Different from US law, shareholders under Swiss law do not receive written reports from committees of the Board of Directors. In addition, the external auditors are appointed by our shareholders at the Annual General Meeting, as opposed to being appointed by the Audit and Compliance Committee. Finally, our Board of Directors has set up a separate Risk Committee that is responsible for risk oversight, as opposed to delegating this responsibility to the Audit and Compliance Committee.

SWISS CODE OF BEST PRACTICE FOR CORPORATE GOVERNANCE

Novartis applies the Swiss Code of Best Practice for Corporate Governance.

NOVARTIS CORPORATE GOVERNANCE STANDARDS

Novartis has incorporated the corporate governance standards described above into the Articles of Incorporation and the Regulations of the Board of Directors, its Committees and the Executive Committee.

The Corporate Governance and Nomination Committee regularly reviews these standards and principles in light of prevailing best practices and makes recommendations for improvements of the corporate governance framework of Novartis for consideration by the full Board of Directors.

Additional corporate governance information can be found on the Novartis website: http://www.novartis.com/corporate-governance

Printed copies of the Novartis Articles of Incorporation, Regulations of the Board and Charters of Board Committees can be obtained by writing to: Novartis AG, Attn: Corporate Secretary, CH-4056 Basel, Switzerland.

Table of Contents

OUR SHAREHOLDERS

SHARES

SHARE CAPITAL OF NOVARTIS AG

The share capital of Novartis AG is CHF 1 318 811 500, fully paid-in and divided into 2 637 623 000 registered shares, each with a nominal value of CHF 0.50. Novartis has neither authorized nor conditional capital. There are no preferential voting shares; all shares have equal voting rights. No participation certificates, non-voting equity securities (Genussscheine) or profit-sharing certificates have been issued.

Novartis shares are listed and traded on the SIX Swiss Exchange (Valor No. 001200526, ISIN CH0012005267, symbol: NOVN) as well as on the NYSE in the form of American Depositary Receipts (ADRs) (Valor No. 567514, ISIN US66987V1098, symbol: NVS).

The holder of a Novartis American Depositary Receipt (ADR) has the rights enumerated in the Deposit Agreement (such as the right to vote and to receive a dividend). The ADR depositary of Novartis, JPMorgan Chase Bank, New York, holding the Novartis shares underlying the ADRs, is registered as shareholder in the share register of Novartis. An ADR is not a Novartis share and an ADR holder is not a Novartis shareholder. ADR holders exercise their voting rights by instructing the depositary to exercise their voting rights. Each ADR represents one Novartis share.

SHARE REPURCHASE PROGRAMS

Novartis began repurchasing its shares in 1999. Since then, five share repurchase programs have been completed with the repurchase of shares worth CHF 19 billion. Shares repurchased under the first program were not cancelled. However, shares repurchased under the other four programs were cancelled. At the Annual General Meeting in February 2008, shareholders authorized the Board of Directors to launch a sixth program to repurchase shares up to a maximum amount of CHF 10 billion via a second trading line. In 2008, a total of six million shares were repurchased at an average price of CHF 49.42 per share and cancelled. The share repurchase program is currently suspended in favor of debt repayment.

CHANGES IN SHARE CAPITAL

Novartis has not increased its share capital during the last three years.

As part of various share repurchase programs, Novartis has reduced its share capital as follows:

CAPITAL REDUCTIONS

Year of reduction	As of Jan 1	Number of shares Shares cancelled	As of Dec 31	Amount of capital reduced in CHF
2006	2 739 171 000	10 200 000	2 728 971 000	5 100 000
2007	2 728 971 000	0	2 728 971 000	0
2008	2 728 971 000	85 348 000	2 643 623 000	42 674 000
2009	2 643 623 000	6 000 000	2 637 623 000	3 000 000

A table with additional information on changes in the Novartis share capital can be found in Note 5 to the financial statements of Novartis AG.

CONVERTIBLE OR EXCHANGEABLE SECURITIES

Novartis has not issued convertible or exchangeable bonds, warrants, options or other securities granting rights to Novartis shares, other than options granted to associates as an element of compensation.

SHAREHOLDINGS

SIGNIFICANT SHAREHOLDERS

According to the share register, as of December 31, 2009, the following shareholders (including nominees and the ADR depositary) held more than 2% of the total share capital of Novartis with the right to vote these shares:(1)

- Shareholders: Novartis Foundation for Employee Participation, with its registered office in Basel, Switzerland, holding 4.6% and Emasan AG, with its registered office in Basel, Switzerland, holding 3.3%;

- Nominees: JPMorgan Chase Bank, New York (holding 10.2%); Mellon Bank, Everett, Massachusetts (holding 2.9%); Nortrust Nominees, London (holding 2.5%); and

- ADR depositary: JPMorgan Chase Bank, New York (holding 10.5%).

During 2009, Novartis AG published several disclosure notifications pertaining to indirect holdings of Capital Group Companies, Inc., with its registered office in Los Angeles, US, on behalf of various companies, clients and funds. As per the last notification on June 6, 2009, Capital

Group Companies, Inc., held 3.26%.

(1) Excluding 6.6% of the share capital held by Novartis AG, together with Novartis affiliates, as treasury shares.

Table of Contents

On December 17, 2009, Novartis AG published a disclosure notification pertaining to indirect holdings of BlackRock, Inc., with its registered office in New York, US, on behalf of various companies. As per this notification, BlackRock, Inc., held 3.34%.

Novartis has not entered into any agreement with any shareholder regarding the voting or holding of Novartis shares.

CROSS SHAREHOLDINGS

Novartis has no cross shareholdings in excess of 5% of capital or voting rights with any other company.

DISTRIBUTION OF NOVARTIS SHARES

As of December 31, 2009, Novartis had more than 159 000 registered shareholders. The following table provides information about the distribution of shareholders by number of shares held:

NUMBER OF SHARES HELD

As of December 31, 2009	Number of registered shareholders	% of registered share capital
1 100	20 579	0.05
101 1 000	93 447	1.57
1 001 10 000	40 751	4.29
10 001 100 000	3 834	3.75
100 001 1 000 000	496	5.67
1 000 001 5 000 000	77	6.45
5 000 001 or more (1)	35	54.13
Total registered shareholders/shares	159 219	75.91
Unregistered shares		24.09
Total		**100.00**

(1) Including Significant Shareholders as listed above

The following table provides information about the distribution of shareholders by type and geographic region. This information relates only to registered shareholders and does not include holders of unregistered shares. Also, the information provided in the table below cannot be assumed to be representative of the entire Novartis investor base since nominees and JPMorgan Chase Bank, as ADR depositary, are registered as shareholders for a large number of beneficial owners.

REGISTERED SHAREHOLDERS BY TYPE AND GEOGRAPHIC REGION

As of December 31, 2009	Shareholders in %	Shares in %
Individual shareholders	95.94	13.04
Legal entities	3.94	40.71
Nominees, fiduciaries	0.12	46.25
Total	**100.00**	**100.00**
Switzerland (1)	89.53	45.09
Europe	9.10	10.66
United States	0.42	42.18
Other countries	0.95	2.07
Total	**100.00**	**100.00**

(1) Excluding 6.6% of the share capital held by Novartis AG, together with Novartis affiliates, as treasury shares

SHAREHOLDER RIGHTS

RIGHT TO VOTE (ONE SHARE, ONE VOTE)

Each share registered with the right to vote entitles the holder to one vote at General Meetings.

ADR holders may vote by instructing JPMorgan Chase Bank, the ADR depositary, to exercise the voting rights attached to the registered shares underlying the ADRs. JPMorgan Chase Bank exercises the voting rights for registered shares underlying ADRs for which no voting instructions have been given by providing a discretionary proxy to the independent proxy (unabhängiger Stimmrechtsvertreter) appointed by Novartis pursuant to Swiss law.

RESOLUTIONS AND ELECTIONS AT GENERAL MEETINGS

The General Meeting passes resolutions and elections with the absolute majority of the votes represented at the meeting. However, under the Articles of Incorporation, the approval of two-thirds of the votes represented at the meeting is required for:

- An alteration of the purpose of Novartis AG;
- The creation of shares with increased voting powers;

- An implementation of restrictions on the transfer of registered shares and the removal of such restrictions;

- An authorized or conditional increase of the share capital;

- An increase of the share capital out of equity, by contribution in kind, for the purpose of an acquisition of property, or the grant of special rights;

- A restriction or suspension of rights or options to subscribe;

- A change of location of the registered office of Novartis AG; or

- The dissolution of Novartis AG.

Table of Contents

OTHER SHAREHOLDER RIGHTS

Shareholders representing at least 10% of the share capital may request that an extraordinary General Meeting of shareholders be convened. Shareholders representing shares with an aggregate nominal value of at least CHF 1 million may request that an item be included in the agenda of a General Meeting of shareholders. Such requests must be made in writing at least 45 days before the date of the General Meeting, specify the item to be included in the agenda and contain the proposal on which the shareholder requests a vote.

Shareholders have the right to receive dividends, appoint a proxy and hold such other rights as are granted under Swiss Law.

SHAREHOLDER REGISTRATION

No restrictions apply on the transferability of Novartis shares. However, only shareholders registered in the Novartis share register may exercise their voting rights. In order to be registered, a shareholder must declare that he or she acquired the shares in his or her own name and for his or her own account. The Articles of Incorporation provide that the Board of Directors may register nominees with the right to vote. For restrictions on registration of nominees, please see below.

The Articles of Incorporation provide that no shareholder shall be registered with the right to vote for more than 2% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction. Exemptions are in force for the Significant Shareholders listed under Our Shareholders Shareholdings Significant Shareholders. In 2009, no exemptions were requested.

The same restrictions apply to holders of ADRs as those holding Novartis shares.

Given that shareholder representation at General Meetings has traditionally been low in Switzerland, Novartis considers the restriction on registration necessary to prevent a minority shareholder from dominating a General Meeting.

The Articles of Incorporation provide that no nominee shall be registered with the right to vote for more than 0.5% of the registered share capital. The Board of Directors may, upon request, grant an exemption from this restriction if the nominee discloses the names, addresses and the number of shares of the persons for whose account it holds 0.5% or more of the registered share capital. Exemptions are in force for the nominees listed under Our Shareholders Shareholdings Significant Shareholders.

The same restrictions apply to holders of ADRs as those holding Novartis shares.

The restrictions on registration contained in the Articles of Incorporation may only be removed by a resolution of the General Meeting of shareholders, with approval of at least two-thirds of the votes represented at the meeting.

Shareholders, ADR holders or nominees that are linked to each other or act in concert to circumvent the restrictions on registration are treated as one person or nominee for purposes of the restrictions on registration.

NO RESTRICTION ON TRADING OF SHARES

The registration of shareholders in the Novartis share register or in the ADR register kept by JPMorgan Chase Bank does not affect the tradability of Novartis shares or ADRs. No restrictions are imposed by Novartis or JPMorgan Chase Bank on the trading of registered Novartis shares or ADRs. Registered Novartis shareholders or ADR holders may, therefore, purchase or sell their Novartis shares or ADRs at any time, including prior to a General Meeting regardless of the record date. The record date serves only to determine the right to vote at a General Meeting of Novartis.

CHANGE-OF-CONTROL PROVISIONS

NO OPTING UP, NO OPTING OUT

The Swiss Stock Exchange Act provides that anyone who, directly, indirectly or acting in concert with third parties, acquires equity securities exceeding 33 1/3% of the voting rights of a company whether or not such rights are exercisable is required to make an offer to acquire all listed equity securities of that company. A company may raise this threshold to 49% of the voting rights (opting up) or may, under certain circumstances, waive the threshold (opting out). Novartis has not adopted any such measures.

CLAUSES ON CHANGES-OF-CONTROL

There are no change-of-control clauses benefiting Directors. With regards to members of the Executive Committee see below under Our Management Contracts with Members of the Executive Committee.

Table of Contents

OUR BOARD OF DIRECTORS

COMPOSITION OF THE BOARD OF DIRECTORS AND ITS COMMITTEES

ELECTION AND TERM OF OFFICE

All Directors are elected individually.

Directors are elected to terms of office of three years or less by shareholders at General Meetings. The terms of office among Directors are to be coordinated so that approximately one-third of all Directors are subject each year to re-election or election. Under Swiss law, a General Meeting of shareholders is entitled to remove any Director at any time, regardless of his or her remaining term of office.

The average tenure of Directors is seven years and the average age is 61. A Director must retire after reaching age 70. Under special circumstances, shareholders may grant an exemption from this rule and re-elect a Director for additional terms of office of no more than three years at a time.

Name	Nationality	Year of birth	First election at AGM	Last election at AGM	Next election at AGM	Retirement due to statutory age limit
Daniel Vasella, M.D.	CH	1953	1996	2007	2010	2024
William Brody, M.D., Ph.D. (1)	US	1944	2009	2009	2012	2014

Peter Burckhardt, M.D. (2)	CH	1939	1996	2008		
Srikant Datar, Ph.D.	US	1953	2003	2009	2012	2024
Ann Fudge	US	1951	2008	2008	2011	2022
William W. George (2)	US	1942	1999	2006		
Alexandre F. Jetzer-Chung	CH	1941	1996	2008	2011	2011
Pierre Landolt	CH	1947	1996	2008	2011	2018
Ulrich Lehner, Ph.D.	D	1946	2002	2008	2011	2017
Hans-Joerg Rudloff	D	1940	1996	2007	2010	2011
Andreas von Planta, Ph.D.	CH	1955	2006	2009	2012	2026
Dr.Ing. Wendelin Wiedeking	D	1952	2003	2009	2012	2023
Marjorie M.T. Yang	CHN	1952	2007	2007	2010	2023
Rolf M. Zinkernagel, M.D.	CH	1944	1999	2009	2012	2014

(1) Since February 2009

(2) Until February 2009

Table of Contents

ROLE OF THE BOARD OF DIRECTORS AND THE BOARD COMMITTEES

The Board of Directors is responsible for the overall direction and supervision of the management and holds the ultimate decision-making authority for Novartis AG, except for those decisions reserved to the shareholders.

The Board of Directors has delegated certain responsibilities to five committees: Chairman s Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee as set-out below (responsibilities described with the terms overseeing or reviewing are subject to the final approval by the Board of Directors).

Responsibilities	Membership comprises	Number of meetings held in 2009/approximate average duration of each meeting Attendance	Link
THE BOARD OF DIRECTORS		**8/6 hours**	
The primary responsibilities of the Board of Directors include:	**Daniel Vasella (1)**	8	Articles of Incorporation of Novartis AG
Setting the strategic direction of the Group;	William Brody (2)	6	
Determining the organizational structure and governance of the Group;	Srikant Datar	8	
Appointing, overseeing and dismissing key executives and planning their succession;	Ann Fudge	7	Regulations of the Board of Directors, its Committees and the Executive Committee of Novartis AG
	Alexandre F. Jetzer-Chung	7	
Determining and overseeing the financial planning, accounting, reporting and controlling;	Pierre Landolt	7	
	Ulrich Lehner	8	
Approving the annual financial statements and the corresponding financial results releases;	Andreas von Planta	7	(Board Regulations)
	Hans-Joerg Rudloff	8	
Overseeing compliance and risk management; and	Wendelin Wiedeking	6	http://www.novartis.com/corporate-governance
Approving major transactions and investments.	Marjorie M.T. Yang	8	
	Rolf M. Zinkernagel	8	
THE CHAIRMAN S COMMITTEE		**8/1.5 hours**	
The primary responsibilities of this committee include:	**Daniel Vasella (1)**	8	Charter of the Chairman s Committee
Commenting on significant matters before the Board of Directors makes a decision;	Ulrich Lehner	8	
	Hans-Joerg Rudloff	7	
Recommending key executive appointments to the Board of Directors;			http://www.novartis.com/corporate-governance

Dealing with Board matters arising in between Board meetings, including the taking of required preliminary actions; and Approving transactions and investments as delegated by the Board of Directors.			
THE COMPENSATION COMMITTEE		**5/1.5 hours**	
The primary responsibilities of this committee include: Designing, reviewing and recommending to the Board compensation policies and programs; Advising the Board on the compensation of the Board members; Approving the employment terms of key executives; Deciding on the variable compensation of the Chairman and Chief Executive Officer, the members of the Executive Committee and other key executives for the past year; and Deciding on the base salary and the total target compensation of the Chairman and Chief Executive Officer, the members of the Executive Committee and other key executives for the coming year. The Compensation Committee has the authority to retain external consultants and other advisors.	**Hans-Joerg Rudloff (1)** Srikant Datar Ulrich Lehner Marjorie M.T. Yang	5 5 5 5	Charter of the Compensation Committee http://www.novartis.com/corporate-governance

(1) Chair

(2) since February 2009

Table of Contents

Responsibilities	Membership comprises	Number of meetings held in 2009/approximate average duration of each meeting Attendance	Link
THE AUDIT AND COMPLIANCE COMMITTEE		**7/3 hours**	
The primary responsibilities of this committee include: Overseeing the internal auditors; Supervising the external auditors and selecting and nominating the external auditors for election by the meeting of the shareholders; Overseeing the accounting policies, financial controls and the compliance with accounting and internal control standards; Approving quarterly financial statements and financial results releases; Overseeing internal control and compliance processes and procedures; and Overseeing compliance with laws and external and internal regulations. The Audit and Compliance Committee has the authority to retain external consultants and other advisors.	**Srikant M. Datar (1),(2)** Ulrich Lehner (2) Andreas von Planta Hans-Joerg Rudloff (2)	7 7 7 7	Charter of the Audit and Compliance Committee http://www.novartis.com/corporate-governance
THE CORPORATE GOVERNANCE AND NOMINATION COMMITTEE		**3/2 hours**	
The primary responsibilities of this committee include: Designing, reviewing and recommending to the Board corporate governance principles; Reviewing on a regular basis the Articles of Incorporation with a view to reinforce shareholder rights; Reviewing on a regular basis the composition and size of the Board and its committees; Reviewing annually the independence status of each Director; Identifying candidates for election as Director; Assessing existing Directors and recommending to the Board	**Ulrich Lehner (1)** Ann Fudge Pierre Landolt Andreas von Planta Rolf M. Zinkernagel	3 3 2 3 3	Charter of the Corporate Governance and Nomination Committee http://www.novartis.com/corporate-governance

whether they should stand for re-election; Preparing and reviewing the succession plan for the Chairman and CEO; and Developing and reviewing an orientation program for new Directors and an ongoing education plan for existing Directors			
THE RISK COMMITTEE (3)		**1/1 hour**	
The primary responsibilities of this committee include: Ensuring that Novartis has implemented an appropriate and effective risk management system and process; Ensuring that all necessary steps are taken to foster a culture of risk-adjusted decision-making without constraining reasonable risk-taking and innovation; Approving guidelines and reviewing policies and processes; and Reviewing with management, internal auditors and external auditors the identification, prioritization and management of the risks, the accountabilities and roles of the functions involved with risk management, the risk portfolio and the related actions implemented by management.	**Andreas von Planta (1)** Ulrich Lehner Srikant M. Datar Hans-Joerg Rudloff	1 1 1 1	Charter of the Risk Committee http://www.novartis.com/ corporate-governance

(1) Chair

(2) Audit Committee Financial Expert as defined by the US Securities and Exchange Commission (SEC)

(3) The Risk Committee was established in December 2009

Table of Contents

THE FUNCTIONING OF THE BOARD OF DIRECTORS

The Novartis Board of Directors takes decisions as a whole, supported by its five Board committees (Chairman s Committee, Compensation Committee, Audit and Compliance Committee, Corporate Governance and Nomination Committee and Risk Committee). Each Board committee has a written charter outlining its duties and responsibilities and is led by a Chair elected by the Board of Directors.

The Board of Directors and its Board committees meet regularly throughout the year. In addition, regular meetings of the independent Directors are held. The Chairs set the agendas of their meetings. Any Director may request a board meeting, a meeting of a Board committee or a meeting of the independent Directors or the inclusion of an item on the agenda of such meetings. Directors are provided, in advance of meetings, with materials intended to prepare them to discuss the items on the agenda.

THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The Board of Directors regularly reviews the position of the Chairman and Chief Executive Officer. In the past, the Board of Directors was of the opinion that it is in the best interest of Novartis and its shareholders that Dr. Vasella serves as Chairman and Chief Executive Officer of the Group.

The combination of the chairman and chief executive officer roles can be advantageous for a company if combined with an appropriate set of checks and balances. These checks and balances include an independent Lead Director, a majority of independent Directors, regular private meetings of the independent Directors chaired by the Lead Director and separate Board committees (Corporate Governance and Nomination Committee, Audit and Compliance Committee and Compensation Committee) that all are composed exclusively of independent Directors. Novartis has instituted all of these checks and balances.

THE LEAD DIRECTOR AND MEETINGS OF THE INDEPENDENT DIRECTORS

In 2006, the Board of Directors appointed Ulrich Lehner, Ph.D., as Lead Director. His responsibilities include ensuring an orderly evaluation of the performance of the Chairman and Chief Executive Officer, chairing the meetings of the independent Directors and leading the independent Directors in the event of a crisis or in matters requiring their separate consideration or decision. The Lead Director is a member of all Board committees.

The Lead Director discusses with the independent Directors the need for meetings of the independent Directors. In 2009, the independent Directors held four such meetings chaired by the Lead Director. Among other topics the independent Directors in their meetings address the succession planning for the Chairman and Chief Executive Officer and evaluate his performance.

INDEPENDENCE OF DIRECTORS

The independence of Directors is a key corporate governance issue. Accordingly, Novartis established independence criteria that are intended to reflect international best-practice standards. These independence criteria (last revised on October 16, 2008) can be found on the Novartis website: www.novartis.com/investors/governance-documents.shtml

The Corporate Governance and Nomination Committee annually submits to the Board of Directors a proposal concerning the determination of the independence of each Director. For this assessment, the Committee considers all relevant facts and circumstances of which it is aware.

In its meeting on November 29, 2009, the Board of Directors determined that all of its members, except for Dr. Vasella and Alexandre F. Jetzer-Chung, were independent.

Dr. Vasella, the Chief Executive Officer, is the only Director who is also an executive of Novartis. Mr. Jetzer-Chung acts for Novartis under a consultancy agreement to support various government relations activities of Novartis.

The Board of Directors has delegated Rolf M. Zinkernagel, M.D., to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF). The Board of Directors concluded that these activities are supervisory, and not consultatory, in nature and do not affect Dr. Zinkernagel s independence as Director.

CONTRACTS WITH NON-EXECUTIVE DIRECTORS

There are no service contracts with any Non-Executive Director other than with Mr. Jetzer-Chung. The contract with Mr. Jetzer-Chung does not provide for any severance payments or for benefits upon termination.

Table of Contents

INFORMATION AND CONTROL SYSTEMS OF THE BOARD OF DIRECTORS VIS-À-VIS MANAGEMENT

THE BOARD OF DIRECTORS

The Board of Directors ensures that it receives sufficient information from the Executive Committee to perform its supervisory duty and to make decisions that are reserved for the Board of Directors. The authority of the Board of Directors to determine the compensation of the members of the Executive Committee is an important element to ensure the alignment of Executive Committee members with the interests of Novartis and its shareholders.

The Board of Directors obtains the information required to perform its duties through several means:

- Since the Chairman is also the Chief Executive Officer of Novartis, who heads the meetings of the Executive Committee, he is fully informed on all current developments;

- The Chairman and Chief Executive Officer informs all Directors regularly about current developments, including by monthly submitting written reports;

- The minutes of Executive Committee meetings are made available to the Directors;

- Informal meetings or teleconferences are held as required between Directors and the Chairman and Chief Executive Officer or the Lead Director;

- A session is held at each Board meeting with all members of the Executive Committee;

- The Board of Directors is updated in detail by each Division Head on a quarterly basis;

- By invitation, other members of management are invited to attend Board meetings to report on areas of the business within their responsibility; and

- Directors are entitled to request information from members of the Executive Committee or any other Novartis associate, and may also visit any Novartis site.

BOARD COMMITTEES

Board committees regularly meet with management and, at times, outside consultants to review the business, better understand applicable laws and policies affecting the Group and support the Board of Directors and the management in meeting the requirements and expectations of stakeholders and shareholders.

In particular, the Chief Financial Officer, the Group General Counsel and representatives of the external auditors are invited to meetings of the Audit and Compliance Committee. Furthermore, the Heads of Internal Audit, Financial Reporting and Accounting, Risk Management and Compliance, as well as the Business Practices Officer, report on a regular basis to the Audit and Compliance Committee.

The Audit and Compliance Committee reviews financial reporting processes on behalf of the Board of Directors. For each quarterly and annual release of financial information, the Disclosure Review Committee reviews the release for accuracy and completeness of disclosures. The Disclosure Review Committee is chaired by the Chief Financial Officer and is attended by the Chief Operating Officer, the Group General Counsel, the Heads of the Divisions, the Heads of Finance of the Divisions and the Heads of the following Corporate Functions: Treasury, Financial Reporting and Accounting, Internal Audit and Investor Relations. Decisions made by the Disclosure Review Committee are reviewed by the Audit and Compliance Committee before publication of the quarterly and annual release.

INTERNAL AUDIT

The Internal Audit function carries out operational and system audits in accordance with an audit plan adopted by the Audit and Compliance Committee; assists organizational units in the accomplishment of objectives by providing an independent approach to the evaluation, improvement and effectiveness of their internal control framework; prepares reports regarding the audits it has performed; and reports actual or suspected irregularities to the Audit and Compliance Committee and the Chairman. The Audit and Compliance Committee regularly reviews the scope of Internal Audit, the audit plans and the results of the internal audits.

RISK MANAGEMENT

The Corporate Risk Management function reports to the independent Risk Committee of the Board of Directors. Organizational and process measures have been designed to identify and mitigate risks at an early stage. Organizationally, the responsibility for risk and risk mitigation is allocated to the divisions, with specialized corporate functions such as Group Finance, Group Quality Operations, Corporate Health, Safety, Environment and Business Continuity, providing support and controlling the effectiveness of the risk management by the divisions.

Table of Contents

From left to right: Wendelin Wiedeking, Srikant Datar, Rolf M. Zinkernagel, Ann Fudge, Ulrich Lehner, Marjorie Mun Tak Yang, Daniel Vasella, Hans-Joerg Rudloff, William Brody, Pierre Landolt, Andreas von Planta, Alexandre F. Jetzer-Chung

BOARD OF DIRECTORS

MEMBERS

Daniel Vasella, M.D.

Chairman and CEO

Swiss, age 56

Ulrich Lehner, Ph.D.

Vice Chairman and Lead Director

German, age 63

Hans-Joerg Rudloff

Vice Chairman

German, age 69

William Brody, M.D., Ph.D.

American, age 65

Srikant Datar, Ph.D.

American, age 56

Ann Fudge

American, age 58

Alexandre F. Jetzer-Chung

Swiss, age 68

Pierre Landolt

Swiss, age 62

Andreas von Planta, Ph.D.

Swiss, age 54

Dr. Ing. Wendelin Wiedeking

German, age 57

Marjorie Mun Tak Yang

Chinese, age 57

Rolf M. Zinkernagel, M.D.

Swiss, age 65

HONORARY CHAIRMAN

Alex Krauer, Ph.D.

CORPORATE SECRETARY

Monika Matti

Table of Contents

Daniel Vasella, M.D.

Swiss, age 56

Function at Novartis AG Daniel Vasella, M.D., has served as Chief Executive Officer and executive member of the Board of Directors since the merger that created Novartis in 1996. He was appointed Chairman of the Board of Directors in 1999. Dr. Vasella has led Novartis through dynamic growth to rank among the world s most successful healthcare companies with a business strategy centered on a focused diversification portfolio, strategically incorporating pharmaceuticals, vaccines, generics and consumer health. He has also implemented several pioneering initiatives to ensure access to medicines in the areas of malaria, cancer and leprosy, among others, dedicating 3% of net sales to these programs in 2009.

Other activities Dr. Vasella is a member of the Board of Directors of PepsiCo Inc., United States and of Alcon Inc., Switzerland. He is also a member of the Global Health Program Advisory Panel of the Bill & Melinda Gates Foundation, a foreign honorary member of the American Academy of Arts and Sciences, the International Business Leaders Advisory Council for the Mayor of Shanghai, China, and the International Board of Governors of the Peres Center for Peace in Israel.

Professional background Dr. Vasella graduated with an M.D. from the University of Bern, Switzerland, in 1979 and was a practicing physician until he joined Sandoz Pharmaceuticals Corporation in 1988, where he held the position of CEO before the merger. Dr. Vasella has been honored with several awards. He also holds the rank of Chevalier in the Ordre national de la Légion d honneur (France). He was also awarded an honorary doctorate by the University of Basel. In addition, a readership survey by the Financial Times selected Dr. Vasella as the most influential European businessman of the past quarter century. During Dr. Vasella s tenure as Chairman and CEO, Novartis has been included on the Ethisphere Institute s list of the world s most ethical companies, Fortune magazine s list of the world s most admired companies, and the Barron s magazine list of the world s most respected companies.

Ulrich Lehner, Ph.D.

German, age 63

Function at Novartis AG Ulrich Lehner, Ph.D., has been a member of the Board of Directors since 2002. He qualifies as an independent Non-Executive Director. He serves as Vice Chairman, Lead Director and Chairman of the Corporate Governance and Nomination Committee. He is also a member of the Audit and Compliance Committee, the Risk Committee, the Chairman s Committee, and the Compensation Committee. The Board of Directors has appointed him as Audit Committee Financial Expert.

Other activities Mr. Lehner is member of the Shareholders Committee of Henkel AG & Co. KgaA, Chairman of the Supervisory Board of Deutsche Telekom AG and serves as a member of the Supervisory Boards of E.ON AG, Thyssen Krupp AG, HSBC Trinkaus & Burkhardt KgaA, Porsche Automobil Holding SE, Dr. Ing. h.c. F. Porsche AG and Henkel Management AG, all in Germany. He is also a member of the shareholders committee of Dr. August Oetker KG and Krombacher Brauerei, both in Germany.

Professional background Mr. Lehner graduated in business administration and mechanical engineering from the Darmstadt University of Technology, Germany, in 1975. From 1975 to 1981, he was an auditor with KPMG Deutsche Treuhand-Gesellschaft AG in Duesseldorf. In 1981, he joined Henkel KGaA. After heading the Controlling Department of Fried. Krupp GmbH in Germany from 1983 to 1986, Mr. Lehner returned to Henkel as Finance Director. From 1991 to 1994, he headed Henkel Asia-Pacific Ltd. in Hong Kong, and from 1995 to 2000, served as Executive Vice President, Finance/Logistics, of Henkel KGaA. From 2000 to 2008, Mr. Lehner served as Chairman of the Management Board of Henkel KGaA.

Hans-Joerg Rudloff

German, age 69

Function at Novartis AG Hans-Joerg Rudloff has been a member of the Board of Directors since 1996. He qualifies as an independent Non-Executive Director. He is Vice Chairman and Chairman of the Compensation Committee. He is also a member of the Audit and Compliance Committee, the Risk Committee, and the Chairman s Committee. The Board of Directors has appointed him as Audit Committee Financial Expert.

Other activities In 2006, Mr. Rudloff joined the Board of Directors of Rosneft, a Russian state-controlled oil company, and became Chairman of the audit committee. He serves as the Chairman of the Board of Directors of Blue-bay Asset Management Ltd., United Kingdom, and the

Marcuard Group, Switzerland. He is also a member of the Boards of Directors of the Thyssen-Bornemisza Group and of the New World Resources B.V., Netherlands. In addition, Mr. Rudloff is a member of the Advisory Boards of Landeskreditbank Baden-Wuerttemberg and EnBW, both in Germany. In 2005, Mr. Rudloff became Chairman of the International Capital Markets Association (ICMA), Switzerland.

Professional background Mr. Rudloff studied economics at the University of Bern, Switzerland. After graduating in 1965, he joined Credit Suisse in Geneva. He moved to the US-based investment banking firm of Kidder Peabody Inc. in 1968. He later headed Swiss operations and was elected Chairman of Kidder Peabody International. In 1978 he became a member of the Board of Directors of Kidder Peabody Inc., United States. In 1980, he joined Credit Suisse First Boston, Switzerland, was elected Vice Chairman in 1983, and became Chairman and CEO in 1989. From 1986 to 1990, Mr. Rudloff was also a member of the Executive Board of Credit Suisse in Zurich, in charge of all securities and capital-market departments. From 1994 to 1998, Mr. Rudloff was Chairman of MCBBL in Luxembourg. In 1994, he was appointed to the Board of Directors of Sandoz AG in Switzerland. In 1998, Mr. Rudloff joined Barclays Capital, United Kingdom, where he is presently Chairman.

Table of Contents

William Brody, M.D., Ph.D.

American, age 65

Function at Novartis AG William Brody, M.D., Ph.D., has been a member of the Board of Directors since 2009. He qualifies as an independent Non-Executive Director.

Other activities Dr. Brody is a member of the Boards of Directors of the US-based IBM, Koolsmiles, Inc. and Genvault, Inc., and the China-based Novamed. He is also a member of numerous professional associations and also serves on the advisory boards of various government and nonprofit organizations.

Professional background Dr. Brody earned his bachelor s and master s degrees in electrical engineering from the Massachusetts Institute of Technology before completing his M.D. and Ph.D. at Stanford University, all in the United States. Dr. Brody was President of the Johns Hopkins University until the end of 2008 and is President of the US-based Salk Institute for Biological Studies. Previously, he held various academic positions, including Professor for Radiology and Electrical Engineering at Stanford University and Professor and Director of the Department of Radiology at the Johns Hopkins University, both in the United States.

Srikant Datar, Ph.D.

American, age 56

Function at Novartis AG Srikant Datar, Ph.D., has been a member of the Board of Directors since 2003. He qualifies as an independent Non-Executive Director. He is Chairman of the Audit and Compliance Committee and a member of the Risk Committee and the Compensation Committee. The Board of Directors has appointed him as Audit Committee Financial Expert.

Other activities Mr. Datar is Senior Associate Dean at the Graduate School of Business Administration at Harvard. He is also a member of the Board of Directors of ICF International Inc. and of Stryker Corporation, both in the United States, and of KPIT Cummins Infosystems Ltd., India.

Professional background Mr. Datar graduated with distinction in mathematics and economics from the University of Bombay, India, in 1973. He is a Chartered Accountant and holds two master s degrees and a Ph.D. from Stanford University, United States. Mr. Datar has worked as an accountant and planner in industry, and as a professor at Carnegie Mellon University, Stanford University and Harvard University in the United States. His research interests are in the areas of cost management, measurement of productivity, new product development, time-based competition, incentives and performance evaluation. He is the author of many scientific publications, and has received several academic awards and honors. Mr. Datar has advised and worked with numerous companies in research, development and training.

Ann Fudge

American, age 58

Function at Novartis AG Ann Fudge has been a member of the Board of Directors since 2008. She qualifies as an independent Non-Executive Director. She is a member of the Corporate Governance and Nomination Committee.

Other activities Ms. Fudge serves on the Board of Directors of General Electric, and on the Board of Overseers of Harvard University, both in the United States, and on the Board of Directors of Unilever, UK/Netherlands. She is also a Trustee of the New York-based Rockefeller Foundation and of Atlanta-based Morehouse College, and is Chairman of the US Programs Advisory Panel of the Bill & Melinda Gates Foundation. She is also on the US Council on Foreign Relations.

Professional background Ms. Fudge received her bachelor s degree from Simmons College and her M.B.A. from Harvard University Graduate School of Business in the United States. She is former Chairman and CEO of Young & Rubicam Brands. Before that, she served as President of the Beverages, Desserts and Post Division of Kraft Foods.

Table of Contents

Alexandre F. Jetzer-Chung

Swiss, age 68

Function at Novartis AG Alexandre F. Jetzer-Chung has been a member of the Board of Directors since 1996.

Other activities Mr. Jetzer-Chung is a member of the Supervisory Board of Compagnie Financière Michelin and of the Board of the Lucerne Festival Foundation, both in Switzerland. He is a member of the International Advisory Panel on Biotechnology Strategy of the Prime Minister of Malaysia, a member of the Investment Advisory Council of the Prime Minister of Turkey, and an economic advisor to the Governor of Guangdong Province, China. He is also a member of the Development Committee of the Neuro-science Center of the University of Zurich, Switzerland.

Professional background Mr. Jetzer-Chung graduated with master s degrees in law and economics from the University of Neuchâtel, Switzerland, and is a licensed attorney. From 1967 to 1980, he served as General Secretary of the Swiss Federation of Commerce and Industry (Vorort). Mr. Jetzer-Chung joined Sandoz in 1980. In 1981 he was appointed member of the Sandoz Group Executive Committee in the capacity of Chief Financial Officer and, from 1990 on, as Head of Management Resources and International Coordination. From 1995 to 1996, he was Chairman and Chief Executive Officer of Sandoz Pharmaceuticals Corporation, and at the same time served as President and CEO of Sandoz Corporation in the United States. After the merger that created Novartis in 1996 until 1999, he was Head of International Coordination, Legal & Taxes, and a member of the Executive Committee of Novartis.

Permanent Novartis management or consultancy engagements Mr. Jetzer-Chung has a consultancy agreement with Novartis International AG.

Pierre Landolt

Swiss, age 62

Function at Novartis AG Pierre Landolt has been a member of the Board of Directors since 1996. He qualifies as an independent Non-Executive Director. He is a member of the Corporate Governance and Nomination Committee.

Other activities Mr. Landolt is currently Chairman of the Sandoz Family Foundation and a Director of Syngenta AG, both in Switzerland. He is a partner with unlimited liabilities of the Swiss private bank Landolt & Cie. Mr. Landolt serves, in Brazil, as President of the Instituto Fazenda Tamanduá, the Instituto Estrela de Fomento ao Microcrédito, AxialPar Ltda and Moco Agropecuaria Ltda. In Switzerland, Mr. Landolt is Chairman of Emasan AG and Vaucher Manufacture Fleurier SA, Vice Chairman of Parmigiani Fleurier SA, and is on the Board of the Syngenta Foundation for Sustainable Agriculture, Switzerland. He is a Director of EcoCarbone SA, France, and Swiss Amazentis SA. He is also Vice Chairman of the Montreux Jazz Festival Foundation.

Professional background Mr. Landolt graduated with a bachelor s degree in law from the University of Paris-Assas. From 1974 to 1976, he worked for Sandoz Brazil SA. In 1977, he acquired an agricultural estate in the semi-arid Northeast Region of Brazil and, over several years, converted it into a model farm in organic and bio-dynamic production. Since 1997, Mr. Landolt has been Associate and Chairman of AxialPar Ltda, Brazil, an investment company focused on sustainable development, with investments in fish farming, soybean for human consumption and organic vegetable. In 2000, he co-founded EcoCarbone SA, France, a company active in the design and development of carbon-sequestration processes in Asia, Africa, South America and Europe. In 2007, he co-founded Amazentis SA, Switzerland, a startup company active in the convergence space of medication and nutrition. In addition to his private activities, Mr. Landolt has been President of the Sandoz Family Foundation since 1994 and oversees the development of the foundation in several investment fields, including hotel, watch making and telecommunications.

Andreas von Planta, Ph.D.

Swiss, age 54

Function at Novartis AG Andreas von Planta, Ph.D., has been a member of the Board of Directors since 2006. He qualifies as an independent Non-Executive Director. He is Chairman of the Risk Committee, a member of the Audit and Compliance Committee, and the Corporate Governance and Nomination Committee.

Other activities Mr. von Planta is Vice Chairman of Holcim Ltd. and of the Schweizerische National-Versicherungs-Gesellschaft AG, both in Switzerland. He is also a member of the Boards of various Swiss subsidiaries of foreign companies and other non-listed Swiss companies. He is a member of the Board of Editors of the Swiss Review of Business Law and is a former Chairman of the Geneva Association of Business Law. Mr. von Planta is Chairman of the Regulatory Board of the SIX Swiss Exchange AG.

Professional background Mr. von Planta holds lic. iur. and Ph.D. degrees from the University of Basel, Switzerland, and an LL.M. from Columbia University School of Law, New York, United States. He passed his bar examinations in Basel in 1982. Since 1983, he has been living in Geneva, working for the law firm Lenz & Staehelin, where he became a partner in 1988. His areas of specialization include corporate law, corporate finance, company reorganizations, and mergers and acquisitions.

Table of Contents

Dr. Ing. Wendelin Wiedeking

German, age 57

Function at Novartis AG Dr. Ing. Wendelin Wiedeking has been a member of the Board of Directors since 2003. He qualifies as an independent Non-Executive Director.

Other activities Mr. Wiedeking was Chairman of the executive board of Porsche Automobil Holding SE and of Dr. Ing. h.c. F. Porsche AG, both in Germany until July 2009. Since then he is an entrepreneur.

Professional background Mr. Wiedeking graduated in mechanical engineering in 1978 and worked as a scientific assistant in the Machine Tool Laboratory of the Rhine-Westphalian College of Advanced Technology in Germany. His professional career began in 1983 in Germany as Director s Assistant in the Production and Materials Management area of Dr. Ing. h.c. F. Porsche AG in Stuttgart-Zuffenhausen. In 1988, he moved to Glyco Metall-Werke KG in Wiesbaden as Division Manager, where he advanced by 1990 to the position of Chief Executive Officer and Chairman of the Board of Management of Glyco AG. In 1991, he returned to Dr. Ing. h.c. F. Porsche AG as Production Director. A year later, the Supervisory Board appointed him spokesman of the Executive Board (CEO), and Chairman in 1993.

Marjorie Mun Tak Yang

Chinese, age 57

Function at Novartis AG Marjorie Mun Tak Yang has been a member of the Board of Directors since 2008. She qualifies as an independent Non-Executive Director. She is a member of the Compensation Committee.

Other activities Ms. Yang is Chairman of the Esquel Group, Hong Kong, China. She is a Non-official Member of the Executive Council of the Hong Kong Special Administrative Region. In China, she is a member of the National Committee of the Chinese People s Political Consultative Conference. She currently serves on the boards of Swire Pacific Limited, and The Hong Kong and Shanghai Banking Corporation Limited in Hong Kong. Ms. Yang has been a member of the MIT Corporation since 2001. She was recently appointed as Chairman of the Council of the Hong Kong Polytechnic University. She also serves on the advisory boards of Harvard Business School and Tsinghua School of Economics and Management.

Professional background Ms. Yang graduated with a bachelor s degree in mathematics from Massachusetts Institute of Technology and holds a master s degree from Harvard Business School, both in the United States. From 1976 to 1978, she was an associate in Corporate Finance, Mergers and Acquisitions with the First Boston Corporation in New York, United States. In 1979, she returned to Hong Kong and became a founding member of Esquel Group. She was appointed Chairman of the Group in 1995.

Rolf M. Zinkernagel, M.D.

Swiss, age 65

Function at Novartis AG Rolf M. Zinkernagel, M.D., has been a member of the Board of Directors since 1999. He qualifies as an independent Non-Executive Director. He is a member of the Corporate Governance and Nomination Committee.

Other activities Dr. Zinkernagel is Vice-President of the International Union of Immunological Societies. He is also a member of the Scientific Advisory Boards of Bio-Alliance AG, Germany; Aravis General Partner Ltd., Cayman Islands; Telormedix, Switzerland; X-Biotech, Canada; Novimmune, Switzerland; Cancevir, Switzerland; Nuvo Research Inc., Canada; ImVision, Germany; MannKind, United States; Laboratoire Koch, Switzerland; and Biomedical Sciences International Advisory Council Singapore. Dr. Zinkernagel is also a science consultant to Chilka Ltd., Cayman Islands; Ganymed, Germany; and Zhen-Ao Group, China. He is a member of the Advisory Panel of Swiss Re, Switzerland.

Professional background Dr. Zinkernagel graduated from the University of Basel, Switzerland, with an M.D. in 1970. From 1992 to 2008, he was a professor and director of the Institute of Experimental Immunology at the University of Zurich and after retirement in 2008 continues to be active at the University of Zurich. Dr. Zinkernagel has received many awards and prizes for his work and contribution to science, notably the Nobel Prize in medicine, which he was awarded in 1996.

112

Table of Contents

OUR MANAGEMENT

COMPOSITION OF THE EXECUTIVE COMMITTEE

(1) Permanent Attendee of the Executive Committee

COMPOSITION OF THE EXECUTIVE COMMITTEE

The Executive Committee is headed by the Chairman and Chief Executive Officer. The members of the Executive Committee are appointed by the Board of Directors. The Chairman and Chief Executive Officer may appoint or remove non-voting Permanent Attendees to attend the meetings of the Executive Committee. As of December 31, 2009, five Permanent Attendees attend meetings of the Executive Committee.

The organizational structure and the details of the responsibility of the Executive Committee are set forth in the Board Regulations.

The Board of Directors has not concluded any contracts with third parties to manage the business.

ROLE AND FUNCTIONING OF THE EXECUTIVE COMMITTEE

The Board of Directors has delegated to the Executive Committee the coordination of the Group s day-to-day business operations. This includes:

- Developing policies, strategies and strategic plans for approval by the Board of Directors and implementing those approved by the Board of Directors;

- Submitting to the Board of Directors and its committees proposed changes in management positions of material significance, investments, financial measures, acquisitions or divestitures, contracts of material significance and budgets;

- Preparing and submitting quarterly and annual reports to the Board of Directors or its committees;

- Informing the Board of Directors of all matters of fundamental significance to the businesses;

- Recruiting, appointing and promoting senior management;

- Ensuring the efficient operation of the Group and achievement of optimized results;

- Promoting an active internal and external communications policy; and

- Dealing with any other matters as are delegated by the Board of Directors to the Executive Committee.

CONTRACTS WITH MEMBERS OF THE EXECUTIVE COMMITTEE

In accordance with good corporate governance, it is a principle of Novartis that new employment contracts with members of the Executive Committee should contain:

- No unusually long notice periods;

- No change-of-control clauses; and

- No severance payments.

Two existing contracts with members of the Executive Committee are not in line with this principle since they provide for a notice period of 36 months (in both cases) or a change-of-control clause (in one case). To align these contracts, Novartis gave notice in 2007 to these two members of the Executive Committee. Both contracts will expire in 2010.

As per the Annual General Meeting held on February 24, 2009, the Board of Directors and Dr. Vasella entered into a new employment contract for Dr. Vasella regarding his current roles as Chairman and Chief Executive Officer of Novartis. The new contract is automatically renewed for one-year periods, if not terminated with a notice period of six months.

Table of Contents

From left to right: Jeff George, Andreas Rummelt, Juergen Brokatzky-Geiger, David Epstein, Jon Symonds, Joe Jimenez, Daniel Vasella, Mark C. Fishman, Raymund Breu, Andrin Oswald, Joerg Reinhardt, Thomas Wellauer, Thomas Werlen, George Gunn

EXECUTIVE COMMITTEE

MEMBERS

Daniel Vasella, M.D.

Swiss, age 56

Raymund Breu, Ph.D.

Swiss, age 64

Juergen Brokatzky-Geiger, Ph.D.

German, age 57

Mark C. Fishman, M.D.

American, age 58

Joe Jimenez

American, age 50

Joerg Reinhardt, Ph.D.

German, age 53

Andreas Rummelt, Ph.D.

German, age 53

Thomas Wellauer, Ph.D.

Swiss, age 54

Thomas Werlen, Ph.D.

Swiss, age 44

PERMANENT ATTENDEES

David Epstein

American, age 48

Jeff George

American, age 36

George Gunn, MRCVS

British, age 59

Andrin Oswald, M.D.

Swiss, age 38

Jon Symonds

British, age 50

SECRETARY

Bruno Heynen

Table of Contents

MEMBERS OF THE EXECUTIVE COMMITTEE

Daniel Vasella, M.D.

Swiss, age 56

Daniel Vasella, M.D., is Chief Executive Officer of Novartis, a position he has held since the merger that created Novartis in 1996. He was appointed Chairman of the Board of Directors in 1999. Dr. Vasella has led Novartis through dynamic growth to rank among the world s most successful healthcare companies with a business strategy centered on a focused diversification portfolio strategically incorporating pharmaceuticals, vaccines, generics and consumer health. He has also implemented several pioneering initiatives to ensure access to medicines in the areas of malaria, cancer and leprosy, among others, dedicating 3% of net sales to these programs in 2009. During Dr. Vasella s tenure as Chairman and CEO, Novartis has been included on the Ethisphere Institute s list of the world s most ethical companies, Fortune magazine s list of the world s most admired companies, and the Barron s magazine list of the world s most respected companies. Dr. Vasella is a member of the Board of Directors of Pepsico, Inc., United States and of Alcon Inc., Switzerland. He is also a member of the Global Health Program Advisory Panel of the Bill & Melinda Gates Foundation, a foreign honorary member of the American Academy of Arts and Sciences, the International Business Leaders Advisory Council for the Mayor of Shanghai and the International Board of Governors of the Peres Center for Peace in Israel. Dr. Vasella graduated with an M.D. from the University of Bern, Switzerland, in 1979 and was a practicing physician until he joined Sandoz Pharmaceuticals Corporation in 1988.

Raymund Breu, Ph.D.

Swiss, age 64

Raymund Breu, Ph.D., is Chief Financial Officer of Novartis AG since 1996. He is a member of the Executive Committee of Novartis. Mr. Breu joined the Treasury Department of the Sandoz Group in 1975. In 1982, he became Head of Finance for the Sandoz affiliates in the United Kingdom. In 1985, he was appointed Chief Financial Officer of Sandoz Corporation in the United States where he was responsible for all US Sandoz finance activities. In 1990, Mr. Breu became Group Treasurer of Sandoz Ltd., Basel, Switzerland, and, in 1993, Head of Group Finance and Member of the Sandoz Executive Board. He is also a member of the Board of Directors of Swiss Re and the Swiss takeover commission. Mr. Breu graduated from the Swiss Federal Institute of Technology (ETH) in Zurich with a Ph.D. in mathematics in 1971.

Juergen Brokatzky-Geiger, Ph.D.

German, age 57

Juergen Brokatzky-Geiger, Ph.D., is Head of Human Resources of Novartis since 2003. He is a member of the Executive Committee of Novartis. Mr. Brokatzky-Geiger joined Ciba-Geigy Ltd. in 1983 as a Laboratory Head in the Pharmaceuticals Division in Switzerland. After a job rotation in the United States, he held positions of increasing responsibility in Research and Development (R&D), including Group Leader of Process R&D, Head of Process R&D, and Head of Process Development and Pilot Plant Operations. During the merger of Ciba-Geigy and Sandoz in 1996, Mr. Brokatzky-Geiger was appointed Integration Officer of Technical Operations. He later became the Head of Chemical and Analytical Development, and served as the Global Head of Technical R&D from 1999 to 2003. Mr. Brokatzky-Geiger graduated with a Ph.D. in chemistry from the University of Freiburg, Germany, in 1982.

Mark C. Fishman, M.D.

American, age 58

Mark C. Fishman, M.D., is President of the Novartis Institutes for BioMedical Research (NIBR) since 2002. He is a member of the Executive Committee of Novartis. Before joining Novartis in 2002, Dr. Fishman was Chief of Cardiology and Director of the Cardiovascular Research Center at Massachusetts General Hospital, and Professor of Medicine at Harvard Medical School, both in the United States. Dr. Fishman serves on several editorial boards and has worked with national policy and scientific committees, including those of the US National Institutes of Health (NIH) and the Wellcome Trust. He completed his internal medicine residency, chief residency and cardiology training at Massachusetts

General Hospital. Dr. Fishman graduated with a bachelor s degree from Yale College in 1972 and an M.D. from Harvard Medical School in 1976. He has been honored with many awards and distinguished lectureships, and is a member of the Institute of Medicine of the National Academies (US) and a Fellow of the American Academy of Arts and Sciences.

Table of Contents

Joe Jimenez

American, age 50

Joe Jimenez is Head of the Novartis Pharmaceuticals Division since 2007. He is a member of the Executive Committee of Novartis. Mr. Jimenez began his career in the United States at The Clorox Company, and later served as president of two operating divisions at ConAgra. In 1998, he joined the H.J. Heinz Company, and was named President and Chief Executive Officer of the North America business. From 2002 to 2006, he served as President and Chief Executive Officer of Heinz in Europe. Before joining Novartis, he was a NonExecutive Director of AstraZeneca plc, United Kingdom, from 2002 to 2007; and was an advisor for the private equity organization Blackstone Group, United States. Mr. Jimenez joined Novartis in April 2007 as Head of the Consumer Health Division and was appointed to his present position in October 2007. Mr. Jimenez graduated with a bachelor s degree from Stanford University in 1982 and with an M.B.A. from the University of California, Berkeley, in 1984.

Joerg Reinhardt, Ph.D.

German, age 53

Joerg Reinhardt, Ph.D, is Chief Operating Officer of Novartis since 2008. He is a member of the Executive Committee of Novartis. Mr. Reinhardt joined Sandoz Pharma Ltd. in 1982, and held positions of increasing responsibility in Research and Development for the company in Switzerland. In 1994, he was named Head of Development for Sandoz Pharma Ltd. After the merger that created Novartis in 1996, Mr. Reinhardt became Head of Preclinical Development and Project Management for Novartis, and assumed the position of Head of Pharmaceutical Development in 1999. From 2006 to 2008, he served as Head of the Vaccines and Diagnostics Division. He also chairs the Board of Directors of the Genomics Institute of the Novartis Foundation in the United States. Mr. Reinhardt graduated with a Ph.D. in pharmaceutical sciences from the University of Saarbruecken, Germany, in 1981.

Andreas Rummelt, Ph.D.

German, age 53

Andreas Rummelt, Ph.D., is Group Head of Quality Assurance and Technical Operations since 2008. He is a member of the Executive Committee of Novartis. He joined Sandoz Pharma Ltd. in 1985 in Switzerland and held various positions of increasing responsibility in Development. In 1994 he was appointed Head of Worldwide Technical Research and Development, a position he retained following the merger that created Novartis in 1996. From 1999 to 2004, Mr. Rummelt served as Head of Technical Operations of the Novartis Pharmaceuticals Division, and from 2004 to 2008, as Head of Sandoz. Mr. Rummelt graduated with a Ph.D. in pharmaceutical sciences from the University of Erlangen-Nuernberg, Germany, in 1983.

Thomas Wellauer, Ph.D.

Swiss, age 54

Thomas Wellauer, Ph.D., is Head of Corporate Affairs for Novartis comprising the functions Intellectual Property, Public Affairs, Risk Management, Health, Safety, Environment, Procurement, Integrity and Compliance, Security, International Coordination, Novartis Switzerland and the Novartis Foundation for Sustainable Development for Novartis since 2006. He is a member of the Executive Committee of Novartis. Mr. Wellauer started his career with McKinsey & Company, Switzerland, becoming a Partner in 1991 and Senior Partner in 1996. In 1997, he was named CEO of the Winterthur Insurance Group, Switzerland, which later was acquired by Credit Suisse. At Credit Suisse he was a member of the Group Executive Board, initially responsible for the Group s insurance business before becoming CEO of the Financial Services Division. Before joining Novartis, in 2006, Mr. Wellauer headed and completed the Clari-ant Performance Improvement Program, a global turnaround project at the Swiss specialty chemicals maker. He is also a member of the Supervisory Board of Munich RE. Mr. Wellauer graduated with a Ph.D. in systems engineering and a master s degree in chemical engineering from the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland, in 1985. He also holds an M.B.A. from the University of Zurich.

Thomas Werlen, Ph.D.

Swiss, age 44

Thomas Werlen is the General Counsel of Novartis and responsible for the Group s legal affairs. He is a member of the Executive Committee of Novartis. Thomas Werlen is Secretary to the Corporate Governance and Nomination Committee of the Board of Directors of Novartis. In 1995, Thomas Werlen started his professional career with Cravath, Swaine & Moore in New York. In 2000, he moved to the Cravath, Swaine & Moore London office and, after a stint with Davis Polk & Wardwell, he joined Allen & Overy as a Partner in March 2001. Based in the London office, he focused on corporate and capital markets. His clients included multinational corporations and investment banks. Thomas Werlen holds lic.iur. and Ph.D. (Dr.) degrees in law from the University of Zurich and a master s degree in law from Harvard Law School. He is a member of the New York and the Swiss bar. He is also a member of the Regulatory Board of the SIX Swiss Exchange AG. He has written several books and articles on business and financial law and teaches corporate and capital markets law at the University of Zurich (LL.M. program) and at the University of St. Gallen.

Table of Contents

PERMANENT ATTENDEES OF THE EXECUTIVE COMMITTEE

David Epstein

American, age 48

David Epstein is Head of Novartis Oncology since 2000 and leads the new Molecular Diagnostics unit since 2008. He is a permanent attendee of the Executive Committee of Novartis. Before joining Novartis, Mr. Epstein was an associate in the Strategy Practice of the consulting firm, Booz Allen & Hamilton. Mr. Epstein joined Sandoz, a predecessor company of Novartis, in 1989, and held various leadership positions of increasing responsibility for the company, including Chief Operating Officer of Novartis Pharmaceuticals Corporation in the United States and Head of Novartis Specialty Medicines. Mr. Epstein graduated with a bachelor s degree in pharmacy from Rutgers University College of Pharmacy in 1984, and with an M.B.A. in finance and marketing from New York s Columbia University Graduate School of Business, in 1987.

Jeff George

American, age 36

Jeff George is Head of Sandoz since 2008. He is a permanent attendee of the Executive Committee of Novartis. Before joining Novartis, Mr. George was a Senior Director of Strategy and Business Development at Gap Inc. From 2001 to 2004, he was with McKinsey & Company in San Francisco, United States, where he was an Engagement Manager. Mr. George joined Novartis in the Vaccines and Diagnostics Division in January 2007 as Head of Commercial Operations for Western and Eastern Europe, then advanced to Head of Emerging Markets for the Middle East, Africa, Southeast Asia and CIS at Novartis Pharma. Mr. George graduated in 1999 with a master s degree from the Johns Hopkins University School of Advanced International Studies, where he studied international economics and emerging markets political economy. He

received an M.B.A. from Harvard University in 2001.

George Gunn, MRCVS

British, age 59

George Gunn is Head of the Novartis Consumer Health Division since 2008. He is a permanent attendee of the Executive Committee of Novartis. Before joining Novartis, Mr. Gunn was president of Pharmacia Animal Health, based in the United States. Previously, he spent more than 15 years in positions of increasing responsibility in healthcare companies. He worked as a veterinary surgeon for nine years before joining the industry. Mr. Gunn joined Novartis in 2003 as Head of Novartis Animal Health, North America. In January 2004, he assumed his position as Head of the Animal Health Business Unit. In addition to this role, he was appointed Head of the Consumer Health Division in December 2008. Mr. Gunn graduated with a bachelor of veterinary medicine and surgery degree from the Royal (Dick) School of Veterinary Studies in the United Kingdom, in 1973. He graduated with a diploma in veterinary state medicine from the same school in 1978. In 2008, he received an honorary doctorate in veterinary medicine and surgery from the University of Edin-burgh.

Andrin Oswald, M.D.

Swiss, age 38

Andrin Oswald, M.D., is Head of the Novartis Vaccines and Diagnostics Division since 2008. He is a permanent attendee of the Executive Committee of Novartis. Before joining Novartis, Dr. Oswald was a delegate of the International Committee of the Red Cross to Nepal from 2002 to 2003 and worked with McKinsey & Company, Switzerland. In 2005, Dr. Oswald joined Novartis and advanced from Assistant to the Chairman and CEO, to Head of the Country Pharma Organization (CPO) and Country President for Novartis in South Korea, to CEO of Speedel and Global Head of Development Franchises at Novartis Pharma in 2008. Dr. Oswald graduated with an M.D. from the University of Geneva, Switzerland, in 1999.

Jon Symonds

British, age 50

Jon Symonds is Deputy Chief Financial Officer (CFO) and CFO-designate of Novartis AG since September 1, 2009. He is a permanent attendee of the Executive Committee of Novartis. Before joining Novartis in 2009, Mr. Symonds was Partner and Managing Director in the Investment Banking Division of Goldman Sachs in the United Kingdom. He also has eight years of experience as CFO of AstraZeneca and previously held positions as Group Finance Director at Zeneca and partner at KPMG. From 2004 to 2007, Mr. Symonds was a director of Diageo Plc. and chairman of the Audit Committee. Other previous roles include director and Audit Committee chairman of Qinetiq Plc., chairman of the 100 Group of Finance Directors, joint chairman of the Business Tax Forum, board member of the Accounting Standards Board and founder of the Oxford University Centre for Business Taxation Research, all in the United Kingdom. Mr. Symonds graduated with a first class degree in business finance from the University of Hertfordshire, United Kingdom, in 1980 and became a Fellow of Chartered Accountants in 1982. He is a Commander of the British Empire (CBE).

Table of Contents

THE INDEPENDENT EXTERNAL AUDITORS

DURATION OF THE MANDATE AND TERMS OF OFFICE

Based on a recommendation by the Audit and Compliance Committee, the Board of Directors nominates an independent auditor for election at the Annual General Meeting. PricewaterhouseCoopers (PwC) assumed its existing auditing mandate for Novartis in 1996. The global engagement partner responsible for the mandate, Michael P. Nelligan, and the lead audit partner for Swiss regulatory purposes, Peter Kartscher, began serving in their respective roles in 2009. The Audit and Compliance Committee ensures that the lead auditor partners are rotated at least every five years.

INFORMATION TO THE BOARD OF DIRECTORS AND THE AUDIT AND COMPLIANCE COMMITTEE

The independent auditor, PwC, is responsible for opining on whether the audited consolidated financial statements comply with International Financial Reporting Standards (IFRS) and Swiss law and the separate parent financial statements of Novartis AG comply with Swiss law. Additionally, PwC is responsible for opining on the effectiveness of internal control over financial reporting.

The Audit and Compliance Committee, acting on behalf of the Board of Directors, is responsible for overseeing the activities of PwC. During 2009, the Audit and Compliance Committee held seven meetings. At each of these meetings, PwC was invited to attend during the discussion of agenda items that dealt with accounting, financial reporting or auditing matters and any other matters relevant for their audit.

On an annual basis, PwC provides to the Audit and Compliance Committee the written disclosures required by Rule 3526, Communications with Audit Committees Concerning Independence, of the Public Company Accounting Oversight Board (PCAOB), and the Audit and Compliance Committee and PwC discuss PWC s independence from Novartis and Novartis management.

The Audit and Compliance Committee recommended to the Board of Directors, and the Board of Directors approved, inclusion of the audited financial statements in the Annual Report for the year ended December 31, 2009.

The Audit and Compliance Committee on a regular basis evaluates the performance of PwC and, once yearly, based on the outcome of the performance of PwC, decides on its recommendation to the Board of Directors whether PwC should be proposed to the Annual General Meeting for re-election. Also, once yearly the lead audit partners report to the Board of Directors on the activities of PwC during the current year and on the audit plan for the coming year by attending a Board meeting and answering any questions or concerns the Directors might have on the performance of PwC, or on the work PwC has conducted or is planning to conduct.

In order to assess the performance of PwC, the Audit and Compliance Committee requires a self-evaluation report from PwC, holds private meetings with the Chairman and Chief Executive Officer, the Chief Financial Officer and with the Head of Internal Audit and, if necessary, obtains an independent external assessment, and the Board of Directors also meets with the lead audit partners. Criteria applied for the performance assessment of PwC include technical and operational competence, independent and objective view, sufficient resources employed, focus on areas of significant risk to Novartis, willingness to probe and challenge, ability to provide effective, practical recommendations and open and effective communication and coordination with the Audit and Compliance Committee, the internal audit function and management.

PRE-APPROVAL OF AUDIT AND NON-AUDIT SERVICES

The Audit and Compliance Committee s pre-approval is required for all audit and non-audit services provided by PwC. These services may include audit services, audit-related services, tax services and other services.

Pre-approval is detailed as to the particular services or categories of services, and is subject to a specific budget. PwC and management report, on a quarterly basis, to the Audit and Compliance Committee regarding the extent of services provided in accordance with this pre-approval and the fees for the services performed to date. The Audit and Compliance Committee may also pre-approve additional services on a case-by-case basis.

AUDITING AND ADDITIONAL FEES

PwC charged the following fees for professional services rendered for the 12-month periods ended December 31, 2009 and December 31, 2008:

	2009 USD thousands	2008 USD thousands
Audit Services	24 360	24 963
Audit-Related Services	4 300	3 200
Tax Services	110	400
Other Services	100	558
Total	**28 870**	**29 121**

Audit Services are defined as the standard audit work performed each year in order to issue opinions on the parent company and consolidated financial statements of the Group, to issue opinions relating to the effectiveness of the Group s internal controls over financial reporting, and to issue reports on local statutory financial statements. Also included are audit services that can only be provided by the Group auditor, such as auditing of non-recurring transactions and implementation of new accounting policies, audits of accounting infrastructure system controls, pre-issuance reviews of

Table of Contents

quarterly financial results, consents and comfort letters and any other audit services required for SEC or other regulatory filings.

Audit-Related Services include those other assurance services provided by the independent auditor but not restricted to those that can only be provided by the auditor signing the audit report. They comprise amounts for services such as acquisition due diligence and related audits, audits of pension and benefit plans, IT infrastructure control assessments, contractual audits of third-party arrangements, assurance services on corporate citizenship reporting, and consultation regarding new accounting pronouncements.

Tax Services represent tax compliance, tax returns, assistance with historical tax matters and other tax-related services.

Other Services include training in the finance area, advice for process improvements, benchmarking studies, assessment of certain non-financial processes and license fees for use of accounting and other reporting guidance databases.

FURTHER INFORMATION

THE GROUP STRUCTURE OF NOVARTIS

NOVARTIS AG AND GROUP COMPANIES

Under Swiss company law, Novartis AG is organized as a corporation, which has issued shares of common stock to investors. The registered office of Novartis AG is Lichtstrasse 35, CH-4056 Basel, Switzerland.

Business operations are conducted through Novartis Group companies. Novartis AG, a holding company, owns directly or indirectly all companies worldwide belonging to the Novartis Group. Except as described below, the shares of these companies are not publicly traded. The most important Novartis subsidiaries and associated companies are listed in Note 31 to the Group s consolidated financial statements.

DIVISIONS

The Novartis Group conducts its business through four divisions: Pharmaceuticals, Vaccines and Diagnostics, Sandoz and Consumer Health.

MAJORITY HOLDINGS IN PUBLICLY TRADED GROUP COMPANIES

- 76.42% of Novartis India Limited. The remaining shares are registered for trading on the Bombay Stock Exchange (ISIN INE234A01025, symbol: HCBA). The market value of the Group s interest in Novartis India Limited, as of December 31, 2009, was USD 291.0 million. The total market value of Novartis India Limited was USD 380.8 million.

SIGNIFICANT MINORITY HOLDINGS IN PUBLICLY TRADED COMPANIES

Novartis AG holds

- 33.3% of the bearer shares of Roche Holding AG, with its registered office in Basel, Switzerland, and listed on the SIX Swiss Exchange (Valor No. 1203211, ISIN CH0012032113, symbol: RO). The market value of the Group s interest in Roche Holding AG, as of December 31, 2009, was USD 9.3 billion. The total market value of Roche Holding AG was USD 147.1 billion. Novartis does not exercise control over Roche Holding AG, which is independently governed, managed and operated.

- 24.8% of the registered shares of Alcon Inc., with its registered office in Hünenberg, Switzerland, and listed on the NYSE (symbol: ACL). The market value of the Group s interest in Alcon Inc., as of December 31, 2009, was USD 12.2 billion. The total market value of Alcon Inc. was USD 49.2 billion. Novartis does not exercise control over Alcon Inc., which is independently governed, managed and operated.

- 47.2% of Idenix Pharmaceuticals, Inc. The shares of Idenix Pharmaceuticals are listed on NASDAQ (Valor No. 1630029, ISIN US45166R2040, symbol: IDIX). The market value of the Group s interest in Idenix Pharmaceuticals, Inc., as of December 31, 2009, was USD 67.3 million. The total market value of Idenix Pharmaceuticals, Inc., was USD 142.6 million. Novartis does not exercise control over Idenix Pharmaceuticals, Inc., which is independently governed, managed and operated.

INFORMATION OF OUR STAKEHOLDERS

INTRODUCTION

Novartis is committed to open and transparent communication with shareholders, financial analysts, customers, suppliers and other stakeholders. Novartis aims to disseminate material developments in its businesses in a broad and timely manner that complies with the rules of the SIX Swiss Exchange and the NYSE.

COMMUNICATIONS

Novartis publishes an Annual Report each year that provides information on the Group s results and operations. In addition to the Annual Report, Novartis prepares an annual report on Form 20-F that is filed with the SEC. Novartis discloses quarterly financial results in accordance with IFRS and issues press releases from time to time regarding developments in its businesses.

Novartis furnishes press releases relating to financial results and material events to the SEC via Form 6-K. An archive containing Annual Reports, annual reports on Form 20-F, and quarterly results releases, as well as related materials, such as slide presentations and conference call webcasts, is on the Novartis Investor Relations website (www.novartis.com/investors). A press release archive is available on the Novartis website: http://www.novartis.com/newsroom/media-releases/index.shtml

Table of Contents

Information contained in reports and releases issued by Novartis is only correct and accurate at the time of release. Novartis does not update past releases to reflect subsequent events and advises against relying on them for current information.

INVESTOR RELATIONS PROGRAM

An Investor Relations team manages the Group s interaction with the international financial community. Several events are held each year to provide institutional investors and analysts various opportunities to learn more about Novartis.

Investor Relations is based at the Group s headquarters in Basel, Switzerland. A team is also located in New York to coordinate interaction with US investors. Information is available on the Novartis website: www.novartis.com/investors. Investors are also welcome to subscribe to a free e-mail service on this site.

WEBSITE INFORMATION

Topic	Information
Share Capital	Articles of Incorporation of Novartis AG http://www.novartis.com/corporate-governance Novartis key share data http://www.novartis.com/key-share-data
Shareholder Rights	Articles of Incorporation of Novartis AG http://www.novartis.com/corporate-governance Investor Relations information http://www.novartis.com/investors
Board of Directors and Executive Committee	Board Regulations http://www.novartis.com/corporate-governance
Senior Management	Senior Leadership Team http://www.novartis.com/executive-committee
Novartis Code for Senior Financial Officers	Novartis Code of Ethical Conduct for CEO and Senior Financial Officers http://www.novartis.com/corporate-governance
Additional Information	Novartis Investor Relations http://www.novartis.com/investors

Table of Contents

Table of Contents

Table of Contents

COMPENSATION REPORT

Novartis aspires to be an employer of choice and to attract and retain the best talent worldwide.

Novartis offers associates around the world competitive compensation plans that are transparent, coherent and aligned with the Group s pay for performance philosophy. These plans underline the importance placed on superior performance resulting in sustainable value creation for the Group and its shareholders by satisfying customer needs.

The independent external advisor to the Board s Compensation Committee reviewed this report and concluded that it addresses required topics adequately to ensure transparency of key elements of the Group s compensation philosophy and executive compensation.

CONTENTS

Table of Contents

2009 COMPENSATION REPORT

The Compensation Committee is the supervisory and governing body for the compensation policies and plans within the Novartis Group and has responsibility for determining, reviewing and proposing compensation policies and plans for approval by the Board of Directors, in line with the Compensation Committee Charter.

The Compensation Committee also reviews and approves the employment contracts and the individual compensation for selected key executives, including the members of the Executive Committee.

The Compensation Committee is currently, and was during 2009, composed of four Directors who meet the Novartis Independence Criteria. In 2009, the Compensation Committee held five meetings. The meetings held in January 2009 had the primary purpose of reviewing the performance of the businesses and the respective management teams and determining compensation for the members of the Executive Committee.

The Corporate Governance Guidelines of the SIX Swiss Exchange require listed companies to disclose certain information about the compensation of Directors and the members of the Executive Committee, their equity participation in the company as well as loans made to them. This Compensation Report fulfills that requirement. In addition, our Compensation Report is in line with the principles of the Swiss Code of Best Practice for Corporate Governance of the Swiss Business Federation (economiesuisse).

All compensation plans and levels are reviewed regularly based on publicly available data as well as on analyses by independent compensation research companies and external compensation advisors. Trends and developments in the field of compensation and corporate governance are carefully analyzed, reviewed and discussed on an ongoing basis with outside experts and consultants.

During the year, the Compensation Committee reviewed the Compensation Principles and confirmed that they are appropriate for Novartis.

In accordance with accounting standards and Swiss law, the compensation awarded to Directors and the members of the Executive Committee is also presented in our audited Financial Report in note 27 to the Group s audited consolidated financial statements and note 11 to the audited financial statements of Novartis AG. The objectives, principles and elements of the Novartis Compensation Policy are set out below.

The Members of the Compensation Committee

Hans-Joerg Rudloff (chair)

Ulrich Lehner

Marjorie M. T. Yang

Srikant Datar

For further information on the Compensation Committee organization and responsibilities, see Corporate Governance Report Our Board of Directors Role of the Board and the Board Committees The Compensation Committee.

INTRODUCTION

Since Novartis was created from two traditional Swiss conglomerates in 1996, management has forged a distinctive culture, and inspired old and new associates alike with the shared vision of being one of the world s most admired and respected healthcare companies.

Because the skills and experience of associates needed to realize this vision are highly sought after, Novartis broke ranks with Swiss peers by raising compensation to internationally competitive levels. From the outset of operations, pay for performance has been a byword at Novartis.

Compensation includes a significant variable element in addition to a fixed base compensation. The size of the variable element is based on company or divisional results, and on individual performance against a written set of objectives as well as appraisals of values and behaviors. This novel performance evaluation system aims to foster personal accountability as well as underline the importance of integrity as a driver of business success. To encourage superior performance, variable compensation at Novartis can range up to 200% of the target value of an associate s incentive.

To align associates with the interests of shareholders, a large proportion of variable compensation for executives is paid in the form of equity Novartis shares or share options. A share option plan originally encompassed 400 key executives, but within two years was expanded to an additional 1 000 leaders. Following 2009 performance, almost 11 000 associates participate in the Equity Plan Select , representing a participation rate of approximately 11% of full-time associates worldwide.

Pay for performance has spurred on a culture of meritocracy at Novartis, but checks and balances have been developed to ensure integrity and fairness. The four eyes principle, for example, requires that associates annual objectives and performance evaluations are reviewed separately by supervisors of supervisors. The performance management system includes an annual Organization and Talent Review in which career aspirations of promising associates are discussed with supervisors. Strengths and weaknesses are assessed, development plans are implemented and the next level managers review appraisals as a group, increasing the visibility of promising candidates for career advancement. The Organization and Talent Review has become an essential tool for top management in succession planning and the scope of the program has steadily expanded from a few dozen executives a decade ago to more than 15 000 prospective leaders today.

These core principles of compensation policy and people development have engendered both superior performance and sustained leadership. Novartis has reported record net sales and net income and has raised the annual dividend payout to shareholders for 13 consecutive years. The continuity of leadership Chief Executive Officer Daniel Vasella, M. D., and Chief Financial Officer

Table of Contents

Raymund Breu, Ph. D., have remained in their positions since the creation of Novartis and the support by the Board of Directors were important factors to consistently embed the company s core capabilities of innovation, external focus, people development and performance orientation into the organization.

The crucial importance of innovation and the uniquely long product development and commercialization cycles in our industry underpin our corporate strategy and explain the emphasis on long-term incentives in Novartis compensation policy. Financial targets, innovation and productivity objectives are set to be challenging and to motivate a high degree of business purpose. At the same time, our compensation policy accentuates prudent risk management and deters excessive risk taking to enhance short-term financial gain at the expense of the long-term health of the company.

COMPENSATION PRINCIPLES

Our compensation policies and plans, which apply to all Novartis associates, are based on three key principles:

- Pay for performance
- Competitive compensation
- Balanced rewards to create sustainable value

PAY FOR PERFORMANCE

At all levels, compensation reflects the market value of skills, business results, individual contribution and meeting key behavioral standards.

To create and maintain a high performance culture and ensure transparency, Novartis applies a uniform performance management process worldwide, based on clear quantitative and qualitative criteria.

Novartis associates, including the Chairman and Chief Executive Officer and the other members of the Executive Committee, are subject to a formal objective setting and performance appraisal process that promotes a culture of continuous improvement, supports individuals in meeting their development aspirations and strengthens organizational capabilities. It is a core process for improving individual, team and overall business performance.

For each performance year, line managers and their direct reports jointly determine performance measures and business objectives. These objectives are derived from the business objectives established at the Group, division, function, country or business area levels.

Two performance appraisals are carried out each year a mid-year and a year-end review. The reviews consist of formal meetings between associates and line managers to evaluate performance. In assessing performance, line managers focus on results-oriented measures of performance, as well as on how those results were achieved in other words, whether the decisions and actions leading to those results were consistent with Novartis Values and Behaviors.

Based on the year-end performance rating, line managers and next-level line managers determine the incentive awards for each associate under review as well as the target compensation for the coming year.

To encourage and reward superior performance, total compensation may reach levels comparable to top quartile levels of compensation offered by the relevant benchmark companies.

Any incentive compensation is subject to recovery or claw-back by Novartis. This includes incentive compensation based on statements of earnings, gains or other criteria that are later shown to be materially inaccurate, or incentive compensation achieved through illicit means, such as a violation of the Novartis Code of Conduct, or gross misconduct. The Board mandated changes in the Code of Conduct and individual employment contracts, implementing clawback provisions as part of our compensation policies.

COMPETITIVE COMPENSATION

Competitive compensation is essential to attract talented associates and maintain commitment towards the Group s performance and success in the highly diverse and competitive business environment in which we operate.

Our compensation is designed with reference to total compensation levels for comparable positions at relevant benchmark companies. For example, an associate who achieves his or her performance objectives is generally awarded compensation comparable to the median level of compensation provided by relevant benchmark companies. In case of over- or under-performance, the actual total compensation delivered is adjusted accordingly and may significantly differ from the benchmark median.

Table of Contents

Novartis participates in several compensation benchmarking surveys that provide details on levels of salary, target and actual annual incentives and long-term incentives, the relative mix of short- and long-term incentives, and the mix of cash- and share-based compensation. Benchmark companies vary with and are dependent on the nature of the positions concerned.

For specific pharmaceutical positions, the benchmark group of industry competitors for our 2009 benchmark survey consisted of the following companies:

BENCHMARK GROUP COMPANIES

Abbot Laboratories	**GlaxoSmithKline**	**Roche**
Amgen	**Johnson & Johnson**	**Sanofi-Aventis**
Astra-Zeneca	**Merck**	**Schering-Plough**
Bristol-Myers Squibb	**Pfizer**	**Wyeth**
Eli Lilly		

For other positions we included companies outside our industry, with stature, size and complexity that approximate our own, in recognition of the fact that competition for senior executive talent is not limited to the pharmaceutical industry.

These surveys, which analyze factors such as recent market trends and best practices, are conducted by well-established global compensation consultancy firms. These surveys are checked and supplemented by input from the Compensation Committee s independent advisor, Pearl Meyer and Partners LLC.

BALANCED REWARDS TO CREATE SUSTAINABLE VALUE

Shareholders expect their investment to deliver sustainable returns while at the same time risks are appropriately managed. Indeed, Novartis shareholders emphasized the importance of creating sustainable value by amending our Articles of Incorporation accordingly at the 2009 Annual General Meeting.

Novartis incentives underpin the long-term strategic planning that is essential to address the challenges of innovation and the long development and commercialization cycles that characterize our industry. Appropriate objective setting combined with proper incentive plan design allow our leaders and associates to focus on shaping the Group s future rather than simply reacting to change.

The equity proportion of the incentives rises according to the role, responsibility and accountability of associates. In addition, our equity-based compensation is generally subject to restrictive features such as vesting, forfeiture and blocking to focus behavior of our associates on our long-term interests and align their interests with those of the Group and its shareholders.

We believe that incentivizing our associates to create sustainable value is not only in the interest of the Group and its shareholders, but also encourages performance, loyalty and entrepreneurship of our associates.

COMPENSATION ELEMENTS

Primary elements of compensation earned by Novartis associates are:

- Base compensation a fixed salary
- Variable compensation rewards for individual and business performance
- Benefits including pension and healthcare benefits as well as perquisites

COMPENSATION ELEMENTS

Base compensation	**Variable compensation**	**Benefits**

Table of Contents

For a summary of our compensation elements and their drivers, see the summary table below.

EXECUTIVE COMPENSATION SUMMARY

Compensation element	Compensation plan	Main drivers	Performance measures	Linkage to compensation principles
Base compensation		Position, function, seniority	Market practice	Attract and retain key executives
Short-term variable compensation	Short-term incentive plans	Achievement of business and financial objectives and individual objectives	Financial measures such as net sales, operating income, free cash flow, market share, innovation and ongoing efforts to optimize organizational effectiveness and productivity Achievement of annual individual objectives	Pay for performance Attract and retain key executives
Long-term variable compensation	Equity Plan Select	Achievement of business and financial objectives and individual objectives	Individual year-end performance rating, talent rating and Group or business area performance	Align executives with interests of shareholders Sustainable business performance
	Long-Term Performance Plan	Achievement of long-term profit, measured through Economic Value Added (EVA) targets at Group level	Group EVA achievement	Attract and retain key executives
	Special Share Awards	Rewarding particular achievements or exceptional performance	Discretionary	
Benefits		Position, function, seniority	Market practice	Establish a level of security in respect of age, health, disability and death

BASE COMPENSATION

Base compensation rewards associates for performing day-to-day responsibilities and reflects job characteristics, seniority, experience and skill sets. It is paid in cash, typically monthly, and is set according to local practice designed to provide our associates with fixed compensation to ensure a reasonable standard of living relative to that offered by our peer companies.

In general, base compensation is reviewed annually to ensure that competitive pay is maintained and undesired fluctuations are minimized.

Base compensation also serves as the basis for determining the variable compensation.

VARIABLE COMPENSATION

Variable compensation is a combination of short-term and long-term incentives with a focus on aligning our compensation objectives with our shareholders interests. It is determined by the nature of the business, role, location, business performance and an associate s individual performance.

Variable compensation may be granted in cash, shares or share options, depending on the plans. For purposes of the conversion of variable compensation into shares or share options, the conversion values of a Novartis share and share option are determined as the closing prices on the grant date, which for 2009 performance is January 19, 2010.

SHORT-TERM INCENTIVE PLANS

Awards under the short-term incentive plans are made each year, calculated by the following formula:

ANNUAL INCENTIVE CALCULATION FORMULA

Actual annual incentive percentage	**=**	**Target incentive percentage**	x	**Business performance multiplier**	x	**Individual performance multiplier**

Under these plans, Novartis defines target incentive percentages of base compensation for each participating associate at the beginning

Table of Contents

of each performance period - traditionally the start of a new year. Target incentive percentages may reach up to 100% of base compensation.

The business performance multiplier is based on the performance of the Group or business area and may range from 0 to 1.5 of the target amount.

The individual performance multiplier is based on achievement of individually set performance objectives and meeting key behavioral standards (Novartis Values and Behaviors). It may range from 0 up to 1.5 of the target amount.

In general, the business performance multiplier combined with the individual performance multiplier may not exceed 2. For exceptional performance, however, higher performance multipliers may apply. Such cases require the approval of the Chairman and Chief Executive Officer and, for key executives, also the approval of the Compensation Committee.

This broad range of target incentive percentages and multipliers allows for meaningful differentiation on a pay for performance basis.

Associates in certain countries and certain key executives worldwide are encouraged to receive their annual incentive awards fully or partially in Novartis shares instead of cash by participating in a leveraged share savings plan.

Under leveraged share savings plans, Novartis matches investments in shares after a holding period. In general, no shares are matched under these plans if an associate leaves Novartis prior to expiration of the holding period for reasons other than retirement, disability or death.

Novartis has three main leveraged share savings plans:

- The Swiss Employee Share Ownership Plan (ESOP) is available in Switzerland to approximately 11 600 associates. Participants within this plan may choose to receive the incentive (i) 100% in shares, (ii) 50% in shares and 50% in cash or (iii) 100% in cash. After expiration of a three-year holding period, each participant will receive one free matching share for every two Novartis shares acquired and continuously held under the ESOP. A total of 5 080 associates chose to receive shares under the ESOP for their performance in 2009.

- In the United Kingdom, associates can invest up to 5% of their monthly salary in shares (up to a maximum of GBP 125) and may also be invited to invest all or part of their net incentive in shares. Two invested shares are matched with one share after a holding period of three years. During 2009, approximately 1 550 associates participated in this plan.

- 28 key executives worldwide were invited to participate in a Lever- aged Share Savings Plan (LSSP) as part of compensation for performance in 2009. Shares in this plan are invested for five years. At the end of the investment period, Novartis matches the invested shares at

a ratio of 1: 1 (i. e., one share awarded for each invested share).

Associates may only participate in one of these plans in any given year.

LONG-TERM INCENTIVE PLANS

Equity Plan Select

Participants in this plan can elect to receive their incentive in the form of shares, share options, or a combination of both. In some jurisdictions Restricted Share Units (RSU) are granted rather than shares. Each RSU is equivalent in value to one Novartis share and is converted into one share at the vesting date. Awards under the Equity Plan Select may be granted each year based on the associate s performance, potential and Group or business area performance. No awards are granted for performance ratings below a certain threshold.

Each share is valued against the closing market price of the share at the grant date (January 19, 2010 for performance grants in 2009). After the incentive has been awarded, its value goes up or down based on the Novartis share price performance. Shares granted receive dividends and have voting rights during the vesting period. RSUs do not carry any dividend or voting rights.

Each share option granted to associates entitles the holder to purchase one Novartis share at a stated exercise price that equals the closing market price of the underlying share at the grant date (January 19, 2010 for performance grants in 2009). If associates in North America choose to receive part or all of their grant under the Equity Plan Select in share options on American Depositary Receipts (ADRs), the resulting number of share options is determined by dividing the respective incentive amount by a value that equals 95% of the International Financial Reporting Standards (IFRS) value of the options on ADR. For associates in other countries, the divisor equals 90% of the IFRS value of options on shares.

Share options are tradable, when vested, and expire on their tenth anniversary. Shares and tradable share options have a vesting period of two years in Switzerland and three years in other countries. As a result, if a participant leaves Novartis for reasons other than retirement, disability or death, unvested shares and share options are forfeited, unless determined otherwise by the Compensation Committee (for example, in connection with a reorganization or divestment).

The terms of the share options granted since 2006 are shown in the table below.

TERMS OF SHARE OPTIONS

Grant year	Exercise price (CHF/USD)	Vesting (years) (CH/other countries)	Term (years)
2010	55.85/53.70	2/3	10
2009	53.65/46.42	2/3	10
2008	64.05/57.96	2/3	10
2007	72.85/58.38	2/3	10
2006	71.30/54.70	2/3	10

Table of Contents

A total of 10 825 participants received 25.6 million share options and 5 777 586 restricted shares under the Novartis Equity Plan Select for their performance in 2009, representing a participation rate of about 11% of all full-time equivalent associates worldwide. Approximately 9% of the total equity value awarded under the plan was granted to the members of the Executive Committee.

2009 TOTAL EQUITY VALUE AWARDED UNDER THE EQUITY PLAN SELECT

As of December 31, 2009, 92.2 million share options granted to associates were outstanding, covered by an equal number of shares and corresponding to 3.7% of the total number of outstanding Novartis shares (excluding treasury shares).

Long-Term Performance Plan

The Long-Term Performance Plan is an equity plan granted to key executives based on a three-year performance period.

At the beginning of the performance period, plan participants are allocated RSUs which may be converted into Novartis shares after the period.

At the end of the performance period, the Compensation Committee adjusts the number of RSUs based on actual performance. The performance is measured by Group Economic Value Added (EVA), a formula to measure corporate profitability while taking into account the cost of capital. No incentive is awarded if actual Group EVA performance fails to meet a pre-determined threshold (or if the participant leaves during the performance period for reasons other than retirement, disability or death). For outstanding Group EVA performance the adjustment can go up to 200% of the target incentive.

At the Award Date, RSUs are converted into unrestricted Novartis shares without vesting period. In the United States, awards may also be delivered in cash under the Deferred Compensation Plan.

LONG-TERM PERFORMANCE PLAN PERIOD

On January 19, 2010, 110 key executives were awarded Novartis shares under the Novartis Long-Term Performance Plan, based on Group EVA achievement over the performance period 2007 to 2009.

LONG-TERM PERFORMANCE PLAN PARTICIPANTS HISTORY

Grant year = Target setting	Performance period	Award year = Payout in shares	Plan participants (number of key executives)
2010	2010-2012	2013	118
2009	2009-2011	2012	107
2008	2008-2010	2011	109
2007	2007-2009	2010	110

Special Share Awards

Selected associates may exceptionally receive special awards of restricted or unrestricted shares. These special share awards are discretionary, providing flexibility to reward particular achievements or exceptional performance. They may also serve to retain key contributors.

Restricted special share awards generally have a five-year vesting period. If an associate leaves Novartis for reasons other than retirement, disability or death, he or she will generally forfeit unvested shares. Worldwide 327 associates at different levels in the organization were awarded a total of 1 158 643 shares in 2009.

SOURCE OF AWARDED SHARES

Novartis uses shares repurchased in the market to fulfill obligations to deliver shares as required by the variable compensation plans and special share awards.

Novartis does not have any approved conditional capital to obtain shares for delivery of our share awards.

BENEFITS

The primary purpose of pension and healthcare plans is to establish a level of security for associates and their dependents in respect of age, health, disability and death. The level of pension and healthcare benefits provided to associates is country-specific and is influenced by local market practice and regulations.

Table of Contents

Other benefits that Novartis may grant in a specific country according to market practice are long-service awards and perquisites. Associates who have been transferred on an international assignment can also receive benefits in line with the Novartis Corporate Expatriation Policy.

COMPENSATION 2009

COMPENSATION GOVERNANCE

DECISION-MAKING AUTHORITIES

Authorities for compensation related decisions are governed by the Articles of Incorporation, the Board Regulations and the Compensation Committee Charter, which are published on the Novartis website: www. novartis. com/corporate-governance

The authorization levels are shown below.

COMPENSATION AUTHORIZATION LEVELS

Decision on	Recommendation	Authority
Compensation of Non-Executive Directors	Compensation Committee	Board of Directors
Compensation of Chairman and Chief Executive Officer		Compensation Committee
Compensation of the members of the Executive Committee (excl. Chairman and Chief Executive Officer) and other selected key executives	Chairman and Chief Executive Officer	Compensation Committee
Annual incentive plans and Equity Plan Select	Executive Committee	Compensation Committee
Long-Term Performance Plan	Executive Committee	Compensation Committee

COMPENSATION COMMITTEE ADVISOR

The Compensation Committee currently uses Pearl Meyer & Partners LLC as its independent external compensation advisor. The advisor assists the Compensation Committee to ensure that the Novartis compensation policies and plans are competitive, corresponding to market practice and in line with our compensation principles. The advisor s work for the Compensation Committee includes data analyses, market assessments, and preparation of related reports.

Pearl Meyer & Partners LLC is independent from management and does, in particular, not perform any other consulting work for Novartis. The advisor reports directly to the Compensation Committee and takes direction from that Committee.

The Compensation Committee enters into a consulting agreement with its independent advisor on an annual basis. In determining whether or not to renew the engagement with the advisor, the Compensation Committee evaluates the quality of the consulting service and annually assesses the projected scope of work for the coming year.

Based on the appraisal for 2009, the Compensation Committee determined that the advisor is free of any relationships that would impair professional judgment and advice to the Compensation Committee.

NON-EXECUTIVE DIRECTORS COMPENSATION

Recognizing that Novartis is a global healthcare company, the level of Non-Executive Director compensation has been established to ensure the ability of Novartis to attract and retain high-caliber Directors.

Compensation of Non-Executive Directors diverges from the compensation principles of Novartis associates outlined above.

The Board annually determines the compensation of Non-Executive Directors based on a proposal made by the Compensation Committee. Annual fees for Non-Executive Directors consist of a directorship fee. Non-Executive Directors receive additional fees that vary with the number of Board committee memberships and functions to reflect their increased responsibilities and engagements. Non-Executive Directors do not receive additional fees for attending meetings. The fee rates for Non-Executive Directors are the following:

NON-EXECUTIVE DIRECTORS ANNUAL FEE RATES

	Annual fee (CHF)
Board directorship	350 000
Lead Director	300 000
Vice Chairman	50 000
Chairman s Committee membership	150 000
Audit and Compliance Committee membership	100 000
Risk Committee membership	25 000
Compensation Committee membership	50 000
Corporate Governance and Nomination Committee membership	50 000
Delegated board directorship (1)	250 000

(1) The Board has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

Non-Executive Directors can choose to receive the annual fee in cash, shares or a combination of both. They do not receive share options.

Table of Contents

NON-EXECUTIVE DIRECTORS COMPENSATION IN 2009 (1)

	Board directorship	Lead Director	Vice Chairman	Chairman Committee	Audit and sCompliance Committee	Risk Committee (2)	Compensation Committee	Corporate Governance and Nomination Committee	Delegated board directorship	Annual cash compensation (CHF)	Shares (number)	T (CI
Ulrich Lehner	•	•	•	•	•	•	•	Chair		1 107 172	0	1 1
Hans-Joerg Rudloff	•		•	•	•	•	Chair			736 337	0	7
William Brody	•									218 750	2 447	3
Srikant Datar	•				Chair	•	•			406 250	1 748	5
Ann Fudge	•							•		340 000	1 119	4
Alexandre F. Jetzer-Chung (4)	•									367 722	0	3
Pierre Landolt (5)	•							•		128 602	5 480	4
Andreas von Planta	•				•	Chair		•		426 576	1 864	5
Wendelin Wiedeking	•									112 692	4 795	3
Marjorie M. T. Yang	•						•			422 601	0	4
Rolf M. Zinkernagel (6)	•							•	•	683 752	0	6
Total										**4 950 454**	**17 453**	**5 8**

See note 11 to the Financial Statements of Novartis AG for 2008 data.

(1) Does not include reimbursement for travel and other necessary business expenses incurred in the performance of their services as these are not compensation. All shares were granted as per January 20, 2009 against the prevailing share price of CHF 53.65.

(2) Established on December 2, 2009. The members of this Committee received no related fees for 2009.

(3) A Non-Executive Director who is tax resident in Switzerland can voluntarily choose to block the shares. In 2009, Andreas von Planta blocked his shares for five years. The value of the shares reflected in this table has been calculated using the valuation methodology described under Compensation 2009 Compensation for Performance in 2009 Valuation Principles.

(4) In addition, Alexandre F. Jetzer-Chung was paid CHF 380 004 for consulting services.

(5) According to Pierre Landolt, the Sandoz Family Foundation is the economic beneficiary of the compensation.

(6) The Board has delegated Rolf M. Zinkernagel to the Scientific Advisory Board of the Novartis Institute for Tropical Diseases (NITD) and to the Board of Directors of the Genomics Institute of the Novartis Research Foundation (GNF).

COMPENSATION OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

DECISION-MAKING PROCESS

At the beginning of a business year, the Compensation Committee meets with the Chairman and Chief Executive Officer to discuss and set his objectives for the coming year. The Board reviews and approves these objectives, ensuring that they are in line with the Group s goals of fostering sustainable performance balancing short- and long-term goals and reasonable risk taking. The objectives include financial and non-financial objectives, such as growth of net sales and profits, EVA, innovation, process and productivity improvements and objectives related to human resources.

At the end of a business year, the Chairman and Chief Executive Officer prepares a self-appraisal assessing actual results against the previously agreed objectives, taking into account the audited financial results. The self-appraisal is discussed with the Lead Director and the Board. The Lead Director also holds individual discussions with all independent Non-Executive Directors about the performance of the Chairman and Chief Executive Officer.

The Board evaluates the extent to which targeted objectives have been achieved and to the extent possible compares these results with peer industry companies, taking into account general financial criteria and industry developments. The independent Non-Executive Directors then discuss the overall performance of the Chairman and Chief Executive Officer and share their appraisal with him afterwards. Based on this appraisal, the Compensation Committee decides upon the Chairman and Chief Executive Officer s total compensation and the target compensation for the coming year. The Compensation Committee takes into account all relevant factors, including available benchmark information and the advice of the Compensation Committee advisor.

OBJECTIVES FOR VARIABLE COMPENSATION OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The Compensation Committee measures the performance of the Chairman and Chief Executive Officer relative to predetermined objectives for short-term and long-term criteria.

The financial criteria for short-term performance appraisal typically include growth objectives for net sales, operating income, net income and earnings per share. For long-term performance appraisal, the financial criterion is EVA.

Non-financial objectives typically include: successful acquisitions, disposals and licensing transactions, Research and Development performance, product launches, successful implementation of growth or cost containment initiatives, process improvements or the successful launch of new sites or operations.

Table of Contents

Novartis does not disclose specific objectives because it would signal areas of strategic focus and impair the Group s ability to leverage these areas for competitive advantages. For example, disclosure of our cash flow objectives would provide insight into timing of large capital investments or acquisitions. In addition, knowledge of the objectives could be used by competitors to target the recruitment of key executives from Novartis. Disclosing specific objectives and metrics would also give our competitors insight into key market dynamics and areas that could be used against Novartis competitively by industry consultants or competitors targeting existing customers.

CHAIRMAN AND CHIEF EXECUTIVE OFFICER COMPENSATION HISTORY

Year	Base compensation (CHF)	Short-term incentives		Total cash compensation (CHF) (1)	Total compensation (CHF)
		Cash	Shares		
2009	3 000 000	0%	100%	3 295 395	20 471 929
2008	3 000 000	0%	100%	3 175 485	20 544 032
2007 (2)	3 000 000	0%	100%	3 166 630	17 037 002
2006	3 000 000	0%	100%	3 058 773	21 068 072
2005	3 000 000	0%	100%	3 257 474	21 257 120
2004	3 000 000	0%	100%	3 016 649	20 786 304

(1) Cash includes all benefits except pension benefits.

(2) Since 2007, disclosed compensation includes all amounts awarded for performance in the given year, i.e., the reporting of annual compensation is synchronized with the performance in that specific year.

PERFORMANCE IN 2009

The Compensation Committee made decisions on the Chairman and Chief Executive Officer s 2009 compensation at its meeting on January 19, 2010, in accordance with the established process and guided by the compensation elements described above.

The achievements were assessed from both a quantitative and a qualitative perspective, with the Compensation Committee using its judgment in concert with a review of metrics. This is in line with Novartis best practice in assessing a senior executive s performance.

The Compensation Committee recognized the following key accomplishments regarding the performance of the Chairman and Chief Executive Officer for 2009:

- Novartis Group achieved record results for 2009, both in sales and in profits;

- The Pharmaceuticals Division delivered outstanding performance during 2009, driven by new product growth and rejuvenation of the portfolio, bringing significant contributions to patients and value to shareholders and gaining market share;

- Consumer Health and Sandoz, the generics division, showed solid underlying growth, accelerating in the fourth quarter, and market share gains;

- The Vaccines and Diagnostics Division exceeded its targets thanks to the rapid response to the demand for influenza A (H1N1) pandemic vaccines;

- Project Forward exceeded its productivity target by almost 70% and one year ahead of plan;

- Despite the largest recession in decades, Novartis achieved record results and has proposed to shareholders a dividend increase of 5%; and

- Novartis was able to increase employment by 3% and increase results without any large restructurings or personnel reductions, taking into account the broader stakeholder interests.

Despite the global economic crisis that shaped the year, the Chairman and Chief Executive Officer

- Strategically transformed Novartis, focused clearly on growth areas of the healthcare market with the recently announced acquisition of Alcon, and strengthening the generics division San-doz with the acquisition of EBEWE (injectable cancer medicines), and acquiring an 85% stake in the Chinese vaccines manufacturer Zhejiang Tianyuan;

- Furthered innovation, achieving a record number of positive proof of concept trials, product development milestones and approvals; and

- Developed and retained talent with an excellent retention rate of high performers and high-potential associates within Novartis.

The compensation granted by the Compensation Committee to the Chairman and Chief Executive Officer for 2009 is detailed in the Executive Committee Compensation table. While the compensation awarded for 2008 increased by 21% compared to 2007, the compensation awarded for 2009 is similar to 2008.

COMPENSATION OF THE OTHER MEMBERS OF THE EXECUTIVE COMMITTEE

DECISION-MAKING PROCESS

In January, the Board meets with the Chairman and Chief Executive Officer to review and discuss the performance of the other members of the Executive Committee for the previous year, taking into account the audited financial results as well as the level of achievement of financial and non-financial objectives.

In a separate session, the Compensation Committee decides, in the presence of the Chairman and Chief Executive Officer and based on his recommendations, on the variable compensation for the other members of the Executive Committee and other selected key executives for the previous year. At the same meeting, the Compensation Committee decides on the target compensation for these executives for the coming year.

In addition to the full year, the mid-year performance of the other members of the Executive Committee is reviewed in June. At the same time, the Board also carries out a mid-year review of the performance of the individual businesses.

Table of Contents

CHALLENGING PERFORMANCE OBJECTIVES

Compensation of our other members of the Executive Committee is highly linked to Group performance against performance objectives. Divisional performance objectives include the following key metrics:

- Net sales;
- Operating income;
- Free cash flow as a percentage of sales;
- Economic Value Added;
- Market share;
- Innovation; and
- Ongoing efforts to optimize organizational effectiveness and productivity.

These metrics and their weightings are designed to appropriately balance short-term and long-term objectives. On the one hand, objectives are set at aggressive levels each year to motivate a high degree of business performance with emphasis on longer term financial objectives. On the other hand, they are also designed to ensure they do not include an inappropriate amount of risk.

PERFORMANCE IN 2009

At its meeting on January 19, 2010, the Compensation Committee decided on the amounts of variable compensation for 2009 for the other members of the Executive Committee by applying the principles described above. The specific compensation decisions made for the other members of the Executive Committee reflect their achievements against the financial and non-financial performance objectives established for

each of them at the beginning of the year.

COMPENSATION FOR PERFORMANCE IN 2009

The compensation table on the following page discloses the compensation granted to the members of the Executive Committee, including the Chairman and Chief Executive Officer for performance, in 2009. The following paragraphs describe the principles underlying the data in the table.

ALIGNMENT OF REPORTING AND PERFORMANCE

The compensation table synchronizes the reporting of annual compensation with the performance in the given year, i.e., all amounts awarded for performance in 2009, including the future LSSP/ESOP match, are disclosed in full.

DISCLOSURE STRUCTURE

The compensation table shows the compensation granted to each member of the Executive Committee for performance in 2009 for all compensation elements base compensation, variable compensation and benefits as described above.

The column Future LSSP/ESOP match reflects shares to be awarded in the future if the member of the Executive Committee remains with Novartis for at least five or three years, respectively. The members of the Executive Committee were invited to invest their annual incentive awards for 2009 in the leveraged share saving plans either the three-year Swiss Employee Share Ownership Plan (ESOP) or the five-year Leveraged Share Savings Plan (LSSP) to further align their interests with those of our shareholders. Under the plan rules, participants will receive additional shares (matching shares) after the expiration of either the three- or five-year vesting period. Under the five-year LSSP plan, each share invested entitles the participant to receive one matching share. Under the three-year ESOP plan, for every two shares invested, the participant receives one matching share. If a participant leaves prior to the expiration of the vesting period, in general, no matching shares are awarded.

VALUATION PRINCIPLES

Shares and share options under the variable compensation plans are generally granted with a vesting(1) period. In addition, associates in Switzerland, including the members of the Executive Committee, may block(2) shares received under any variable compensation plan for up to 10 years.

The Compensation Committee believes that such restrictions affect the value of the shares and share options.

The Swiss Federal Tax Administration, in its Kreisschreiben Nr. 5 , provides for a methodology pursuant to which unvested or blocked shares or share options shall be valued with a discount for each year they are unvested or blocked. In addition, for the valuation of share options, the Swiss Tax Authorities apply in a standing practice for Novartis (since 1997) an option valuation model based on Black-Scholes.

In the Compensation Committee s view, this is the appropriate methodology to report the economic value of shares and share options for executive compensation under Swiss law because, unlike IFRS, it takes into account the trading restrictions due to vesting and blocking. The application of this methodology to determine the value of the shares and share options granted for the year 2009 is explained in footnote 9 to the Executive Committee Compensation table below and applies to all members of the Executive Committee.

See note 27 to the Group s consolidated financial statements for information on executive officer and Director compensation as reported under IFRS.

---

(1) Vesting refers to the waiting period under an equity-based incentive plan that must expire before the associate becomes irrevocably entitled to the shares or share options involved. The associate cannot sell or exercise unvested share or share options. If an associate leaves before the end of the vesting period for reasons other than retirement, disability or death, the associate will generally forfeit his or her rights to such shares or share options.

(2) Blocking refers to the ability of associates in Switzerland to opt for an extended trading restriction period of up to 10 years from the award date (including vesting). Novartis encourages associates to block their shares because doing so aligns the associates interests with those of shareholders.

Table of Contents

EXECUTIVE COMMITTEE COMPENSATION FOR PERFORMANCE IN 2009 (1)

		Base compensation	Variable compensation						Benefits	Total	
			Short-term incentive plans		Long-term incentive plans						
	Currency	Cash (Amount)	Cash (Amount)	Shares (Number)(2)	Equity Plan Shares (Number)(3)	Select Options (Number)(4)	Long-Term Performance Plan Shares (Number)(5)	Special share awards Shares (Number)(6)	Pension benefits (Amount)(7)	Other benefits (Amount)(8)	(Amount
Daniel Vasella (Chairman and Chief Executive Officer)	CHF	3 000 000	0	113 018	161 146	1 630 435	74 987	37 279	146 503	295 395	16 947
Raymund Breu	CHF	1 125 504	0	18 210	0	736 957	13 963	11 639	106 109	0	3 275
Juergen Brokatzky-Geiger	CHF	663 924	0	11 997	28 792	0	8 279	0	163 128	30 006	3 251