

# CSR Report 2005 Astellas Pharma Inc.





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## Astellas Pharma Inc.

The Astellas corporate brand mark is depicted by the "Flying Star," a beautiful shining star moving toward the future. This corporate brand mark reflects the corporate vision of Astellas — to deliver hope and happiness to all for a healthy life, supported by state-of-the-art science, technology and new insights. The red color represents an enriched and healthy lifestyle that embodies "quality of life," while the gray text expresses credibility in state-of-the-art science and technology.

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"Astellas will fulfill its social responsibilities with integrity."

Toichi Takenaka, Ph.D.

Joichi Jakenaka



Astellas Pharma Inc. was created through the merger of Yamanouchi Pharmaceutical Co., Ltd. and Fujisawa Pharmaceutical Co., Ltd. on April 1, 2005.

Our overriding aspiration is to create innovative medicines to benefit patients suffering from illnesses, and to respond to the needs of our customers through the provision of timely and appropriate information. Astellas aspires to achieve these goals in markets throughout the world, and aims to realize its ambition of contributing toward improving the health of people around the world by providing superior products and services as a global pharmaceutical company created in Japan. To attain these goals, we must obtain the trust of all our stakeholders, including our customers, shareholders, and employees, and strive to protect the environment and contribute to society. We want the presence and enterprise value of Astellas to be recognized on that basis.

It goes without saying that a firm that does not succeed economically will go out of existence. However, one sees numerous examples of companies that have lost the trust of society as the result of not paying enough attention to legal and ethical concerns, while giving excessive priority to the bottom line.

On the other hand, with respect to environmental issues, climate change accompanying global warming is influencing economic activity on a global scale. It is thought that this influence will extend directly and indirectly to all social systems, with mounting pressure on corporations to take environmental initiatives. Additionally, in order to develop global business, we need to be accepted by the societies of many nations and regions.

For these reasons, Astellas recognizes that corporate social responsibility (CSR) is a critical management issue. In creating Astellas, we have undertaken a range of environmental and safety tasks, along with Company-wide compliance and social activities. We intend to positively fulfill our social responsibilities. In other words, we have initiated CSR-based management — socially responsible management.

Our CSR Report 2005 introduces the CSR initiatives we launched as we started the new company. It brings together the activities reported by Yamanouchi in its Social and Environmental Report, and by Fujisawa in its Environmental Report. CSR initiatives had been taken by both of the original companies for quite some time in response to the needs of society and the changing times. Astellas's efforts began by continuing and developing these activities undertaken prior to the merger.

While the CSR concept covers a lot of ground and is at times hard to define, we are thinking proactively and positively about the sorts of CSR activities befitting Astellas in the days to come, and would like to put these into practice and continuously make these activities public through CSR reports.

We request your understanding and further support.

September 2005

## Top interview

"Our wish is to contribute to the health of the people of the world as a global pharmaceutical company created in Japan."



Hatsuo Aoki, Ph.D. Chairman

The following are excerpts from an interview with Chairman Hatsuo Aoki and President and CEO Toichi Takenaka. (The interview was conducted by Ms. Seiko Tsuchiya, a freelance writer.)

#### Aiming to be an R&D-driven company fully competitive in the global market

Takenaka: Four months have passed since the birth of Astellas Pharma Inc. through the merger of Fujisawa and Yamanouchi. We began the effort two years ago after Mr. Aoki and I came to a common understanding that we would build a global corporation with a high level of operations that would contribute to the lives of the people of the world. Harmonizing human resources has gone even more smoothly than we expected, even though various problems are usually encountered when two groups are brought together. Our business results have also been good, and we have reached the targets that we set. We would like to express our appreciation to the shareholders of both companies who have supported the merger, and would also like to thank our customers, business partners, and the relevant authorities who provided cooperation. We also want to warmly thank all the employees of the group, who have energetically worked to make the merger a success while undertaking their daily tasks so diligently.

Aoki: I also think that Astellas has made to a fine start. We are in a situation in which mergers are being carried out by pharmaceutical companies overseas, and at the same time, the Japanese market is remaining at the same scale with little or no growth. This means that, in order to survive, companies must expand operations in global markets. However, there were limits to what one company could achieve in terms of capital, scale of operations, and the level of capabilities at hand. Yamanouchi and Fujisawa were established on remarkably similar principles, and the ways in which they subsequently grew were also quite similar. Nevertheless, their fields of specialization were quite different. It is a situation in which the two companies had the same broad ambitions yet different areas of strength. This is an ideal partnership. The consolidation of the two companies will surely lead to a synergetic effect conducive to further growth. It is important to realize that Astellas's operations have just begun, and we must strive to link the good start we have made with business results down the road.

**Takenaka:** I agree. We have completed the stage of bringing the two companies together. There will be many challenges in the period ahead. Our aim is to be an R&D-driven company that is fully competitive in the global market. The fundamental management process of developing new products will be based on investing profits earned from worldwide sales of products we develop back into further research and development. That is what we mean when we talk about an R&D-driven global company. We intend to bring superior products to the world's markets that will serve as therapies for patients afflicted by disease. Continuously bringing new products to market will add to our global competitive strength.

#### Moving ahead as a company with integrity

**Takenaka:** I am very happy to work at a pharmaceutical company. This is because we are able to help people suffering from disease. Our business, of itself, is a valuable contribution to society. The overwhelming majority of employees who have joined the Company are also motivated by a desire to help people. Expanding our business globally means we are expanding the scale of our opportunities to contribute to society.

**Aoki:** This is the most important social responsibility that pharmaceutical companies bear. Since its formation, Astellas has enjoyed steady sales growth. This is ample evidence that our products are contributing to society. However, this does not mean that we can do whatever we want to expand sales. In the words of Professor Katsuhito Iwai at the University of Tokyo, a company is a thing, yet, because a corporation has an individual character just the way a person does, as long as a company exists, it will face the challenge of personal responsibilities.

I think there are three ways in which a company, as a legal entity, must be "correct." A company must be "ethically correct," "legally correct," and "correct in the way it adheres to regulations." In this sense, if a company is correct in its practice, it is a good company. This is our other major area of social responsibility.

**Takenaka:** We always want to be an honest, principled company. To do this, Astellas intends to go beyond simply obeying laws and regulations. The company intends to base all of its business activity on the highest of ethical standards. To honestly uphold such principles, properly providing information about safety is of the utmost importance. The way medicine is administered can adversely affect its safety and effectiveness. Side-effects can be the negative aspect of medicines triumphing over disease and playing a role in health maintenance.

Information on side-effects must be properly given to customers and correctly disclosed to society. No one will deny that corporations must strive to increase earnings. Today, however, involvement in business alone is not sufficient for sustainable existence. A company's true mission is to meet the expectations of stakeholders. Corporations are called on to develop this capability.



#### Focusing on employees and the environment

**Aoki:** In recent years, various important points have been raised in discussions of CSR. I feel that the essence of CSR is the continued existence of a company. If a company is operating properly, it is providing a livelihood — a place of employment — for a large number of people. At the same time, it serves as a place where people can grow and find a true meaning in life. I think that this is the most important, most essential aspect of CSR.

To do this, the company must be a place where it is comfortable to work. At Astellas, we are promoting a new workplace environment. We have done away with the practice whereby executives and employees address one another by their job titles. They address each other with the person's name followed by "san," which is the Japanese equivalent of Mr. or Ms. A title of an executive or an employee is not an indication that he or she is superior or inferior to others. It is only an indication of his/her role in the system. Therefore, we call on our staff to use the same polite form of address used in general society. These initiatives are leading to the type of active and positive communication among company employees that will help form the type of company that we all want to see.

Takenaka: One more critical CSR point is to give consideration to the environment. This is also the starting point of both Fujisawa's and Yamanouchi's CSR. A concrete example of the burden our industry places on the environment is that, in comparison to the physical weight of the goods they produce, pharmaceutical companies use an unexpectedly high amount of energy. Our products are required to meet high quality and safety standards. For this reason, we manufacture them in a closed environment in which air conditioning is tightly controlled. However, while seeking high safety and quality, all employees must recognize and make efforts to reduce energy usage and CO<sub>2</sub> emission.

As I was born and raised near the ocean, I have always



Toichi Takenaka, Ph.D. President & CEO

loved marine life, and even now, whenever I have time, I visit aquariums. My fascination with the astonishing diversity of marine life renews my feeling of responsibility and realization that our business activities must not destroy the Earth's ecosystem. It gives me much to think about as an executive officer.

**Aoki:** Both Yamanouchi and Fujisawa have up until now taken firm steps to reduce the impact they place on the environment by such efforts as careful management of chemicals and recycling of wastes. We intend to continue these activities and establish even higher goals.

Takenaka: We are operating in various countries, and it is likely that CSR requirements will differ from country to country. We hope to fulfill our responsibility as a global company while responding to the needs of every country in which we operate. It is said that, to this day, treatments for three out of four diseases have not yet been discovered. This means there are many areas where we can contribute to society. In the future, as we face new challenges and test new alternatives, we hope to provide medicines that can satisfy patients throughout the world.



#### Thoughts after concluding the interview Seiko Tsuchiya, freelance writer

"Being able to work at a pharmaceutical company is a pleasure." This statement made by President Takenaka impressed me greatly. I could feel his strong desire to contribute to society through the operations of his company. Hearing both executives say that they want to manage a "good" company — one that successfully

balances its responsibilities to society with its need to expand earnings — I realized that they were not going out of their way to say something about CSR. Rather, CSR efforts were being incorporated into the Company's business activities as a matter of course. I also gained the impression from all of the staff at the newly established CSR department, that they were just naturally promoting CSR, without this being forced on them from above. In the future, as operations expand globally, I think Astellas will be able to earn recognition for being a truly splendid company — not simply a Japanese pharmaceutical company that makes good products.

## Approach to editing CSR Report 2005

Astellas Pharma Inc. was established on April 1, 2005 through the merger of Yamanouchi Pharmaceutical Co., Ltd. and Fujisawa Pharmaceutical Co., Ltd. CSR Report 2005 is a report on the environment, society and economy issued by the Astellas Group (Astellas), which is centered on Astellas Pharma. As fiscal 2005 is the first year for Astellas, the report will outline the current state of the new group, using data, action policies, action plans and various rules and regulations. We will also focus on our tasks, goals and thinking as we aggressively implement CSR management.

The fiscal 2004 activities discussed in this report are the individual efforts by Yamanouchi and Fujisawa. However, as the current fiscal year is the first for the newly created Astellas, the names of the facilities and group companies used in this report are generally those used in corporate activities undertaken following the merger on April 1, 2005. The names of businesses and business locations that concluded operations as of March 31, 2005 are those used prior to the merger. The numerical data on environmental activities and health activities up to the end of March 2005 were calculated by simply combining the two companies' results based on a unified standard calculation method and conversion coefficients.

The group's economic activities are only outlined in this report because a summary of their business results, annual reports required by the Securities and Exchange Commission, and the status of new drug development are provided as Investor Relations information on our website (http://www.astellas.com).

## Significant changes up to April 1, 2005

On October 1, 2004, Yamanouchi and Fujisawa merged their respective OTC divisions and established Zepharma Inc., a separate joint-venture company. The merger of the two companies was announced in February 2004. Work proceeded on a joint management review of the companies' respective operations to prepare for the integration of the two businesses on April 1, 2005. Noted below are key changes that impacted on the companies' environmental performance in fiscal 2004 and on the activities described in the report.

Key changes	Description of change
Operations at new pharmaceuticals plant	Construction was undertaken, and operations commenced at the manufacturing plant of Hoshienu Pharmaceuticals Co., Ltd., a group company (August 2004).
Spin-off of OTC drug business	An OTC drug research center was established along with the October 1, 2004 establishment of a new joint ven- ture integrating the two companies' OTC businesses (October 2004).
Suspension of fermentation tank	Production of one pharmaceutical product at the Takahagi Facilities was halted (November 2004).
operations	Production of goods for Kiyosu Facilities was halted (December 2004).
Spin-off of production divisions	The Yaizu Plant and Nishine Plant were spun off, and Astellas Tokai Co., Ltd. was established (April 2005).
Outsourcing distribution operations	In March 2005 Yamanouchi Logistics Co., Ltd. and Fujisawa Distribution Service, Co., Ltd. were dissolved and distribution operations were outsourced (April 2005).
Fujisawa Taiwan plant closed	Fujisawa Taiwan closed its pharmaceuticals manufacturing plant and moved production to Japanese domestic and other plants (June 2005).

## **Reporting period**

Matters subject to reporting in this report are as follows. •The policies, plans and systems of Astellas:

- Established April 1, 2005
- •Matters relating to activity results:
- From April 1, 2004 to March 31, 2005

## Corresponding guidelines in the preparation of the report

The CSR Report 2005 conforms to the Ministry of Environment's environmental report guidelines, and was prepared in accordance with the Environmental Report Preparation Procedure Report drafted by Astellas Pharma.

## Facilities covered in the CSR Report 2005

### Astellas Pharma and domestic group companies

Names of facilities appearing in this CSR Report are intended to indicate the areas for which environmental data are available. In some cases they are not consistent with the names generally used.

Company	Name of facilities	Notation
Astellas Pharma Inc.	Nihonbashi Office, Hasune Office, Doshomachi Office, Miyukigaoka Research Center, Tokodai Research Center, Tokyo Research Center, Kiyosu Facilities, Takahagi Facilities, Yaizu Facilities, Kashima Facilities, branch/sales offices	Noted by facility name
Astellas Tokai Co., Ltd.	(Yaizu Plant)*, Nishine Plant	Noted by facility name
Astellas Shizuoka Co., Ltd.	Fuji Plant	Noted by facility name
Astellas Toyama Co., Ltd.	Toyama Plant, Takaoka Plant, (Nagoya Plant)* (Osaka Plant)*	Noted by facility name
Hoshienu Pharmaceuticals Co., Ltd.	Gojo Plant, Takatori Plant	Collectively noted as "Hoshienu"
Zepharma Inc.	Head office, research center	
Fujisawa Distribution Service Co., Ltd.**	Tobu Shipping Center, Chuo Shipping Center	
Yamanouchi Logistics Co., Ltd.**	Tokyo Distribution Center, Nishi-Nihon Distribution Center	

\* As it exists within Astellas Pharma's facilities, the activity results are, as a general principle, noted collectively under Astellas Pharma's facility name. (Figures for the Yaizu Plant are included under the heading of the Yaizu Facilities, those of the Nagoya Plant under the Kiyosu Facilities, and those of the Osaka Plant under the Kashima Facilities)

\*\* Fujisawa Distribution Service Co., Ltd. was dissolved on March 31, 2005 and Yamanouchi Logistics Co., Ltd. was dissolved on January 31, 2005.

## Overseas group companies

The group companies listed below are overseas production facilities. Reorganization of these companies in Europe has not been completed. Therefore, when discussing their performance, we will use their names prior to the merger.

Company	Plant
Astellas Pharma Manufacturing, Inc.	Grand Island Plant
Astellas Pharma Technologies, Inc.	Norman Plant
Yamanouchi Europe B.V.	Meppel Plant
Yamanouchi Ireland Co., Ltd.	Dublin Plant
Fujisawa Ireland Ltd.	Kerry Plant
Enijeawa Dautschland CmbH	Kerry Plant
	Munich Plant
Yamanouchi Pharmaceutical (China) Co., Ltd.	Shenyang Plant
Fujisawa Taiwan Co., Ltd.	Guanyin Plant

## Leading Light for Life

Superior pharmaceuticals that provide the promise of healthier and more enriched life to people from all over the world. That is Astellas' earnest wish. Our challenge, our vision, and our mission are to illuminate the future and constantly seek a better life for all. As a global pharmaceutical company, Astellas is determined to be the "Leading Light for Life."

This corporate message directly reflects our business philosophy (raison d'être): "Contribute toward improving the health of people around the world through the provision of innovative and reliable pharmaceutical products."

## Introducing Astellas Pharma Inc.

Based on the concept of creating a completely new company that is competitive not only in Japan, but in global pharmaceutical markets, Astellas Pharma, which has superior research abilities and an in-house sales force, was born through the merger of Yamanouchi and Fujisawa, with ethical pharmaceuticals as its core business. Astellas Pharma will seek to aggressively develop its business as a global pharmaceutical company, but

Company outline (as of April 1, 2005)

Founded:	April 1923
Capital:	100,491 million yen
President:	Toichi Takenaka
Head office:	3-11, Nihonbashi-Honcho 2-chome,
	Chuo-ku, Tokyo 103-8411, Japan
	Tel: +81-3-3244-3000

Principal areas of business are the manufacture, sale, import and export of pharmaceuticals, quasi-drugs, foods, and medical products, and the provision of home health care services.











with a unique Japanese perspective, that helps improve the health of people around the world through the provision of innovative and reliable pharmaceutical products. At the same time, Astellas aims to achieve sustained enterprise value growth.

Note, please view the economic indicators as rough values only, as the figures shown are simple aggregations of the figures for Yamanouchi and Fujisawa.

#### Employees

FY	2000	2001	2002	2003	2004
Consolidated	17,401	17,311	17,608	16,898	15,024
Non-consolidated	8,857	8,891	8,712	7,733	7,577



## Astellas group profile

Names of facilities appearing in this CSR Report are intended to indicate the areas for which environmental data are available. In some cases they are not consistent with the names generally used.

#### Astellas Pharma

Facility name	Location	Business outline
Nihonbashi Office	Chuo-ku, Tokyo	Office locations of the principal head office departments
Hasune Office	ltabashi-ku, Tokyo	Office locations
Doshomachi Office	Chuo-ku, Osaka	Office locations
Miyukigaoka Research Center	Tsukuba-shi, Ibaraki	Pharmaceutical research locations
Tokodai Research Center	Tsukuba-shi, Ibaraki	Pharmaceutical research locations
Tokyo Research Center	ltabashi-ku, Tokyo	Pharmaceutical research locations
Kiyosu Facilities	Kiyosu-shi, Aichi	Pharmaceutical research department and Nagoya Plant* multi-functional locations
Takahagi Facilities	Takahagi-shi, Ibaraki	Pharmaceutical research department and Takahagi Plant multi-functional locations
Yaizu Facilities	Yaizu-shi, Shizuoka	Pharmaceutical research department and Yaizu Plant* multi-functional locations
Kashima Facilities	Yodogawa-ku, Osaka	Pharmaceutical research department and Osaka Plant* multi-functional locations
Branch/sales offices	The whole country	Sales & marketing

\*Facilities of following domestic group companies

#### Domestic group companies

Company name	Facilities	Location	Business outline	
Astallas Takai Co	Head Office and Yaizu Plant	Yaizu-shi, Shizuoka	Manufacture, cale and import/avport of pharmacautica	
Asiellas Tukal GU., Liu.	Nishine Plant	lwate-gun, lwate	Manufacture, sale and imporvexport of pharmaceuticals	
Astellas Shizuoka Co., Ltd.	Head Office and Fuji Plant	Fuji-shi, Shizuoka	Manufacture, sale and import/export of pharmaceuticals	
Astellas Toyama Co., Ltd.	Head Office and Toyama Plant	Toyama-shi, Toyama	Manufacture, sale and import/export of pharmaceutical	
	Takaoka Plant	Takaoka-shi, Toyama		
	Nagoya Plant	Kiyosu-shi, Aichi		
	Osaka Plant	Yodogawa-ku, Osaka		
Hoshienu Pharmaceuticals	Head Office and Gojo Plant	Gojo-shi, Nara	Manufacture and cale of pharmacouticale	
Co., Ltd.	Takatori Plant	Takaichi-gun, Nara	Manufacture and sale of pharmaceuticals	
Zepharma Inc.	Head Office	Chuo-ku, Tokyo	Research & development and sale of OTC drugs	

## Overseas group companies

#### North America

Company name	Location	Business outline	
Astellas US Holding Inc.		Holding company	
Astellas US, LLC	United States of America (Illinois)	Headquarters	
Astellas Pharma US, Inc.	United States of America (minors)	Development and sales	
Astellas Research Institute of America, LLC		Research	
Astellas Pharma Manufacturing Inc.	United States of America (New York)	Production	
Astellas Pharma Technologies Inc.	United States of America (Oklahoma)		
Astellas Pharma Canada, Inc	Canada (Ontario)	Development and sales	

## Europe

Company name	Location	Business outline
Astellas B.V	Netherlands	Holding company
Astellas Pharma Europe, Ltd.	United Kingdom	Headquarters
Astellas Pharma Europe, B.V.	Netherlands	Research & development and manufacturing
Astellas Pharma GmbH	Germany	Development, sales & marketing and manufacturing
Astellas Ireland Co., Ltd.	Ireland	Development, manufacturing and sales & marketing

Note: As the European group companies need to be restructured in accordance with the legal systems of each country, this restructuring will be undertaken sequentially during the 2005 fiscal year. The above is following the completion of reorganization (scheduled for April 2006).

## 💠 Asia

In addition to Astellas Pharmaceutical (China) Co., Ltd. (production and sales) there are sales companies in South Korea, Taiwan, Hong Kong, Thailand, and other countries.

## A global pharmaceutical company contributing to keeping everyone healthy

Astellas's aim is to be a global firm that aids each individual patient fighting an illness. In order to respond to the desires of all our stakeholders, starting with patients and their families, those in the health care field, shareholders, employees and regional society we continue to take up the challenge at an even faster speed.

The Astellas philosophy has three elements: "raison d'êre," "mission" and "beliefs." This management philosophy expresses Astellas's stance of aiming to contribute to the health of people around the world through the provision of highly usable and trustworthy pharmaceuticals, while continuously increasing the Company's enterprise value. Astellas's action criteria are based on four beliefs: "a high sense of ethics," "customer focus," "creativity," and a "competitive focus." Through actions in accordance with these beliefs, we strive to win the trust of all our stakeholders — our customers, shareholders, employees, and society at large.

Established April 1, 2005

## Business Philosophy

## Raison d'Etre

Contribute toward improving the health of people around the world through the provision of innovative and reliable pharmaceutical products

- •To go beyond all others in exploring and tapping the potential of the life sciences.
- •To continue tackling new challenges and creating innovative pharmaceutical products.
- •To deliver quality products along with accurate information and retain solid credibility among customers.
- •To support healthy living for people around the world.
- •To continue shining on the global pharmaceutical field.

## Mission

#### Sustainable enhancement of enterprise value

- •Astellas will seek to enhance its enterprise value in a sustainable manner.
- •Astellas will seek to be the company of choice among all its stakeholders, including its customers, shareholders, employees, and the global community. Astellas will strive to gain the trust of all stakeholders and thereby enhance its enterprise value.

## Beliefs

#### Our "beliefs" provide the code of conduct we prize at all times Astellas will always be a group of people who act upon these beliefs

- High Sense of Ethics: We will always manage our business with the highest sense of ethics.
- Customer Focus: We will always seek to understand customer needs and our focus will always be on achieving customer satisfaction.
- Creativity: We will not be complacent and will always seek to innovate to create new value.
- Competitive Focus: Our eyes will always be directed to the outside world, and we will continue to create better value faster.

#### Interaction between Astellas and its stakeholders



Astellas promises to perform its obligations toward all stakeholders by acting ethically and seeking to actively disclose information.

## **Charter of Corporate Conduct**

Established April 1, 2005

The Astellas Group seeks to enhance its enterprise value in a sustainable manner through its worldwide business activities and to gain the trust of all stakeholders, including its customers, shareholders, employees, and the global community. To achieve this, we must not only continuously provide stakeholders with value through our business activities, but we must also proactively take measures to ensure legal compliance and corporate accountability and to conserve the environment, based on our recognition of our corporate social responsibility.

This Charter states the Astellas Group's business philosophy (raison d'être, mission, and beliefs) in concrete terms of specific business conduct, and clarifies for our business partners, customers, and society how we will conduct ourselves in our activities.

Senior management within the member companies of the Astellas Group fully recognize that they, first and foremost, must assume responsibility for implementing this Charter in the Group's actual business activities. Executives shall not only lead by example, but shall also take necessary action to ensure that all employees are aware of the Charter and to develop and implement internal systems and training that will ensure ethical corporate conduct at all times. In the event of a violation of the principles of this Charter, the company executives shall investigate the cause of the violation and implement reforms designed to prevent its recurrence. In addition to the timely disclosure of appropriate information regarding the violation, responsibility for the violation shall be attributed and disciplinary action taken, including against senior management, where necessary.

The member companies of the Astellas Group shall observe both the spirit as well as the letter of all laws and regulations applying to their activities and conduct themselves in accordance with the following ten principles based on high ethical standards.

<ol> <li>Providing beneficial products         To fulfill our raison d'être — "Contribute toward improving the health of people around the world through the provision of innovative and reliable pharmaceutical products" — we shall provide products and services which benefit customers and society.     </li> </ol>	
2. Maintaining high ethical standards We shall ensure that all our relationships with stakeholders are sound and proper, based on high ethi- cal standards.	
3. Fulfilling disclosure requirements and transparency We shall disclose relevant corporate information in a timely and appropriate manner not only to stake- holders but also to all members of society at large, thereby fulfilling our obligations regarding corporate accountability.	
4. Fair and free competition	
We shall promote appropriate competitive behavior in our business activities.	
5. Ensuring sustainable benefits We shall actively pureue management officiency to opeure sustainable benefits for stakeholders	
6 Promoting employee welfare	
We shall respect the universally recognized human rights of our employees as well as their diversity, individuality, and differences, and provide a safe work environment and fair treatment for all.	
7. Respect for different cultures	
In the management of our international businesses, we shall not only observe all applicable laws and regulations, but also respect the culture and customs of other nations.	
8. Promoting environmental conservation	
Recognizing that harmony between the global environment and our business activities is a prerequisite to our corporate existence, we shall proactively take measures to conserve the global environment.	
9. Engaging in philanthropic activities	
As good corporate citizens, we shall actively engage in charitable and other activities to benefit society.	
10. Selecting ethical business partners We shall not do business with others who break the law or fail to accept standards of responsible social	
behavior.	

## CSR efforts of Astellas

Astellas, in order to realize IR, CSR, and risk management activities required for continuous, sound corporate activities, established a risk management committee, a CSR committee and an IR committee.

The CSR committee, chaired by an Executive Vice President, promotes and bears responsibility for Astellas's CSR activities.

## **CSR** policy

Astellas's enterprise value is the Company's aggregate value to its stakeholders, who are our customers, shareholders, employees, and other members of society. Thus, at Astellas, we not only seek economic efficiency, but will also build a trusting relationship with various stakeholders and uphold a belief in the importance of increasing "corporate integrity." Based on these beliefs, we have formulated Astellas's Charter of Corporate Conduct, which lays down the ways in which Company executives and employees must behave.



The Charter of Corporate Conduct more concretely expresses our management philosophy based on high sense of ethics. The Charter clearly confirms the Company's intentions to fulfill its social responsibilities through activities characterized by a high level of corporate integrity.

Accordingly, putting into practice the Charter of Corporate Conduct can be described as a specific guide to meeting our social responsibilities. The Charter of Corporate Conduct is thus the central document setting out the Company's policy on CSR.

#### • Our management philosophy and Charter of Corporate Conduct



## CSR efforts in the fiscal 2005

Prior to their merger, Yamanouchi and Fujisawa engaged in various efforts directed towards their respective stakeholders, and in these activities they strove to fulfill their required responsibilities. These activities, viewed comprehensively from the perspective of CSR, involved the formulation of strategies and policies, but our efforts were not always adequate. Thus, in order to investigate and determine the means of implementing CSR, a CSR committee and a CSR department were established in Astellas Pharma. In the future, the management of Astellas will work hard to continuously increase enterprise value through global corporate activities, and will aim to become a firm with a solid reputation for trustworthiness among all its stakeholders. To achieve this, Astellas has positioned "compliance" as the framework of CSR activities. All activities in such areas as research and development, production, sales, environmental protection and safety, and information disclosure are built upon the foundation of compliance. However, firms carry various risks, and it is critical that they continuously clarify these risks and seek to reduce them. Accordingly, CSR management of Astellas has introduced the concept that management of overall business activities is carried out from both a compliance and risk management perspective.

Compliance must be upheld by each employee of Astellas. By positively addressing corporate issues with

this as a foundation, the group will be able to build a relationship of trust with all stakeholders. Additionally, Astellas recognizes that these efforts must meet diversified social needs while at the same time they are linked to increasing "corporate integrity" and to obtaining the trust of society.

Based on these concepts, at Astellas, with the CSR department taking the lead, the group will for the immediate future continue to promote the environmental and safety activities and compliance activities which Yamanouchi and Fujisawa positively undertook up to their merger. At the same time, the group will make aggressive efforts directed towards firmly rooting corporate activities on the foundation of compliance. Astellas intends to fulfill its responsibility to inform society by reporting on these efforts through the CSR Report.

In the future, we believe the concrete details on CSR activity will change due to advances in computerization and changes in the consciousness of consumers. Also, customs and cultures will differ depending upon the countries in which we operate. For this reason, through this type of comprehensive analysis of present circumstances, we hope to clarify the aims of Astellas's global CSR activity.



#### CSR-based management basic concept of Astellas

On the basis of its business philosophy, Astellas has established various action standards, as detailed below.

The Company's Environmental and Safety Policy, which sets forth the basic stance relating to environmental protection and safety, was drawn up on the basis of Astellas's Charter of Corporate Conduct, which lays out the group's business philosophy in terms of specific business conduct. Based on this Environmental and Safety Policy, all domestic and foreign group companies have drawn up action plans relating to issues of the environment and safety. The stance which Astellas should aim for in 2010 is clearly shown in the Environmental and Safety Guidelines, and these companies will make efforts to strengthen their management structure and to engage in organized and continuous activities.

## **Environmental and Safety Policy**

Our Environmental and Safety Policy was established on the basis of the clauses pertaining to the environment and safety shown in the Charter of Corporate Conduct, of which there are seven. The policy applies to all domestic and foreign group companies.

#### Established April 1, 2005

Astellas, as a life science corporation that contributes towards improving the health of people all over the world, conducts business activities in harmony with the global environment and due regard for employees' health and safety. Environmental and safety issues are recognized as key elements of our corporate management and are considered for every aspect of the business.

- 1. We not only strive to comply with applicable laws and regulations relating to environmental protection and occupational safety & health, but also proactively aim to achieve stringent standards, setting ourselves higher targets than those required by regulations.
- 2. We have established environmental and occupational health & safety management systems, which demonstrates our commitment to continual improvement through organized activities.
- 3. We regularly assess the potential environmental impacts and safety risks for all our business operations and make sustained efforts to reduce those potential impacts and risks through our environmental and safety objectives and targets.
- 4. We develop effective products and technologies that harmonize well with environmental and safety considerations. 5. We promote the implementation of activities that aim to reduce the potential risks that may give rise to environmental pollution or occupational accidents. These activities also ensure that in the event of an emergency we can act promptly
- and appropriately in order to minimize damage. 6. We provide continual training in environmental and safety education for all employees so that they can keep abreast of environmental and safety issues and embrace their social responsibility.
- 7. We are committed to social and corporate accountability and openly communicate environmental and safety information in a timely and appropriate manner to our stakeholders.

## **Environmental and Safety Guidelines**

To achieve Astellas's Environmental and Safety Policy, the seven clauses shown in the Policy have been amplified as Environmental and Safety Guidelines that have been established for all group companies, both in Japan and overseas, to reach by 2010. They also serve as unified standards. Concrete action plans have been developed based on these Guidelines. In addition, Astellas Corporate Head Office uses the Guidelines as indices when it conducts its environmental and safety audit to evaluate the activities at each facility.

#### Environmental and Safety Guidelines (established April 1, 2005)

<ol> <li>Compliance with laws, regulations and internal guidelines</li> </ol>	4 clauses
2. Environmental and safety management	6 clauses
3. Development of products and techniques	4 clauses
4. Global warming prevention and resource conservation	6 clauses
5. Waste management	3 clauses
6. Pollution control for air, water and soil	4 clauses
7. Chemical substance management	7 clauses
8. Control of sensory nuisance sources and preparedness and response to complaints	2 clauses
9. Preparedness and response to accidents and emergencies	5 clauses
10. Management of facilities and vehicles	6 clauses
11. Social contribution	3 clauses
12. Education, training and motivation	5 clauses



In order to carry out Astellas's Environmental and Safety Policy, an Environmental and a Safety Action Plan are formulated for each year as well as for the medium term. This is done in accordance with the Environmental and Safety Guidelines.

The action plans for fiscal 2005 were formulated by the group after having analyzed and assessed the conditions in fiscal 2004 inherited by Astellas from Yamanouchi and Fujisawa.

Note that, at the present time, numerical targets have not been set for some of the 55 items in the Guidelines. However, numerical targets will be established where deemed necessary, on the basis of analyzed data and other materials.

#### Astellas's Environmental Action Plan

Item	Action Plan	Fiscal 2004 performance			
1. Global warming prevention					
Reduction of CO2 emissions	uction of CO2•Reduce CO2 emissions to below fiscal 1990 level by fiscal 2010				
2. Resource conservation					
Croop purphosing	<ul> <li>Increase the percentage of general items, such as office supplies and copier paper, acquired through green purchasing, to 90% or more on a monetary basis by fiscal 2007</li> </ul>	Green purchasing percentage: 81.9%			
Green purchasing	<ul> <li>Increase the percentage of low-pollution vehicles used by our sales staff to 90% or more of total vehicles purchased, and to 50% or more of equivalent 75% low- pollution vehicles by fiscal 2007</li> </ul>	Ratio of low-pollution vehicles Number of vehicles: 63.1% Equivalent to 75% low-pollution vehicles: 49.1%			
3. Chemical Substances Management					
Reducing harmful air	<ul> <li>Reduce atmospheric emissions of dichloromethane by 95% or more from fiscal 1995 levels by fiscal 2010</li> </ul>	Atmospheric emissions: 90 tons (compared with fiscal 1995: 85.0% reduction)			
pollutant emissions	•Reduce atmospheric emissions of formaldehyde by 95% or more from fiscal 1999 levels by fiscal 2010	Atmospheric emissions: 0.7 tons (compared with fiscal 1999: 70.6% reduction)			
4. Waste management					
Reducing landfill waste•Reduce landfill waste by 90% or more from fiscal 1990 levels by fiscal 2007		Landfill waste volume: 1,099 tons (compared with fiscal 1990: 91.3% reduction)			
5. Cooperation with local communities					
•Release environmental and safety information by each principal facility by 2007		Two facilities issue an environ- mental report.			

## Astellas's Safety Action Plan

	Action Plan
1. Safety management	<ul> <li>Construct a safety management system at each principal facility and commence activities by the end of the fiscal 2007</li> </ul>
	•Prepare and begin to implement a concrete risk assessment action plan concerning safety, hygiene, and disaster prevention by the end of fiscal 2007
2. Preparedness and response to accident and emergency	•Develop a risk management system incorporating methods of response and organizational and contact structures for work-related accidents and emergency situations by the end of fiscal 2005
3. Chemical substances management	•Introduce systems to respond to emergencies and accidents related to the transport of the materials such as waste and chemical substances for each principal facility by the end of fiscal 2005
4. Cooperation with local communities	•Release information related to safety for each principal facility by fiscal 2007

Astellas has established environmental and safety management structures at its major facilities.



## **Environmental Management Systems**

All of Astellas's major domestic and overseas production facilities are ISO14001 certified. Other offices have introduced ISO14001-standard environmental management systems, and are required to conduct activities based on the PDCA (Plan, Do, Check, Act) cycle.

## ISO14001 certification

Actoliae Pharma Inc	Takahagi Technology Center	Acquired ISO14001 certification in July 1008
Asienas i narma me.	Takahagi Plant	Acquired 13014001 certification in July, 1990
Astellas Tokai Co. Itd	Yaizu Plant	Acquired ISO14001 certification in Oct., 2000
Asienas Tokai GU., Liu.	Nishine Plant	Acquired ISO14001 certification in Feb., 2001
Astellas Shizuoka Co., Ltd.	Fuji Plant	Acquired ISO14001 certification in Dec., 2000
Astellas Tovama Co. Ltd	Toyama Plant	Acquired ISO14001 certification in Mar., 2000
Asienas Toyania Go., Liu.	Takaoka Plant	Acquired ISO14001 certification in Nov., 2000
Astellas Pharma Manufacturing Inc.	Grand Island Plant	Acquired ISO14001 certification in Nov., 2002
Yamanouchi Europe B.V.	Meppel Plant	Acquired ISO14001 certification in Jan., 2001
Yamanouchi Ireland Inc.	Dublin Plant	Acquired ISO14001 certification in Mar., 1997
Fujisawa Ireland Inc.	Kerry Plant	Acquired ISO14001 certification in Dec., 2003
Euijeawa Doutoobland CmbH	Munich Plant	Acquired ISO14001 certification in Jan., 2004
Tujisawa Deutsentanu unibri	Kerry Plant	Acquired ISO14001 certification in July, 2001
Yamanouchi Pharmaceuticals (China) Co., Ltd.	Shenyang Plant	Acquired ISO14001 certification in Oct., 2001

Flow of the Environmental Management System



## Environmental and Safety Assessment System

In order to produce and sell pharmaceutical products, it is necessary to obtain government approval for each product. Since governmental approval also covers production methods and packaging specifications, when there are changes in either approved production methods or packaging, new approval must be obtained even if the changes are related to work safety or reducing the environmental impact. This entails substantial time and costs. Therefore, Astellas has introduced an Environmental and Safety Assessment System as a tool that requires efforts to minimize the environmental burden at all stages, including research and development, production, distribution, and disposal.

Furthermore, the Environmental and Safety Assessment System requires an examination of the environmental impact when facilities larger than a certain scale are to be built and an examination of whether land to be purchased is contaminated.

## Operation of the Environmental and Safety Assessment System

An assessment team conducts environmental and safety assessments in stages for the development of products and when new facilities are to be built. The results are discussed at a meeting, and the decisions reached



Diagram of Environmental and Safety Assessment System

determine whether development of the product can move on to the next stage, the facility should be built, or the land purchased.

- Environmental and Safety Assessment System Manufacturing process assessment Container and packaging assessment Product licensing-in/out assessment Manufacturing facilities assessment Research facilities assessment Head office facilities assessment
- Composition of the Environmental and Safety Assessment System

## Environmental and safety audits

The chief auditor is the officer in charge of CSR. Audit teams for each facility consist mainly of members of the CSR department. The teams conduct environmental and safety audits of manufacturing and R&D departments.

Regarding the frequency of audits, domestic audits are conducted on-site once a year, and for overseas audits, a paper audit is conducted once a year, and

## Standards for environmental and safety audits

Based on our Environmental and Safety Guidelines, the environmental and safety audits examine set items that each place of business is expected to focus on in its environmental and safety activities. A checklist is used to

#### Environmental and Safety Audit Items

Environmental and safety management system, response to legal requirements, response to risks, education and training, facility maintenance and management, chemicals management, wastes management, energy conservation, social contributions, environmental and safety performance, etc.

### Environmental and safety audit report and response

During environmental and safety audits, topics related to such issues as the progress towards reaching targets set forth in our Environmental and Safety Guidelines, the extent to which the Environmental Action Plan and Safety Action Plan have been implemented, and responses to environmental and safety risks are selected and included in the environmental and safety audit report, which is submitted to the chairman of the environmental and safety committee at each facility. Each facility then submits an improvement plan related to the audit report. Implementation of the improvement plan is checked six months later through an examination of the relevant documents and an environmental and safety audit conducted the following fiscal year.

In addition, a comparative analysis of the audit results is conducted with both Astellas Pharma facilities and domestic and overseas group companies in order to clarify problems related to environmental and safety measures. This is reported to top management and reflected in management policy.



on-site audits are done once every two years.

In fiscal 2004, Yamanouchi and Fujisawa conducted environmental and safety audits based on their own standards. At that time, the officer responsible for environmental and safety audits participated in the audit as an observer so as to become acquainted with the activities in each facility.

grade these activities according to four grades. A perfect

score for each item is 100. Total scores and scores for

progress made for each item are tabulated to provide the

basis for the evaluation of each facility.

## Education, development and training

As part of Astellas's education and development efforts, the CSR department arranges study groups, which involve the exchange of information and training for all employees responsible for or engaged in the implementation of environmental and safety activities from all facilities, including all domestic group companies. In addition to providing the latest information on various issues, including laws and regulations related to the environment and safety, industry and technological trends on the intranet, Astellas is planning to introduce an e-learning program of education for all employees.

There are requests for the systematic implementation of education, development, and training related to environment and safety at each facility based on the education and training plan.

In fiscal 2004, numerous activities were undertaken related to education, development, and training from a broad perspective. These activities included an education program for all new employees and those who entered the group mid-career. The program covered environmental policies applied to our facilities, the operation of the environmental management system, study groups for all managers related to ISO14001 environmental management systems, education on procedures, responses to environmental risk, specialized education for employees involved in environmental conservation work, training for public certification related to environment and safety, emergency response training, and training related to checking the effectiveness of the emergency communication network.

In addition, Astellas is making various efforts related to each facility's environmental and safety policies for the employees of our outsourced service providers who regularly work at our facilities, construction-related workers, raw material suppliers, and workers involved in the outsourced processing of waste materials. These efforts include sponsoring explanatory meetings regarding topics related to the emergency contact system responses in the case of accidents during normal working hours or the transportation material.



Water discharge training

## $\blacksquare$ Interaction between Astellas and the environment

INPU	JT		Astellas		OUTP	UT
Energy					Greenhouse gas	es
Electricity 2	24,643,000 kWh	Res	search and develop	ment	CO2	182,657 tons
City gas	17,112,000 m <sup>3</sup>		V 1		(including CO <sub>2</sub> from	
LPG (in cylinders)	4,415 tons				cars used by sales staff)	
Heavy oil	12,783kl				, ,	
Kerosene	2,802kl					
Gasoline	19kl				Chemical polluta	ants
Diesel oil	5kl				In air	98 tons
					In water	1 tor
Sales vehicles			Production			
Gasoline	4,000kl		FIUUUCIIUII			
Raw materials					Waste	
Ingredient	44 021 tons			3	Generation volume	39,454 tons
Glass	820 tons		1 JOF		Recycled volume	21,903 tons
Paper	603 tons				Landfill volume	1,099 tons
Plastics	1.316 tons					
Metals	77 tons			• /		
Rubber	25 tons	-/		г/	Air pollutants	
			Distribution/sales		SOx	12 tons
Office supplies		1			NOx	46 tons
Copier paper	383 tons			7		
			LEAD IN A			
Water			54 J   68	11	Water pollutants	
Water usage	18,258,000 m <sup>3</sup>				BOD	68 tons
Tap water	1,200,000 m <sup>3</sup>					
Industrial water	13,423,000 m <sup>3</sup>					
Well water	3,635,000 m³∫				Drainage volume	17,318,000 m <sup>3</sup>
	<ul> <li>Gasoline</li> </ul>				• CO <sub>2</sub>	
	Diesel oil		Wholesalers		<ul> <li>NOx, SOx</li> </ul>	
		C C C				
		V				
	Pharma	acies		Hosp	itals	

## Environmental accounting

The economic benefits of environmental conservation activities and the cost involved for fiscal 2004 were calculated on the basis of the Ministry of the Environment's environmental accounting guidelines. The aggregate environmental costs are the total of the separate costs for Yamanouchi and Fujisawa. Fiscal 2004 costs are based on the simple additions of the environmental cost calculated according to each company's criteria.

Astellas will establish integrated criteria for environmental accounting, and wants to correctly understand the benefits of environmental conservation directly related to such activities and capital investment while improving the precision of environmental accounting.

#### Method for aggregating environmental accounts

Scope of aggregation: Astellas's domestic production departments, research departments, and head office.

Environmental conservation cost: total of labor and other costs and investment in and depreciation of equipment for environmental conservation activity Economic benefit: total of items such as reduced costs that can be expressed in monetary terms, reduced energy consumption, and reduced expenses for outsourced waste processing.

Environm	ental conservation costs	3		(million yen)
Category			Environmental co	onservation costs
		Major activities	Investments	Expenses
(1) Business area	costs		655	2,020
	Prevention of air pollution	Management of facilities such as incinerators and boilers	13	47
	Prevention of water pollution	Management of waste water processing, preventive measures against the release of pollutants	58	861
Pollution	Soil contamination prevention	Soil surveys, soil contamination countermeasures	17	36
prevention	Noise, odor, and vibration prevention	Periodic measurement of noise, noise reduction measures	12	54
	Others	Ground sinkage countermeasures	0	7
		Subtotal	100	1,004
	Prevention of global warming	Energy conservation activities, introduction of energy efficient equipment and processes	344	170
Global environmental conservation	Prevention of ozone depletion Reduction of emissions of specified CFCs		20	29
	Chemical substances management	Management of chemicals, measures for the reduction of emissions	12	94
	Others		0.8	0
	Subtotal			293
	fficient use of waste material Recycling of waste		130	22
December	Water conservation	Reducing water usage	0	0
circulation	Waste processing	Self-processing of waste, outsourcing	48	679
onoulation	Others	Measures related to illegal dumping of waste	0	22
		Subtotal	178	723
(2) Upstream/dow	nstream costs	Expense of product package design and outsourcing recycling of packaging	0	62
(3) Administration	costs	Operation of environmental management system, environmental measurements, education and training	0	443
(4) R&D costs		Development and improvements in environmental technology	9	77
(5) Social activity costs		Socially constructive activities, community outreach activities, landscape maintenance	0	255
(6) Environmental remediation costs		Recovery from environmental accidents	0	0
		Total	664	2,857
	Total environmental conse	ervation cost, excluding environment damage cost	664	2,857

#### Economic benefits

(million yen)

Category	Description	Value
a. Resource conservation	* Cost saving by recycling of solvents	195
b. Sale of recyclable waste	* Revenue from sale of solvent, used paper, and metal waste	10
c. Energy conservation	* Reduction in lighting and heating expenses through introduction of energy-efficient equipment and energy conservation activities	54
d. Reduction in waste processing expenses	<ul> <li>* Reduction in processing expenses from the reduced volume of waste</li> <li>* Reduction in energy expenses from burning waste on-site</li> <li>* Reduction in processing expenses from the reduction of waste generated</li> </ul>	727
	Total	986

## Environmental impact

#### 1. Energy conservation and global warming prevention

Action Plan

• Reduce CO<sub>2</sub> emissions to below fiscal 1990 level by fiscal 2010

Measures related to global warming are different from countermeasures against other environmental issues, since such measures as installing new machines do not immediately solve the problem: measures must be implemented over a long time to achieve any effect.

Astellas considers preventing global warming, an environmental problem that all mankind faces in the 21st century, to be one of the most important environmental conservation issues that the group is working on.

In fiscal 2004, the amount of CO<sub>2</sub> generated from the use of energy was 16.1% (24,000 tons) greater than the amount generated in 1990. Expansion of production and increased use of energy for items such as refrigerators due to improved GLP in R&D and GMP in manufacturing are considered two reasons for this increase.

Astellas is continuing to work toward the targets in its environmental action plan by investigating more efficient research and production systems while promoting the use of fuels that generate lower CO<sub>2</sub> emissions, and the introduction of energy-saving equipment. In addition, since preventive measures for global warming must be introduced on a global scale, the group is working to make all employees, not only those in production and research departments but also those in the office and

## **Energy consumption**

The amount of energy used in fiscal 2004 was equivalent to 3,737,000 giga-joules (GJ), which was 2.3% (89,000 GJ) less than that used in fiscal 2003, but 23.9% (720,000 GJ) more than in the reference year of 1990. The main reason for the decrease in energy use in fiscal 2004 was reexamining the product lineup at the Kiyosu and Takahagi Facilities, which resulted in the suspension of production of two products.

About 60% of the energy used was in the form of electricity, and the majority of this was for air conditioning equipment and refrigerators used by the production and research departments to control temperature and humidity.

Turning to other energy sources, the amount of heavy oil used has declined. Progress is also being made in converting to city gas, which produces less CO<sub>2</sub> and air pollutants such as sulfur dioxide.

When calculating the calorific value for energy used, Astellas uses a conversion factor provided by the Agency for Natural Resources and Energy. sales departments, more aware of the effect that their daily work has on the environment and to foster the creation of an environment where individual employees make steady efforts related to energy conservation.

#### GLP (Good Laboratory Practices)

These are standards for conducting appropriate safety tests that make use of animals and appear in the Experiment Standards for Non-Clinical Trial of Pharmaceutical Safety. In Japan, the Japan Pharmaceuticals Manufacturers Association established a Code of Conduct for Animal Experiments of Medicine Safety in 1980, and based on this, a system of self-regulation was created. In 1982, the Ministry of Health and Welfare (presently the Ministry of Labor, Health and Welfare), issued a Director-General of the Pharmaceutical Affairs Bureau notification on GLP standards, which came into effect in 1983. The provisions of the Pharmaceutical Affairs Law with respect to GLP standards were revised in 1996, with implementation starting in 1997.

#### GMP (Good Manufacturing Practices)

This establishes requirements for a broad range of categories, including quality management, production and facility management, in order to produce effective, safe and high-quality pharmaceuticals. The requirements appear in the Standards for the Management of Production and Quality of Pharmaceuticals, which became effective in the same year as the 1980 revision to the Pharmaceutical Affairs Law.

## Amount of CO2 generated through energy consumption

In fiscal 2004, 173,000 tons of CO2 was generated, which was 3.0% (5,000 tons) less than in fiscal 2003 but 16.1% (24,000 tons) more than in the reference year of 1990.

The target of reducing the amount of CO<sub>2</sub> to 1990 levels was included in the Environmental Action Plan. In order to reach this goal and continue efforts after fiscal 2010, Astellas will expand the introduction of energy-saving equipment and the use of fuels that generate less CO<sub>2</sub>. The group also feels that it is necessary to examine the efficiency of corporate activities in all business fields, which could lead to restructuring research and production facilities, reexamining product lineup, and altering production processes and energy conservation plans from the research and development phase.

When calculating the amount of CO<sub>2</sub> from the use of energy, a conversion coefficient appearing in the enforcement ordinance of the Law Concerning the Promotion of the Measures of Cope with Global Warming in Japan.

Joule

This is a unit of heat energy and is calculated by multiplying each type of energy by a conversion factor. The amount of energy used is converted into calorific value. One giga-joule is equivalent to 1 billion joules.

City gas

Kerosene

Gasoline



#### Energy consumption by energy source



#### Percentage of energy use by fuel



#### Conversion coefficient to calorific value

Fuel	Conversion factor				
Electricity	9.83 GJ/1,000kWh				
Heavy oil	39.1 GJ/kl				
Kerosene	36.7 GJ/kl				
LPG	50.2 GJ/ton				
City gas	41.1 GJ/1000m <sup>3</sup>				
Diesel oil	38.2 GJ/kl				
Gasoline	34.6 GJ/kl				

#### CO2 emissions



#### CO2 emissions by fuel

Electricity City gas Heavy oil LPG (1,000 tons) Diesel oil



#### Percentage of CO2 emissions by fuel



#### Conversion coefficient to CO2

Fuel	Conversion factor		
Electricity	0.378	tons/1,000kWh	
Heavy oil	2.71	tons/kl	
Kerosene	2.49	tons/kl	
LPG	3.00	tons/ton	
City gas	1.96	tons/1,000m <sup>3</sup>	
Diesel oil	2.62	tons/kl	
Gasoline	2.32	tons/kl	

#### 2. Chemical substance management

- Reduce atmospheric emissions of dichloromethane by 95% or more from fiscal 1995 levels by fiscal 2010
   Reduce atmospheric emissions of formaldehyde by 95% or more from fiscal 1999 levels
  - Reduce atmospheric emissions of formaldehyde by 95% or more from fiscal 1999 levels by fiscal 2010

Leakage of chemical substances into the environment lead to environmental pollution, and the exposure of employees to high levels of chemicals can cause safety problems. Astellas considers proper management of chemical substances and reductions in the amount of hazardous chemicals released to be important target areas in its environmental and safety activities. To prevent environmental pollution, work-related accidents, and damage to human health caused by chemical substances, Astellas conducts new product assessments from the initial stages of research and development, and promotes research on production processes based on "green" chemistry. This research involves topics such as the development of production methods that do not use hazardous chemicals and production processes that limit the use of such chemicals as much as possible.

#### "Green" Chemistry

This refers to the production of useful chemical products by designing materials and reactions to minimize the use of harmful compounds and eliminate the release of these chemicals into the environment. Technologies and research that eliminate the creation of pollutants, not simply remove hazardous materials through incineration, are drawing a great deal of attention.

## Measures to reduce atmospheric emission of chemical substances

Astellas has set numerical targets for reducing atmospheric emissions of dichloromethane and formaldehyde, two highly used chemicals. In fiscal 2004, 6,018 tons of dichloromethane were used, 90 tons of which were released into the air. This was an 85.0% (508 ton) reduction of atmospheric emissions compared with the reference year of fiscal 1995.

Dichloromethane is mainly used as a solvent in the synthesis and formulation of pharmaceuticals, and Astellas is working on the development of alternative processes that do not use dichloromethane by establishing a policy of avoiding the use of the chemical in new processes and requiring the assessment of new products under development starting from the initial research and development stage.

Furthermore, in production that already makes use

#### Atmospheric emissions of dichloromethane



of dichloromethane, the group has taken steps to change the processes to prevent the release of the chemical into the atmosphere. This is expected to greatly reduce amounts released into the atmosphere.

In fiscal 2004, 160 tons of the formaldehyde were used, 0.7 tons of which were released into the air, which was a 70.6% (1.8 tons) reduction of atmospheric release compared with the reference year of fiscal 1999. Formaldehyde is mainly used for sterilization in the production of such items as injectable solutions. Drastic measures are considered necessary to achieve the goals set in the Astellas's environmental action plan, including reviewing sterilization processes that use formaldehyde and introducing equipment to eliminate atmospheric releases.

#### Atmospheric emissions of formaldehyde



## PRTR (Pollutant Release and Transfer Register) survey

The total volume of release of chemicals designated by the PRTR system has been steadily decreasing since 2001. By the end of fiscal 2004, the release of these chemicals came to 46.5% of that of fiscal 2001. The following page contains information on the release and transfer of materials that required notifications in fiscal 2004.

The group has set numerical targets for reducing

atmospheric release of dichloromethane and formaldehyde, which are chemicals designated by the PRTR system. Astellas is also working to reduce the use, transfer, and release of other designated chemicals, and to prevent and reduce risks related to environmental contamination, work-related injuries, and damage to human health caused by hazardous chemicals.



#### Emissions of Class 1 designated chemical substances under the PRTR system

#### PRTR system

PRTR system is a registry of the amounts of potentially harmful chemicals released into the air, land, or water, and the amount released as waste material. Chemical substances designated by the PRTR system are defined by the Law Concerning Reporting, etc. of Release to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management in Japan. The registry is created and then submitted to the central government.

#### Fiscal 2004 statistics on material requiring notification under the PRTR system

Substance name	Number of facili-	Volume	V	olume release	d	Volume	Volume	Volumes t	ransferred
Substance name	ties reporting	handled	Air	Water	Soil	treated	removed	Waste	Sewerage
Acetonitrile	10	50.993	1.888	0.003	0.000	0.000	15.942	33.160	0.000
Ethylene glycol	2	27.891	0.008	0.003	0.000	0.000	27.880	0.000	0.000
Xylene	3	28.864	0.105	0.000	0.000	0.000	28.474	0.284	0.000
Chlorodifluoromethane	1	1.499	0.004	0.000	0.000	0.000	0.000	1.495	0.000
Chloroform	5	41.447	1.827	0.009	0.000	0.000	0.703	38.865	0.044
Salicylaldehyde	1	60.433	0.000	0.000	0.000	18.000	38.412	4.021	0.000
1, 4-dioxane	1	7.029	0.015	0.000	0.000	0.000	6.999	0.015	0.000
Dichloromethane	5	2,876.292	89.822	0.003	0.000	1,838.718	364.868	582.881	0.000
N, N-dimethylformamide	4	777.003	3.994	0.005	0.000	0.000	198.596	574.408	0.000
Thiourea	2	41.391	0.000	0.000	0.000	0.000	41.391	0.000	0.000
Toluene	1	19.030	0.004	0.005	0.000	0.000	9.566	9.455	0.000
Lead and its compounds	1	2.460	0.000	0.000	0.000	0.000	0.000	2.460	0.000
Pyridine	1	1.623	0.003	0.005	0.000	0.000	1.615	0.000	0.000
Benzene	1	2.771	0.188	0.002	0.000	0.000	0.370	2.211	0.000
Boron and its compounds	2	10.285	0.000	0.922	0.000	0.000	0.000	9.363	0.000
Formaldehyde	1	158.681	0.132	0.000	0.000	0.000	41.045	117.504	0.000
Manganese and its compounds	1	113.715	0.000	0.000	0.000	0.000	0.000	113.715	0.000
Dioxins	2	_	2.68237	0.04573	0	0	0	0.8144	0

#### Notes:

The number of facilities refers to the number of plants and laboratories that handle one ton or more of class 1 designated chemical substances annually, or half a ton or more of special class 1 designated chemical substances.

\* Volume consumed refers to the amount of the chemical that was transformed into another substance through a chemical reaction, incorporated in other products that were removed from the premises, or disposed of through recycling by businesses.

\* Volume removed through processing refers to the amount of the chemical that was transformed into another substance through incineration, neutralization, or degradation at the facility. \* Amounts in the table are ton/year. For dioxins, the units are mg-TEQ/year (an explanation of dioxins and dioxin units is given on page 27).

## PCB-contaminated waste material

Enterprises are required to properly store PCBcontaminated waste. Astellas properly stores the waste at seven locations. The authorities are developing public facilities to dispose of this waste. When it becomes possible to dispose of the waste, a plan will be drawn up and the waste processed.

#### State of PCB-contaminated waste storage

Classification	Category	Number or volume
Stored	High-pressure condenser	255
	Fluorescent lamp ballasts	5,999
	PCB contaminated oil	151 (Liters)
	High voltage transformer	12
In use	Fluorescent lamp ballasts	1,382

#### PCB (Polychlorinated Biphenyl)

This is the common name of a group of chemical compounds formed by two benzene rings with 1 to 10 chlorine atoms attached. There are 209 different varieties depending on the number and location of the chlorine atoms. The compound is hard to break down when exposed to heat, which makes it a superior electrical insulator, and it is often used in heating media and condensers. Waste materials (including PCB) that have been identified as having harmful effects, and those whose production was suspended are stored by local governments and businesses as stipulated by law.

## Management of harmful chemical substances

In fiscal 2004, there were several incidents related to the management of harmful chemicals at research facilities: these are listed below. In response, Astellas has restructured its management system, established an emergency contact network, and conducted employee reeducation, while conducting an inventory of chemicals presently stored at all business premises, including research facilities.

#### Storage of controlled substances (Tokodai Research Center)

A chemical synthesized for research was determined to be usable as the raw material for production of a controlled substance, and Tokodai Research Center reported this to the Tsukuba Public Health Center in Ibaraki Prefecture. The Public Health Center requested that all efforts be made to ensure the secure management of the material.

#### Release of poisonous material (Miyukigaoka Research Center)

The person in charge of conducting an inventory of chemical reagents at the facility mistakenly rinsed out 25 grams of strychnine that had been in a reagent bottle. This was reported to the appropriate authorities.

### 3. Waste management

Action Plan

Reduce landfill waste by 90% or more from fiscal 1990 levels by fiscal 2007

In Japan, the remaining years of availability of landfill waste sites are limited, and reducing the amount of landfill waste is one of the most important measures related to waste management. Under these conditions, Astellas has set numerical targets for the amount of landfill waste, and is working on the three R's (reduce, reuse, recycle) at each of its facilities. In fiscal 2004, the amount of landfill waste was 1,099 tons, 91.3% less than the amount in the reference year of 1990. The group, therefore, met its numerical target — mainly due to the greater-than-expected amount of sludge that was recycled at the Toyama Plant and Takaoka Plant, which began recycling operations in the middle of fiscal 2004. We will continue activities to reach zero emissions, a goal that is already in sight.

Zero emissions

The goal is to reduce the emission of waste material to effectively zero. In general, this is interpreted as eliminating emissions that are processed through final disposal.

## Waste generation and landfill volume

Approximately 39,500 tons of waste material was generated in fiscal 2004. This was 1,500 tons less than that in fiscal 2003. Waste oil accounted for 50% of this volume; waste acids and alkalis for 33.7%; sludge for 8.4%; and other waste material for 7.9%. Suspending production of two products after reexamining the product lineup at our Kiyosu and Takahagi Facilities, and recovering and recycling organic solvents used in post-fermentation bacterial cell processing at the Toyama Plant, led to a reduction in the amount of waste water treated. This, in turn, reduced the amount of active sludge. This was the main reason for the decrease in waste material generated in fiscal 2004.

The volume of waste whose disposal (which includes processing, recycling, and final disposal) was

outsourced was 22,500 tons in fiscal 2004, an increase of 400 tons from fiscal 2003. Of the total amount of waste generated, 53.5% was recycled, which was 1.3% more than the previous fiscal year.

The amount of landfill waste was 500 tons less than in fiscal 2003, which was largely due to being able to convert active sludge, which had been buried at the Toyama and Takaoka Plants, into compost. While the sludge accounted for only 8.4% of waste generated, it accounted for 75.8% of landfill waste.

Therefore, in order for Astellas to reach its goal of zero emissions, it is necessary to make efforts to reduce the amount of sludge generated and increase the volume recycled.

#### Flow of waste processing



(%)

125

100

75

50

25

Λ

04 (FY)

Others



#### Volume of waste processing outsourced (tons)



#### Volume of landfill waste

(tons)

15,000

12,000

9,000

6.000

3 000

12,630

90

(Base year)





76%

## Waste recycling

#### Sludge recycling

In fiscal 2004, investigations were made into effective uses for the sludge emitted from wastewater treatment facilities, which had previously been buried at the Toyama and Takaoka Plants. It was found that the waste could be transformed into compost, and since then, seven facilities with wastewater treatment facilities have been recycling the sludge generated.

#### Recycling of organic solvents

Among the organic solvents used in the production of pharmaceuticals, a large amount of these solvents are

### Communication with waste material contractors

Illegal dumping is another problem related to waste material. Recognizing its responsibility as a generator of waste material to properly dispose of such material, Astellas feels it is important to build a relationship of trust with contractors that handle the transport and disposing of waste material. Based on this concept, we created guidelines with common criteria on what is required of waste material contractors. As a generator of waste material, Astellas is working to improve the level of waste material processing in cooperation with its contractors based on these guidelines and through intensive communication.

In addition, it is possible that if an accident during the transportation of chemical substances and waste material were to occur, a delayed initial response or insufficient environmental and safety information

either recycled and reused (material recycling), or are used as fuel when incinerating waste material (thermal recycling). In fiscal 2004, an estimated 13,100 tons of organic solvents (17 types) were recycled. Material recycling accounted for 68.4% (9,000 tons) and thermal recycling accounted for 31.6% (4,100 tons).

#### Other recycling activities

In addition, efforts are being made to recycle numerous other types of waste materials, including plastics, glass, metal, used paper, fluorescent lights, batteries, and reagent bottles.

related to the material could hamper recovery work, which could have major social repercussions. To prevent this, related parties such as drivers must take appropriate steps, such as providing information to the relevant authorities, such as fire departments.

Taking this into consideration, Astellas has established guidelines for outsourcing the transportation of chemical substances and waste material. These guidelines require that emergency contact cards, which contain environmental and safety information, be provided. In fiscal 2005, based on the introduction of this system, efforts have been made to provide information to waste material contractors and to establish a contact system for group facilities in the case of accidents during transportation.

#### **Topics**

The Nishine Plant was awarded the Reduce-Reuse-Recycle Promotion Committee's Chairman's prize for achieving 100% recycling of packaging material waste, such as PTP scrap, through goal management activities of all employees. This has encouraged employees at the plant to make suggestions for improvement, not only in relation to waste material management, but also in areas such as energy handling and conservation of resources.



Award ceremony

PTP (Press Through Package)

This is one type of packaging for capsules, where capsules are sandwiched between a layer of aluminum and plastic. The package is designed so that by pushing on the top part, the aluminum part tears away so that the capsule comes out.

### 4. Air and water conservation

To conduct business in harmony with local communities and win their trust, Astellas is working to limit the release of pollutants by establishing stricter self-regulations (related to major environmental issues such as air and water quality) than are legally required or specified in agreements. In addition, we are working to reduce the

## Air pollutants

In fiscal 2004, NOx emissions totaled 46 tons and SOx emissions reached 12 tons.

The amount of SOx emissions was greatly reduced due to such measures as changing the fuel used in boilers from heavy oil to city gas and LPG (which contain less sulfur), and ending the use of incinerators at facilities. Astellas intends to systematically convert to fuels that impose less of an environmental impact and contribute to solving the problem of global-warming.

## Measures related to incinerators

At present, three incinerators are operated by domestic facilities: a liquid waste incinerator at the Takaoka Plant, and liquid waste and general waste incinerators at the Takahagi Facilities. The following shows the results of measurements of dioxins in the exhaust emitted from these incinerators. The liquid waste incinerators at both the Takahagi Facilities and Takaoka Plant were both far below the allowable limits. While the results for the general waste material incinerator were also less than half the maximum under the standards, the most appropriate manner for managing the incinerator, including the possibility of terminating its use, will be examined.

#### Amount of dioxins in the exhaust gas of incinerators

risk of contamination resulting from leaks of environmental pollutants due to accidents or emergencies through various measures to minimize the possibility of such leaks. This includes the use of strengthened monitoring, emergency cutoff devices, and emergency escape tank.



#### Dioxins

These are not a single chemical substance, but a general name for a group of chemical compounds. Dioxins can be broadly divided into polychlorinated dibenzo-para-dioxin (75 varieties) and polychlorinated dibenzofuran (135 varieties); generally, coplanar PCB (14 varieties) are also now considered dioxins.

TEQ (Toxicity Equivalency Quantity)

Toxicity equivalency quantity (TEQ) is a value that converts the amount of dioxin into an equivalent amount of the most toxic material. Dioxins are a broad group of compounds, and since toxicity depends on the compound, a method that expresses the amount of dioxin into as an equivalent amount of the most toxic substance is formally employed.

(ng-TEQ/m<sup>3</sup>N)

Facility locations	FY	2000	2001	2002	2003	2004
Takabagi	Municipal waste incinerator	7.4	0.0055	3.34	0.35	2.6
такапаут —	Liquid waste incinerator	0.013	0.000012	0.0047	0.014	0.00083
Takaoka	Liquid waste incinerator	0.000028	0.00034	0.000053	0.00032	0.000058
	Standard	80	10	10	10	10

## Water quality management

In fiscal 2004, 18,258,000 m<sup>3</sup> of water were used, which was 4.4% (831,000 m<sup>3</sup>) less than fiscal 2003. In addition, the amount of BOD (Biochemical Oxygen Demand) emissions (organic water pollutants emissions) was 68 tons, down 26.3% (24 tons) from fiscal 2003. The reduction in water usage was mainly due to the termination of production of fermented products at the Shinkawa and Takahagi Facilities. The reduction in water usage in fiscal 2004 also led to a drop in the amount of well water usage; this amount decreased by 8.4% (334,000 m<sup>3</sup>). The reduction in BOD emissions was caused by the same factors as the fall in water usage.

Wastewater from Astellas facilities is released into rivers, the sea, or sewerage systems. When releasing wastewater into the sea or a river, there is the fear that the accidental release of harmful material could cause substantial harm to the local community. In addition,

the release of wastewater into the sewerage system could also negatively affect the local community through various channels, including lowering the processing ability of water treatment facilities. From this perspective, Astellas considers wastewater issues and accidents as one of its major environmental risks. At each facility, a system of self-regulation, which includes standards for the operation of water treatment facilities and final outlet water quality management that are stricter than mandated under the Water Pollution Prevention Law, have been established. In addition to measuring and monitoring water quality, Astellas carries out thorough management of wastewater treatment facilities. Furthermore, the group is striving to prevent environmental pollution by systematically moving forward with the establishment of systems and backup facilities to reduce the environmental impact of wastewater and to respond to accidents and emergencies.

#### Water consumption



#### SOx (Sulfur Oxides)

Sulfur oxides are produced when oxygen is combined with sulfur, which is a component of both oil and coal, during combustion. SOx is one of the causes of acid rain.

#### NOx (Nitrogen Oxides)

Nitrogen oxides are produced when nitrogen, which is contained in fossil fuels and in the air, combines with oxygen during combustion. NOx is one of the causes of acid rain.

BOD (Biochemical Oxygen Demand)

This index gives the level of water pollution by organic matter, and shows the amount of oxygen (mg/L) consumed when water contaminants are oxidized by microorganisms. The larger the value, the greater the water contamination.

#### Drainage volume



### 5. Measures related to soil and ground water contamination

The Soil Contamination Countermeasures Law, which went into effect in February 2003, is not generally applicable to land that is continually used for corporate activities. However, there are concerns that, if contaminated land is left as it is, it could possibly be harmful to the health of local residents and lead to continuous exposure to harmful materials by employees. Even when not legally required to do so, Astellas has decided it is vital to limit health risk as much as possible.

Criteria related to such issues as determining when to conduct a soil contamination survey, implementing riskreducing measures if soil contamination is detected, and notifying government authorities are set as guidelines in line with the Soil Contamination Countermeasures Law. Based on these guidelines, Astellas conducts soil surveys at facilities where projects such as the destruction of old facilities and building of new ones are being conducted, and at facilities that are open to the public, such as squares and grounds. In addition, these same guidelines set environment-related decision criteria for the purchase of land.

The following is a summary of results of soil surveys and risk-reducing measures taken for land where soil contamination has been detected.

Facilities	Land surveyed	Pollutants	Level of contamination	Countermeasures
		Arsenic	Content amount is 3.6 times the allowable amount	Area covered with 50cm of new soil
Toyama Plant	Land prior to purchase	Lead	Leaching amount is 9 times the allowable amount Content is 2.2 times the allowable amount	The soil is replaced in areas with an amount five times or greater than the allowable limit, and other areas are covered with 50cm of new soil.
		Fluorine	Leaching amount 1.3 times the allowable amount	The soil was replaced, and covered with 50cm of new soil
		Total mercury	Leaching amount 4.4 times the allowable amount	The soil was replaced, and covered with 50cm of new soil
	Exercise area	—	No contamination	_
	Square	—	No contamination	_
Takaoka Plant	Exercise area	—	No contamination	_
	Land for future plant	—	No contamination	_
	Land after plant was	Arsenic	Leaching amount is 3.3 times the allowable amount	Area covered with 50cm of new soil
Fuji Plant	torn down	Fluorine	Leaching amount is 1.5 times the allowable amount	Area covered with 50cm of new soil
	Exercise area	—	No contamination	_
Hoshienu	Purchased land	—	No contamination	_
Kiyosu Facilities	Land after plant was torn down	—	No contamination	_

#### Results of soil contamination surveys and countermeasures

Note: Notifications of the level of contamination at sites expected to be purchased for the Toyama Plant and at plots where old facilities were torn down at the Fuji Plant were made to the authorities. However, it has been confirmed that the groundwater used for drinking in the surrounding area is not contaminated.

## 6. Adherence to emission standards and response to accidents and complaints

## State of compliance with emission standards

In fiscal 2004, there were three incidents in which wastes exceeded standards. These cases, which occurred at our Kashima Facilities and Fuji Plant, involved temporary phenomena. The authorities were notified and appropriate measures were taken.

## **Environmental accidents and lawsuits**

In fiscal 2004, there was an environmental accident at the Osaka Plant (a summary of the accident is given on the next page). In response, Astellas is even more aggressively implementing measures to reduce environmental risks and working to eliminate the causes of the accident and prevent any further violations.

On the other hand, none of the facilities are involved in legal cases related to environmental problems, and there have been no fines or charges related to environmental problems.

## **Environment-related complaints**

Astellas considers measures related to sensory pollution such as noise and offensive odors as an extremely important topic that must be effectively addressed to build a relationship of trust with local communities.

Environmental measurements are periodically taken to obtain an accurate grasp of conditions relating to the emission of noises and foul odors, and efforts are made to prevent such problems.

In fiscal 2004, a complaint was received about noise

Facilities	Overview
Fuji Plant	Excess of amount of suspended solids in plant wastewater over level in agreement - Average daily value: 44.5mg/L (level in agreement: 22mg/L) - Maximum amount: 50mg/L (level in agreement: 45mg/L)
Kashima Facilities	Aberration in pH level of discharged water into sewage - This was caused by hydrochloric acid escaping through a pinhole that had formed in the upper part of the pump for the tank holding the acid, and which flowed into a gutter.
	Aberration in pH level of discharged water into sewage - This was due to a faulty connection of the inputs for a pump that adds acid or alkali, when the pH meter used for adjusting the pH of water released in the sewer was changed.

at the Tokyo Research Center. An investigation revealed that the source of the noise was the cutting of metal by construction workers conducting earthquakeretrofitting work. The person responsible for plant works contacted the plant office and the cutting of metal was suspended.

Responses to complaints about environmental issues such as noise and odors are considered priority problems, and are handled as such.

Complaints	FY2000	FY2001	FY2002	FY2003	FY2004
Noise	0	0	0	2 (Takaoka, Yaizu)	1 (Tokyo)
Odors	0	0	0	0	0
Vibration	1 (Kiyosu)	0	0	0	0
Others	0	0	0	0	0
Total	1	0	0	2	1

Environment-related complaints (number)

Note: Kiyosu = Kiyosu Facilities, Takaoka = Takaoka Plant, Yaizu = Yaizu Facilities, Tokyo = Tokyo Research Center

## Summary of accident at the Osaka Plant

On June 1, 2004, at the Osaka Plant (in Kashima Facilities), a violent exothermic reaction occurred during the final stage of the drying process of pharmaceutical intermediate. A summary of the accident is given below.

#### Details of the accident

On June 1, 2004, a dryer being used in the drying process of a pharmaceutical intermediate gave off a stench and smoke. As an emergency measure, water was poured into the dryer to cool the machine, and water was also used to cool the exterior of the machine. These measures stopped the smoke. However, a large amount of the gas that caused the stench was not trapped by the scrubber (an exhaust gas trap), and it escaped, spreading throughout the facility. The fire department was immediately contacted. After confirming that smoke was no longer being produced and that the area was safe, the area was cordoned off. This was the final response taken on the day of the accident.

On the day of the accident, as the response was underway, a press conference was held, at which the details of the accident were explained.

#### Damage caused

- (1) Three students at the neighboring junior high school complained of physical pain including eye pain. One was hospitalized and given an intravenous drip. The student was released the following day, and has completely recovered. Follow-up examinations have not revealed any problems.
- (2) Twenty-five employees complained of eye pain, and twentythree of whom were examined at local hospitals and clinics. One, who was working at the site of the accident, fell sick later on, but subsequently recovered.

#### Cause of the accident

Production of the pharmaceutical intermediate was suspended at the plant, an on-site inspection was conducted by the relevant authorities, and an in-house investigation into the cause of the accident was immediately conducted. It was found that there was poor drainage during the filtration of the lot that caused the problem. This caused the drying time to be twice as long as normal. An operator had used a crusher twice to break up the lumps that had formed during the drying process. Based on a modeling experiment, it was found that the gas was composed of the decomposed pharmaceutical intermediate, which had undergone an exothermic reaction during the final stage of the drying process. The following are considered likely reasons for the exothermic reaction.

- (1) The problem lot contained more impurities than normal lots, which caused poor heat stability. (Impurities lower the temperature at which the exothermic reaction occurs.)
- (2) Drying required a long time, and more than twice the normal amount of heat was used, making self-decomposition easier.
- (3) Since the revolving crusher was used during the final drying cycle, the rise in temperature of this lot was larger than the normal.

#### Preventive measures

To prevent a recurrence of the accident, equipment remodeling was carried out, four new operation criteria were introduced, and employees were thoroughly informed of the situation. Revisions were made to the internal contact system and notification procedures for the supervising agencies, local residents, schools, and businesses. These revisions were included in the job-related injury prevention plan.

#### Equipment measures

(1) A smoke detector was installed to quickly detect problems.(2) The effectiveness of the scrubber was improved.

Strengthening control system for dryer operation

- (1) Operation procedures were revised
  - (i) Poor drainage leads to longer drying periods. Lots with poor drainage (where drainage takes more than a set time) should not be allowed to proceed to the drying stage.
  - (ii) A criterion was created for the total length of the drying process. If drying takes more than the permitted time, drying should be terminated.
  - (iii) The crusher should not be used during the final drying cycle.
  - (iv) A check should be made of impurities in the pharmaceutical intermediate before proceeding to the drying process, and if the lot contains more than the permitted amount of impurities, the lot should not be allowed to proceed to the drying stage.
- (2) Strengthening operation control training for workers and redesigning the management system for the whole plant

Furthermore, promoted by this accident, Fujisawa conducted accident and emergency response education and training for all safety managers of its domestic group companies under the guidance of headquarters. The company decided to revise emergency internal and external contact systems and change the organizational layout to cope with possible emergencies.

#### Discussions with supervising agencies

After the accident, on-site inspections were conducted by numerous agencies, including the fire departments and police, the Labor Standards Inspection Office, and the Environment and Sewerage Bureau of Osaka City Hall. Reports on measures to prevent this kind of accident and others were submitted to the authorities.

Production was restarted on June 16 after carrying out the above-mentioned improvements and receiving approval from the supervising authorities.

#### Pharmaceutical intermediates

Pharmaceuticals start as raw materials, and are gradually built up through various manufacturing processes. For example, consider the case where the initial compound is A, which is built up to compound B, and then C, and finally to the desired compound D, the pharmaceutical. Compounds B and C are called pharmaceutical intermediates of compound D.

### 7. Environmental conservation efforts by offices

Action Plan

 Increase the percentage of general items, such as office supplies and copier paper, acquired through green purchasing, to 90% or more on a monetary basis by fiscal 2007

 Increase the percentage of low-pollution vehicles used by our sales staff to 90% or more of total vehicles purchased, and to 50% or more of equivalent 75% low-pollution vehicles by fiscal 2007

We have not yet begun systematically promoting environmental conservation at offices in a way comparable to the systems being implemented at our plants and research centers. To promote environmental and safety activities at offices, Astellas is working to create a system for organized and continuing activities by requiring offices, beginning with Head Office, to set numerical targets; establish a system of meetings to plan environmen-

## Green purchasing

Astellas has set guidelines on promoting green purchasing, which require that products and services that minimize environmental impact be given priority when purchasing office supplies and copier paper, raw materials, and items such as product packaging. In fiscal 2005, numerical targets were set related to the percentage of daily office supplies and low-pollution vehicles used for sales activities purchased through green purchasing. To promote green purchasing of daily office supplies and copier paper, the purchasing system includes a list of products that meet green purchasing criteria. It is recommended that these products be given priority in

#### Green purchasing of office supplies

FY	2004		
	Purchase amount (thousand yen)         Purchasing           Total         Applicable products         ratio (%)		Purchasing
Total	103,991	85,137	81.9

#### Introduction of low-pollution vehicles

tal and safety activities; and create of a system to promote the previously mentioned activities.

In fiscal 2005, activities at offices related to environment and safety include setting numerical targets for green purchasing. At the same time that a system is being created, there are plans to examine other efforts related to environment and safety.

purchasing.

In fiscal 2004, 81.9% of the daily office supplies and copier paper was purchased through green purchasing, and 94.4% of the copier paper was purchased through green purchasing. These activities will be expanded to include all employees to reach the numerical targets.

In addition, as of fiscal 2004, 1,588 of the 2,517 vehicles used by sales staff were low-pollution vehicles, and these vehicles accounted for 63.1% of cars purchased, which is equivalent to 49.1% when converted to 75% low-pollution cars.

#### Green purchasing

This refers to the preferential purchasing of items that cause a lower environmental load than products and services provided in the market. The central government passed a law that requires green purchasing by governmental bodies (Law on Promoting Green Purchasing).

FY		2001	2002	2003	2004
Number of vehicles used for sales		2,364	2,467	2,690	2,517
	75% low-pollution vehicles	45	176	754	1,042
Low-pollution vehicle	50% low-pollution vehicles	23	35	51	75
(Units)	25% low-pollution vehicles	368	500	659	471
	Total	436	711	1,464	1,588
Introduction rate	Number of vehicles	18.4	28.8	54.4	63.1
(%)	*Conversion to 75% low-pollution vehicles	7.6	14.6	37.1	49.1

\* Conversion to 75% low-pollution vehicles is done in the following manner:

Equivalent 75% low-pollution vehicles = number of 75% low-pollution vehicles + number of 50% low-pollution vehicles x 1/2 + number of 25% low-pollution vehicles x 1/3.

## Package recycling expenses

In fiscal 2004, the total amount of glass, plastic, and paper from products made by Yamanouchi and Fujisawa discarded by households, was estimated to be around 659 tons. The cost of outsourcing package recycling based on the Container and Packaging Recycling Law was around 3.6 million yen.

#### • Recycling cost based on the Container and Packaging Recycling Law

EV	Required amou	Recycling expenses		
FT	Glass containers	Plastic containers	Paper containers	(10,000 yen)
2000	203	192	72	2,586
2001	155	198	73	2,034
2002	96	281	25	2,244
2003	152	361	34	2,768
2004 <sup>(note)</sup>	179	433	48	3,595

Note: In fiscal 2004, due to the establishment of a common statistical year for Yamanouchi and Fujisawa, recycling costs were greater than in a typical year, because the period exceeded one year.

## History of our environmental initiatives

While Astellas's history of environmental preservation initiatives is only just beginning, it has inherited a long history of measures taken by Yamanouchi and Fujisawa. The following table gives a summary of the history inherited by Astellas.

FY	Major initiatives
1991	<ul> <li>Creation of Integrated Environmental Activity Departments (Yamanouchi created a department in charge of environmental protection) (Fujisawa established a department in charge of environmental protection)</li> </ul>
1994	<ul> <li>Creating a basic environmental policy (Yamanouchi created a Basic Environmental Policy) (Fujisawa established Environmental Action Guidelines and an Environmental Action Plan)</li> </ul>
1996	Yamanouchi Ireland Co., Ltd., acquires BS7750 certification
1997	Yamanouchi Ireland Co., Ltd., acquires ISO14001/EMAS certification
1998	Takahagi Facilities acquires ISO14001 certification
1999	Nagoya Plant acquires ISO14001 certification
2000	<ul> <li>Environmental Report issued (Fujisawa)</li> <li>Toyama Plant acquires ISO14001 certification</li> <li>Takaoka Plant acquires ISO14001 certification</li> <li>Fuji Plant acquires ISO14001 certification</li> </ul>
2001	<ul> <li>Environmental Report issued (Yamanouchi)</li> <li>Nishine Plant acquires ISO14001 certification</li> <li>Yamanouchi Pharmaceutical (China) Co., Ltd. acquires ISO14001 certification</li> <li>Fujisawa Deutschland GmbH (Kerry) acquires ISO14001 certification</li> </ul>
2002	Fujisawa Health Care Inc. Ltd. (Grand Island) acquires ISO14001 certification
2003	<ul> <li>Fujisawa Ireland Inc. Ltd. (Kerry) acquires ISO14001 certification</li> <li>Fujisawa Deutschland GmbH (Munich) acquires ISO14001 certification</li> </ul>
2004	Conclusion of joint venture agreements
2005 Launch of Astellas Establishment of CSR Committee and CSR Department	

#### Yamanouchi's Social and Environmental Report

#### • Fujisawa's Environmental Report (GLOBE)



Because ensuring the health and safety of its employees is a fundamental component of business, Astellas is working to provide a safe and comfortable working environment. The group is establishing a system to prevent work-related injuries and improve employee health. To ensure that each and every employee is both physically and mentally healthy and active, an Environmental and Safety Action Plan has been established on the basis of the Environmental and Safety Policy, and systematic efforts are being made to reach this goal.

In fiscal 2005, with the birth of Astellas, issues related to safety management systems, disclosure, and communications were identified and incorporated into an action plan for safety activities.

In addition, risk-reduction measures were implemented to respond to natural disasters such as earthquakes and floods, and initiatives taken to minimize damage in such circumstances.

## 1. Building a safety management system

- Construct a safety management system at each principal facility and commence activities by the end of the fiscal 2007
   Plan
  - Prepare and begin to implement a concrete risk assessment action plan concerning safety, hygiene, and disaster prevention by the end of fiscal 2007

It is important to maintain a high level of awareness of issues that can be a source of physical danger at production and research facilities. Difficulty in seeing the benefits of safety activities, and employee complacency, can lead to a drop in awareness and sensitivity to dangers and risks. This is viewed as one factor in major disasters. Therefore, the introduction of a safety management system was considered the most effective way to ensure a continual high level of vigilance by all employees. While expanding the management system to research and production departments, in order to reduce risks, Astellas is implementing measures to uncover potential safety risks at facilities and during operations, and is conducting risk assessments.

## 2. Preparedness and response to accidents and emergencies

Action Plan

Plan

• Develop a risk management system incorporating methods of response and organizational and contact structures for work-related accidents and emergency situations by the end of fiscal 2005

Efforts related to the prevention of accidents are a priority to ensure the safety of employees. In addition, when a work-related accident occurs, it is possible that workers or members of the public in the surrounding area could be exposed to further danger, depending on the scale of the accident. Therefore, while it is important to prevent accidents, it is also necessary to minimize possible damage caused by any accident that does occur. Astellas conducts regular checks on the effectiveness of its systems, and has quickly established both an internal and external contact network and developed an organization to respond to emergencies.

#### 3. Chemical substances management

 Introduce systems to respond to emergencies and accidents related to the transport of the materials such as waste and chemical substances for each principal facility by the end of fiscal 2005

Astellas has devised measures to prevent workers from being exposed to harmful chemical substances they handle. These include providing information on harmful substances and ensuring that employees are aware of the dangers involved; providing employees with protective equipment; improving work procedures; and taking steps such as closing off facilities. In addition, to deal with the possibility that concerns arise that exposure to chemicals may result in severe damage or injury, a system for remote monitoring has been created and a management system to enable a quick and appropriate response to accidents has been set up.

In the event of an accident during the transportation of chemicals, delays in initial responses and incomplete information on the material being transported could delay containment efforts and cause major problems. To prevent this, for outsourcing the transportation of chemical substances, Astellas has developed and implemented guidelines on the presentation of emergency contact cards that contain environmental and safety information.

### 4. Education and training

To ensure the effectiveness of efforts related to safety, and disaster prevention, Astellas systematically conducts training in emergency responses and danger prediction at the workplace. It also conducts safety education for



 Disaster-response training at the Fuji Plant Disaster-response team



 Fuji Plant wins the Shizuoka Labor Bureau's Award for Excellence (Safety Measures Section) Award accepted at the Shizuoka Occupational Health and Safety Conference/Pleasant Workplace Promotion Conference

#### 5. Health improvement measures

At a time of dramatic changes in the structure of society and employment systems, many people are burdened with stress, a lack of psychological security, and other concerns that have increased the physical and mental burden at the workplace. Therefore, companies have to undertake more aggressive efforts for employee health management.

Astellas feels that measures to improve employees' health will help prevent a deterioration in corporate activity. Furthermore, to avoid psychological problems, it is necessary for the organization to continually and systematically take steps to improve the overall mental health (morale) of staff, since some problems cannot be solved individually.

To accomplish this, Astellas is providing an over-the-counter service where employees can obtain

#### expert counseling about issues that worry them. This has been seamlessly combined with the "Individual Consultation with Industry Doctors (Psychiatrists)," "Care through Employee Aid Program (EAP)," and "Independent EAP Policies" programs, to provide a counseling system not only for employees, but also for the whole family. Furthermore, in cooperation with personnel labor management departments, the Company intends to expand education and training for managers on mental health issues.

safety managers and responsible employees at each

facility, as well as for general employees and employees

conducting possibly dangerous or harmful work.

In the future, efforts for health management and promotion will not be limited to early detection through physical examinations and treatment. They will also emphasize the prevention of illness. These efforts will be made by the entire Astellas Group in cooperation with health insurance companies and our labor unions.

#### 6. Work-related injuries

In fiscal 2004, a combined total of 31 work-related injuries occurred at Yamanouchi and Fujisawa. The frequency rate of work-related injuries was 0.30, and the severity rate of work-related injuries was 0.0052.

As always, there are often minor work-related injuries and "near misses." Astellas wants to create a

work environment that makes safety a priority by providing specialized education related to safety, eliminating potential safety risks at the work place, and conducting education and training to maintain and deepen employee awareness of safety.

This rate shows the number of employees suffering deaths or injuries resulting from work-related accidents per million hours of work. The larger the number, the more frequently work-related injuries occur.

Severity rate of work-related injuries

This rate shows the number of days absent from work due to work-related injuries per thousand hours worked. The higher the number, the greater the severity of the injury.

Frequency rate of work-related injuries

Astellas positions compliance as the basis for all corporate activity, not simply as a single corporate social responsibility (CSR) issue. Corporations must develop a compliance philosophy that is based not only on adherence to laws, but also on social norms and customs and the corporation's own situation. Astellas does not regard compliance simply as an educational tool. The Company's position is that all of its business activity should clearly reflect its compliance philosophy, and that every employee's actions must follow this philosophy as a guide. We recognize that adhering to a sound compliance philosophy will enable us to respond to more diverse social needs in the future and win society's trust.

#### Our Definition of Compliance

To fulfill its social responsibility, Astellas believes it to be important that the Company and each of its employees meet the standards for appropriate action that are expected of them as members of society. Therefore, compliance does not simply refer to adherence to laws. It has a broader meaning closer to corporate ethics, in which companies and the individuals who engage in company activities are required to act in line with the norms and standards generally adopted by society.

## Our Code of Conduct

In the Astellas's Charter of Corporate Conduct, Astellas shows the conduct we should adopt when translating our business philosophy into reality, and has clearly set out that such conduct should be put into practice faithfully in the roles and responsibilities of the senior management.

Corporate activity is the aggregation of the business activities of each individual officer and employee, and therefore we have laid down how officers and employees should conduct themselves to realize our business philosophy in the form of this "Our Code of Conduct," based on the Astellas's Charter of Corporate Conduct.

Our Code of Conduct is composed of the "Basic Code of Conduct" common to all stakeholders, and the stakeholder-specific "Code of Conduct towards Principal Stakeholders."

- I. Basic Code of Conduct
- We will strive to observe laws and regulations, company rules, industry rules, norms of social behavior, etc., and to enhance our sense of ethics constantly.
- We will not simply content ourselves with "corporate logics" and "industry logics," but will maintain sound social judgment and conduct ourselves with integrity.
- 3. We recognize that sales and profits can be won based on a high sense of ethics, and will act accordingly. In the event of a conflict between generating sales or profits and behaving in an ethical manner, we will always opt for ethical behavior.

#### II. Code of Conduct towards Principal Stakeholders

#### 1. Conduct towards Customers

- We will endeavor, in all business activities, from research and development to production, sales, and post-marketing surveillance, to identify the customer needs of patients, healthcare practitioners, and others.
- We will conduct research for, and develop, the most advanced pharmaceuticals, provide high-quality and safe products together with useful information, and endeavor constantly to increase customer satisfaction.

#### 2. Conduct towards Shareholders

- We will disclose timely and appropriate information to shareholders, to enable them to gain a correct understanding of Astellas.
- We will make effective use of the capitals that shareholders entrust to the company to help increase enterprise value.

#### 3. Conduct towards Employees

- We will respect not only other employees' human rights and safety, but also the personality and individuality of each as a colleague, so as to create pleasant workplace environments.
- We will create workplaces in which people respect and enhance each other, by creating an open-minded working environment.

#### 4. Conduct towards Suppliers

- We will respect suppliers as important partners, maintaining relationships as equals based on contracts.
- We will conduct fair and transparent business with suppliers based on objective criteria governing each transaction.

- 4. We will maintain sound and normal relations with all stakeholders.
- We will respect other people's human rights, personality and individuality, and not engage in any improper discrimination or harassment.
- We will protect company property, including information assets, in accordance with company rules and similar regulations, and handle it correctly.
- We will appropriately manage and use all personal information, confidential information and information on intellectual property, etc., obtained from stakeholders in accordance with laws and regulations, company rules and similar regulations.

#### 5. Conduct towards Our Industry

- We will engage in free and fair market competition in accordance with the rules.
- We will respect other companies' rights and property, and will take the greatest possible care with respect to the methods of obtaining and handling external information.

#### 6. Conduct towards the World of Politics and Public Administration

- We will understand the mission and responsibilities (to serve the public good) of public servants, politicians, etc., and maintain impartial, transparent and sound relations with them.
- We will perform faithfully our legal and other obligations with respect to accounting records, reporting, notifications, and tax payments to public agencies, etc.

#### 7. Conduct towards Society

- We will attach importance to communication with local communities and society, and will contribute actively to society from each of their perspectives.
- We will observe local laws and respect local cultures and customs, both
   within Japan and overseas, to build mutual trust with people.
- We will maintain a resolute stance towards antisocial forces and organizations that pose a threat to social order and stability.

#### 8. Conduct towards the Environment

- We will remain fully conscious of the impact of the company's day-to-day business activities on the local community and the Earth's environment, and undertake environmental-conservation activities.
- We will make active efforts to ensure efficient use of resources and energy, and to reduce and recycle waste, so as to reduce the burden on the environment.

## Charter of Corporate Conduct and Our Code of Conduct

Astellas has clarified, both internally and to the public at large, its commitment to fulfilling its social responsibilities through corporate activities that show a high level of integrity based on the Charter of Corporate Conduct, which more concretely expresses the concept of conduct in accordance with high standards of ethics, which is one of the principles underlying our business philosophy.

Since corporate activity amounts to the cumulative work activities of each executive and employee, how executives and employees should act is clearly stated in Our Code of Conduct, which is based on the Charter of Corporate Conduct.

The Code of Conduct consists of basic principles of conduct that commonly apply to all stakeholders, and rules for dealing with major stakeholders, which differ for each stakeholder, and provide specific norms for executive and employee behavior. Each point in the Code of Conduct begins with the word "We." This usage makes it clear that all executives and employees promise to act towards all Astellas stakeholders in the manner prescribed.

The Charter of Corporate Conduct and Our Code of Conduct were compiled into a single pamphlet entitled

## Compliance promotion system

The CSR Committee deliberates and decides on Astellas's policy, plans, and measures related to compliance, which are then disseminated to each department by the director in charge of compliance and the CSR department.

Furthermore, items that commonly apply throughout Astellas are then passed on to group companies overseas, and a request is made that these items be reflected in their own compliance efforts.



"Astellas C-file," which was distributed to all executives and employees on April 1, 2005. The Charter of Corporate Conduct and Our Code of Conduct can also be accessed on the Internet.

The "C" in "Astellas C-file" stands for the "C"s in CSR, Compliance, Charter, and Code of Conduct.



#### Compliance promotion leaders

Compliance promotion leaders (127 in all) have been appointed for each domestic department to disseminate Astellas's ideas on compliance at each facility and workplace.

The main role of the compliance promotion leaders is to provide compliance-related consulting and instruction for all members of the department, to act as a contact person for the CSR department, and to distribute compliance-related information provided by the CSR department to all members of the department.

In June, the first Compliance Promotion Leader Conference was held at Astellas Head Office for all compliance promotion leaders. The conference was a forum for sharing information on various issues, including understanding the Charter of Corporate Conduct and Our Code of Conduct, thoughts on compliance at Astellas, the place of compliance in business, and examples of compliance both within and outside of Astellas. There were also group discussions on compliancerelated topics in each department and compliancerelated presentations. The Compliance Promotion Leader Conferences are expected to be held regularly.

Compliance promotion leader conference



#### Education and study activities

In fiscal 2005, compliance education was provided for all domestic Astellas executives and employees, and an e-learning program, which utilizes its intranet, was also launched. In addition, executives and employees who received this compliance education signed and submitted a declaration that they understood Astellas's compliance policies and would make efforts to promote them.

Since Astellas's Charter of Corporate Conduct is applicable at all domestic and overseas facilities, it was distributed to group companies overseas, which are also required to make compliance-related efforts. Since laws and customs differ from country to country, Our Code of Conduct was distributed as reference material only,

#### Helpline established

Since corporate activity is the overlapping work of individuals, all employees, including executives, are required to be responsible for their own actions and adhere to the Code of Conduct. If an employee discovers a violation of the Code, and if this conduct was ordered and the employee thought that the action was probably in violation of the Charter of Corporate Conduct or Code of Conduct but did nothing about it and did whatever he or she was ordered to do, this would be damaging to Astellas, the individual, and society.

Therefore, a Helpline has been created to provide counseling and solutions related to these kinds of problems. This system makes it possible for all employees to directly contact the director in charge of compliance by email, regular mail, or phone. The identity of employees using the Helpline is strictly confidential, and retaliatory actions, workplace threats, and harassment of an employee that has used the Helpline are strictly forbidden.

Sexual harassment is a major violation of Astellas's compliance policy, and the Code of Conduct contains the following pledge: "We will respect other people's human rights, personality and individuality, and not engage in any discrimination or harassment."

Sexual harassment is clearly forbidden by employment rules. Female staff are assigned to provide counseling and handle reports of sexual harassment, because

#### Personal information protection system

Astellas has established an in-house system in line with various guidelines to comply with the Law on Personal Information Protection, which came into full effect in April 2005.

In-house system

- \* Appointment of officer in charge
- \* Establishment and announcement of personal information protection policy
- \* Establishment of personal information protection rules
- \* Announcement of purpose of use
- \* Creation of an inquiry office

The Company has also created a Personal Information Protection Manual that sets forth specific rules for the handling of personal information. All employees have been instructed to carry at all times the Personal Information Protection Card, an abridged version of the and it was requested that overseas group companies establish their own codes of conduct when necessary.



this makes it easier for female employees to seek counseling.

In addition to the above items, the Helpline can also be used for a wide range of issues, including questions and proposals related to compliance.

#### Outline of the helpline



Personal Information Protection Manual. Efforts are also being made to strengthen the personal information protection system by holding, when necessary, departmentand job-specific explanatory meetings.



Personal Information Protection Card

It takes ten years or more from the time a candidate compound is discovered or created until it receives approval from the Ministry of Health, Labor and Welfare (MHLW) to clear the way for the launch of a new pharmaceutical product. During this time, various scientific technologies and lab animals are used, and finally, tests are conducted on patients to prove the pharmaceutical's usefulness, which includes efficacy and safety. A pharmaceutical company's efforts, including genetic research, are also required to bring the process to completion.

Astellas employs a system with careful standards for the creation of new pharmaceuticals that takes into consideration human rights and consideration for animals at the necessary stages of research and development.

## Consideration of human rights in genetic research

Deciphering the human genome (all human genes) will dramatically increase our understanding of the relationship between genes and biological functions or diseases. Genetic research is expected to enable the development of epoch-making pharmaceuticals and to design pharmaceuticals and treatments that fit individual genetic information.

However, human genetic research raises ethical concerns about collecting and managing information related to samples such as blood, tissue, and individual

## Consideration of human rights in clinical trials

It is necessary to improve reliability, safety, and test quality, and protect the personal information and human rights of patients when conducting clinical tests required for the development of pharmaceuticals, postmarketing clinical trials and surveillance.

Astellas has established a Clinical Trial Investigative Committee that includes outside doctors and lawyers. This Company committee checks and monitors the ethical and scientific appropriateness of clinical trial plans.

## Ethical considerations related to animal tests

The relevant authorities in every country require various tests to ensure the efficacy and safety of new pharmaceuticals before they can be launched, and, given the current state of scientific technology, it is impossible to conduct these tests without using animals.

Astellas conducts these tests based on the highest legal and ethical standards. Along with setting policies on animal testing, from a perspective of harmonizing the scientific and animal welfare points of view, the genetic information.

At Astellas, we have established a Human Tissue Research Ethics Investigative Committee based on ethical guidelines for human genome/gene analysis research. This Committee, which is made up of members of the public and experts in various fields such as ethics, law, and the natural sciences, deliberates on ethical questions and recommends appropriate action related to the analysis of the human genome and tissue samples.

Astellas uses both newspapers and the Internet to provide information related to trial subjects in compliance with the Japan Pharmaceuticals Manufacturers Association methods and rules concerning appropriate dissemination of information for efficient recruitment of subjects (Notification No. 65 of the Inspection and Guidance Division, Pharmaceutical and Medical Safety Bureau, dated June 30, 1999).

Animal Test Committee strictly examines the four R's: replacement (is it possible to replace the animal test), reduction (reducing the number of animals used to a minimum), refinement (refining measures to eliminate unnecessary suffering of the animal), and responsibility (being responsible for sufficiently explaining the predictability and significance of the experiment). It then recommends whether to conduct animal testing or not.

#### Flow of R&D for pharmaceuticals

Basic research	Non-clinical trials	Clinical trials	Application for approval	Post-marketing surveillance
This is the stage at which research is conducted to discover or chemically create new substances and components that will become the source of a pharmaceutical product. Various chemical and physical processes and biotechnology are used. Recently, methods using genome information (genetic information) have been employed.	During basic research, the effectiveness and safety of selected substances are examined using cultured cells and lab animals (such as rats and mice). Research on how the substances affect the body, stability, and quality is conducted.	Efficacy and safety for human beings is assessed during this stage. Useful compounds become investigational new drugs (IND) at this stage. After the doctor receives the informed consent of both healthy people and patients, clinical trials are cautiously conducted while checking safety. This is done in the following three stages: Phase I clinical trial: safety, including side-effects, are checked on a small number of healthy volunteers Phase II clinical trial: usage and dosage are examined while checking the efficacy and safety on a small number of patients, Phase 3 clinical trials: efficacy and safety are checked	Application for approval is filed with the MHLW. The application is examined by experts, and if the material is determined to be useful, it is approved as a pharmaceutical.	By collecting data on usage by large numbers of patients at medical institutions such as hospitals, efforts are made to identify and examine side- effects that were not detected at the development stage or through efficacy investigations.

Employees are important stakeholders – the people who put Astellas's business philosophy into practice. Astellas wants employees who can carry out their missions and fulfill their roles, with the aim of contributing to the enhancement of the Company's enterprise value, thereby winning society's trust.

In order to have a solid organization which attracts and inspires employees like these to actively contribute to the Company with their best efforts, skills and abilities, Astellas is endeavoring to establish effective systems for performance evaluation and compensation, human resources development, and staff deployment.

Furthermore, our welfare and benefits system is designed to provide an environment in which employees can enjoy fulfilling lives both at work and at home, and make the most of their abilities. While providing a workplace where employees can focus on their work without distractions, the welfare and benefits system also helps keep them in the best of health, and serves as a safety net, giving employees a stronger feeling of security.



#### Competency

Competency is defined as the ability to achieve continuous excellent results in the performance of the employee's job.

## Providing opportunities for employee growth

Astellas values its human resources, which it recognizes as the driving force of corporate growth. To increase enterprise value, all employees must understand their responsibilities, display creativity, and make accurate decisions in their work, applying advanced specialized knowledge and skills. For us to be a company where all employees have opportunities and work with enthusiasm, Astellas actively supports employees who are independently striving to develop themselves.



## Operating a fair human resources management system

We have introduced a system for job evaluation, as well as performance appraisals. In this, expectations regarding employees' work and performance are clearly stated based on a job grading system, and fair and reasonable work and performance evaluations are conducted. The system includes individual interviews to ensure that evaluations are accurate and reasonable and to explain each employee's evaluation results. Therefore, training is conducted so that managers fully understand the system, and opportunities are created to deepen the mutual understanding between the manager and employees being evaluated by bringing them together. The system also ensures opportunities for sufficient discussions at the individual interviews. In Astellas's human resources management system, there is no discrimination regarding the gender of employees.

Work assignments are based on the concept of assigning the right people to the right positions to maximize performance for the organization and to make the fullest use of everyone's abilities, experience, and aptitude.

## Composition of the labor force

The following gives the percent composition by type of work of Astellas's workforce in Japan as of April 1, 2005.

Regular full-time employees account for 98% of Astellas Pharma's work force and 77% of the Astellas Group's workforce in Japan. Diversification of employment patterns is gaining momentum. Taking this into consideration, Astellas works to create a workplace that is conducive to productive work by providing extensive training related to safety and environmental protection



Poster promoting the use of "name-plus-san" rather than job-title in addressing superiors

Astellas considers an employee's title as an indicator of his or her role. To create an open organization and an environment in which employees respect each other's personality, employees address their superior officers not by the person's title, but with the person's name followed by "san," which is the Japanese equivalent of Mr. and Ms. This is the case with both executives and newly-hired entry-level employees.

Astellas wants to create a friendly and energetic company by fostering open relationships where employees use the same polite form of address used in general society, rather than the extremely formal, hierarchical system of addressing superiors that has been the general practice up to now.

activities, while promoting compliance awareness for all domestic employees. We are also working to develop a management system enabling a diverse workplace, which includes reducing work-related risks and providing education and training for employees in production and research areas that do involve risks. This includes providing training on preventing work-related accidents, including fires and explosions, and exposure to harmful chemical substances.

	Regular full-time employees	Other full-time/part-time employees	Total
Astellas Pharma	98%	2%	6,800
Domestic Astellas Group	77%	23%	2,700

## A work time system that supports a diverse range of workstyles

Under Astellas's human resource management system, evaluations shall be based on the responsibilities and performance of each employee. Therefore, the following systems were introduced as work-schedule systems to support various patterns of work hours. In addition, domestic group companies have introduced their own systems based on the concepts underlying the following systems.

## Flex-time system

This system is applied to employees who have not attained a certain level of responsibility regarding their work, excluding sales. The system gives employees the flexibility to choose when they start and finish work

## Outside de facto working hours system

This is applicable for sales-related work performed outside the office. For employees who have a better understanding than their superiors of their customers, this system gives them discretion in setting their working time-frames; under this system, employees are considered to have worked their scheduled number of work hours regardless of the actual number of hours worked. per month, and taking into consideration business plans.

each day based on a scheduled number of work hours

## Discretionary working system

This system applies to researchers and staff with a certain amount of responsibility. Under this system, an employee's work performance is evaluated largely on the contribution they make to the company. It is similar to the "outside de facto working hours system" in that employees are compensated for a fixed number of hours, although actual hours worked do not necessarily coincide with this amount.

## A leave system that supports child-raising families

## Systems for maternity and child-raising leave

To support mothers, Astellas has established a childraising leave system that combines the statutory maternity leave and time considerations for pregnancy health exams and child-raising time. The employee is able to take the leave until the child is three years old. We also have a system for reduced working hours for employees raising children up to three years old.

Astellas has also established the following systems.

## Nursing leave system

Building a society where the elderly can live comfortably and all citizens can enjoy a long life is an urgent issue for Japan, and companies have to create systems to respond to the aging of the population.

Astellas has introduced a nursing leave system where employees can take time off (up to a year) to aid in the home care or rehabilitation of family members if

## Bone marrow donor special leave

Out of respect of an employee's desire to donate bone marrow, a system has been created so that special leave can be taken to register and donate bone marrow.

## Childcare leave system

As one part of our child-raising support, if a child who has not yet entered elementary school is injured or becomes ill, employees can take up to five days of childcare leave, which is separate from the annual regular paid leave.

the need arises. If the leave is greater than three months but within the one-year period, the employee can take leave in one-month periods when needed (however, when the number of days is less than 93, this is set by law.) It is also possible to work one hour less a day without taking leave.

## **Special care leave**

If continued hospitalization or homecare is necessary after receiving one month of treatment for the same disease or injury, employees can take up to one month of recovery leave.

## Measures to support the development of the next generation (countermeasures against the falling birthrate)

The total fertility rate (TFR) for Japanese women has fallen significantly in recent years, hitting a historic low of 1.29 in 2004. It is feared that the falling birthrate will lead to a decline in the number of future workers, which would sap society's vigor. To reverse this declining birthrate trend, we must create a social structure in which people can experience the joys and pleasures of having children, and in which children can be raised in a healthy manner.

Japan now has two laws addressing this issue: the Fundamental Law on Measures to Combat the Falling Birth Rate, and the Law to Promote Measures to Support the Development of the Next Generation. The following are given as the principles behind the laws: "the importance for all citizens and organizations, including administrative bodies and corporations, of overcoming the generation barrier and supporting children and families with children, and of creating cooperation and mutual support," and "the importance of creating an environment where the joy of raising children is taken into consideration and leads to a deeper understanding of the importance of children at home and in other places, based on the fundamental recognition that the primary responsibility of raising a child belongs to the child's guardian."

In response to measures to support the development of the next generation, the responsibility of corporations concerning the declining birth rate is to "establish and implement an action plan to create a work environment conducive to both having a career and raising children."

Based on the principles behind the law, Astellas has established a general business owner's action plan in line with the "action plan establishment guidelines," and as an initial step in building a system in which it is possible to have a career and raise children.

#### Total fertility rate (TFR)

This is a demographic indicator that statistically expresses the average number of children born in a given population. This indicator makes it possible to determine if the future population will naturally increase or decline. It is calculated on the basis of the total number of babies born to females between the ages of 15 and 49.

#### Astellas Pharma's action plan

Planning period April 1, 2005 to March 31, 2007 (two years) Application for approval has been submitted.

Plan contact

Target 1	During the plan period, have at least one male employee take child-rearing leave.
Measures	Provide information to employees over the intranet and foster an environment where it is easy to take child-rearing leave.
Target 2	By April 2006, increase the length of time that an employee can work reduced hours for child rearing up to the point where a child enters elementary school.
Measures	Reform the present system after confirming employees' needs
Target 3	By April 2006, implement measures to reduce the amount of overtime work to eliminate excessive work.
Measures	Establish a management system to reduce overtime work based on Ministry of Health, Labor and Welfare standards related to the prevention of the adverse effects on health of excessive work.

## Employment of physically challenged persons

At Yamanouchi and Fujisawa, prior to the merger that created Astellas, physically challenged employees accounted for around 1.7% of the work force at both companies in fiscal 2003, which was less than the legally required rate of 1.8%. In fiscal 2004, there were 126 physically challenged employees, which boosted the percentage of employees with disabilities to 1.88%, 0.08 percentage point above the legally required level.

This was due to contributions from the promotion of employment of physically challenged persons at Astellas Human Resource Development, a domestic group company that is responsible for human resource development at Astellas.  Percentage of physically challenged employees in the workforce

	Percentage of physically challenged employees in the workforce           Yamanouchi         Fujisawa		
FY03	1.70	1.72	
FY04	1.88		

Astellas promotes activities that contribute to the good of society and that help create a dialogue with local communities in various fields, including health care, welfare, environment, and disaster aid and response. In addition, the Company actively contributes to regional cultural development and academic support activities, including aid for research in the fields of medicine and pharmacology.

## Academic support activities

As a pharmaceutical company focused on R&D, Astellas supports research in various scientific fields, particularly medical science and pharmacology. Currently, the group has established four research foundations, and is

## Astellas Foundation for Research on Metabolic Disorders

As a corporation involved in the business of saving lives, Yamanouchi established the Foundation for Research on Metabolic Disorders in 1969 to support advances in medicine, pharmacology, and the development of pharmaceuticals. The Foundation has supported researchers studying abroad and research in the fields of medicine and pharmacology.

In fiscal 2004, the Foundation invited proposals on the theme of genetic and biological systems related to disease and treatment, and provided support for 70 proposals and five researchers who wanted to study abroad.

## Astellas Foundation for Research on Medicinal Resources

Early into the recovery of Japan after the war, in 1946, Fujisawa established the Research Center for Medicinal Resources (presently the Astellas Foundation for Research on Medicinal Resources), based on the idea that it was necessary to develop original pharmaceuticals and ensure their production. Over the years, the Foundation has supported researchers at universities and research institutes to promote basic research and applications related to the discovery and development of medical resources. Astellas has inherited this idea, and will continue to support scholarship in this field through the Foundation.

In fiscal 2004, the Foundation received numerous applications for support, and based on a final report by the Selection Committee, the board of directors chose 25 projects to support.

## Other support for worthy causes

## Establishment of the Astellas Social Contribution Fund

The Charter of Corporate Conduct clearly states that social contribution activities are an important part of becoming a trusted corporation.

Having inherited the idea behind the Three-Nine Fund, established by Yamanouchi in 1996 based on an employee's proposal and with the catchphrase "low-key but sustained social contributions," we have established the Astellas Social Contribution Fund. Astellas is expanding the scope of its contributions to society and promoting activities that contribute to society on various fronts, including medicine, health, welfare, and environmental protection.

This system is based on 100-yen contributions deducted from the paychecks of participating employees.

supporting the development of basic science and life sciences by supporting study-abroad programs for young researchers as well as researchers from developing countries.

## Astellas U.S. Foundation

The U.S. Foundation was established by Yamanouchi in 1993. The Foundation supports basic research in various fields to promote advances in the field of medical science and pharmacology. Through academic conferences, it also supports programs that aim to improve the lives of patients who feel they have lost their dignity due to incontinence. Other programs it supports include improvements for regional hospitals and study-abroad programs at public schools for Japanese students.

In fiscal 2004, donations were made to 85 programs, including those for basic research, improvements at regional hospitals, and educational programs.

## **Astellas Europe Foundation**

The Astellas Europe Foundation was established by Yamanouchi in the United Kingdom in 1994. With the goal of supporting academic programs related to basic medical care, the Foundation selects researchers conducting excellent research and awards them the Astellas Award through the Société Internationale d'Urologie. In addition, the Foundation selects certain countries in Europe each year and supports a research institution in that county. In fiscal 2004, scholarships were provided to institutes in Ireland and Portugal.

Astellas also pays 100 yen for each 100 yen donated by an employee. Once a year, the collected funds are donated to groups that work to improve health and welfare.

 Number of vans (for transporting wheelchair-bound passengers) donated from the Three-Nine Fund

Number of vans donated in fiscal 2004	5
Cumulative number of donated vans	118

\* Donated through the Zenshiren (National Federation of The Physically Disabled and Parents Associations). Members who took part in the presentation ceremony felt the deep appreciation of the patients and staff of the facilities for disabled children, and this reconfirmed for them the importance of mutual support within society.

## **Donation of ambulances on First-Aid Day**

A presentation ceremony for Miyake-Mura was held on September 9.

Yamanouchi donated ambulances to four local governments throughout Japan on First Aid Day, September 9, 2004. As part of its social contribution activities, the company had made the same donation each year since 1970.

Including the four ambulances (two of which were

### Disaster aid for the Sumatran Tsunami

The worst of the succession of natural disasters in fiscal 2004 — the tsunami that devastated the coast of northwest Sumatra on December 26 — resulted in damage of historic proportions. In Japan, the Chuetsu Earthquake caused heavy damage to the central region of Niigata Prefecture, and recovery work related to that earthquake is still underway.

Both Yamanouchi and Fujisawa made donations through the Japanese Red Cross Society to support reconstruction efforts after the Sumatran Tsunami. Furthermore, donations were collected from executives high-grade ambulances), a total of 196 vehicles (22 of which were high-grade ambulances) have been donated.

Astellas will continue to value this idea and to make social contributions based on the idea of harmonious cooperation with local communities.

and employees in cooperation with labor unions, and these funds were also passed on to the Japanese Red Cross Society to support reconstruction efforts. Since there were requests for medical supplies from affected communities, medical supplies were sent through government organizations.

In Japan, along with providing medicine to the victims of the Chuetsu Earthquake, donations were collected and passed on to the Niigata Prefecture Community Chest to aid in reconstruction efforts.

## Information disclosure

With the birth of Astellas, Yamanouchi's Social and Environmental Report was integrated with Fujisawa's Environmental Report to form the CSR Report, which covers the CSR-related efforts that Astellas should make, including those related to environment and safety issues. Besides, we plan to gradually introduce site reports for major production and research facilities that cover their efforts related to environment and safety.

In addition to the CSR Report, Astellas provides information in various other formats to inform the general public of the Company's mission and beliefs. On April 1, 2005, the day Astellas was launched, an outline was released to inform customers, suppliers, and people connected with Astellas of the Company's philosophy in easy to understand terms. In addition, a business report was created for shareholders to provide information on the corporation, including earnings. Astellas also published its Annual Report 2005 to provide shareholders and investors with a wider range of information on the business areas in which Astellas is active.

Information on Astellas's corporate activities is also available on the Company's website. A range of information, including Astellas's management policy, business activities, environmental information, and IR information can be found on Astellas's website (http://www.astellas.com).

#### Astellas website



 Marcine
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## Providing information on medical products

### Information for medical professionals

Pharmaceuticals are valuable only to the extent that doctors and pharmacists are provided with information on their use, efficacy, and safety, and that they are used by patients properly. Medical Representatives (MRs) are responsible for seeing to it that these things are performed properly. Astellas has 22 branch offices and 181 sales offices throughout Japan, and Astellas's 2,500 MRs are active in medical institutions throughout Japan. (Worldwide, we have 4,700 MRs.) Our MRs distribute a wide range of information on pharmaceuticals to users on the healthcare frontline, and pass on information they receive and requests from medical professionals to our research and development departments.

Recently, medical professionals have come to demand a wider range of high-quality information related to ethical pharmaceuticals. Therefore, employing various channels, we ensure that our MRs are equipped with all the information they need to support their efforts.

Astellas has also introduced systems that allow medical professionals to obtain basic information on products 24 hours a day; these include Astellas Medical Net, a net-based system for medical professionals; and a fax-based service, Pharmaceutical Information BOX. In addition, an e-mail magazine with information on treatments is available to medical professionals on request. The Drug Information (DI) Center handles inquiries from medical professionals, general consumers, and patients and their families, about how to take medicines, safety, effectiveness, and efficacy.

The DI Center, the source of information on Astellas products, embodies the idea of patient-centered treatment by increasing customer satisfaction and providing information on quality and proper use. Furthermore, the Center provides sales departments with information it gets from inquiries and strives to provide fuller services.

In fiscal 2004, Astellas received 57,495 inquiries from outside the Company related to ethical pharmaceuticals for treatment. In addition, there were 15,106 inquiries related to OTC pharmaceuticals. We would like to thank all those who sent us questions.



## Astellas's Health Support Line

Astellas has maintained the "Health Support Line" established by Yamanouchi in 1996. Experienced nurses give friendly, understandable health advice over the phone. The support line is free, and more detailed advice is provided by specialists. (Advice from specialists

is provided once every two months, and all inquiries are by appointment.) However, the support line does not offer diagnoses.

The support line responded to 9,196 inquiries in fiscal 2004.

## Health information on the radio

Astellas has continued to broadcast the health radio program that Yamanouchi launched in 1996.

In the Kanto and Tokai areas, the program is called "Astellas Pharma Ashita mo Genki" ("Healthy Tomorrow"), and in the Kansai and Chugoku region it is called "Astellas Pharma Sukoyaka Life" (Healthy Life). The tenminute Monday-to-Friday programs provide accurate and useful information on health and diseases. Astellas hopes to increase interest in health and promote the correct use of medicines through this program.

In addition, information on diseases, such as selfadministered checks for lifestyle-related illnesses, is also provided on our website at:

http://www.astellas.com/jp/kenkou/index.html

## **Citizen's courses**

To help people live a healthy and full life and actively enjoy their later years, in 1997 Fujisawa began sponsoring a citizen's health course, "Fujisawa Good Life Forum." At the ninth Fujisawa Good Life Forum - held in Hiroshima in 2004 — a health specialist gave thought-provoking lectures on medical care and technological innovations for the graving society, and mental health. A famous entertainer was also invited to the forum to give talks.





Good Life Forum

Pamphlet

## **Promoting local culture**

#### Shinno-San

In cooperation with various participants, including local pharmaceutical companies, we have worked to maintain and develop the Sukunahikona Shinto shrine in Doshomachi, Osaka, where Sukunahikonanomikoto, the Japanese deity of medicine, and Shinno-San, the Chinese deity of medicine, are enshrined.



Doshomachi Pharmaceutical Museum

This museum passes on the local culture of the Doshomachi area of Osaka, which has developed since the Edo period, and does research to preserve Doshomachi writings, and material of historical importance.

## Interacting with the communities to which it belongs

As a company active in the field of saving lives, Astellas works to not only provide superior medicines but also actively interacts with other members of the communities in areas where its plants and offices are located.





#### Labor Union's contributions to society

Through the participation of individual members who value mutual assistance, the labor union at Astellas contributes to society from various perspectives, as households, organizations, and members of society. Among these, the union contributes to society with the goal of developing socially independent employees, fostering independent action and harmony with the surrounding community, and building a society in which everyone can live enjoyably and fruitfully.

In particular, the union contributes to the Ashinaga Scholarship Society, which supports the continuing education of children who have lost parents due to traffic accidents or suicide. The union has also expanded its support by participating in the



Ashinaga P Walk 10 (fiscal 2004)

"Ashinaga P Walk 10," a charity walk held throughout Japan.

In addition, union members took part in visits to the Higashimurayama factory of "Tokyo Colony," a social welfare corporation, hands-on volunteer training at *Hinode Taiyo No Ie*, a social welfare institution for people with mental disabilities (located in Hinode-Machi, Tokyo), and emergency response training through the Social Contribution Emergency Forum sponsored by the Federation of Pharmaceutical Producers. In addition, at the Social Contribution Forum in Osaka, whose theme was HIV and disabilities, union members had the opportunity to experience being confined to a wheelchair and being blind, using a blindfold.



Hands-on training at Hinode Taiyo No le (fiscal 2004)

## • Environmental performance data for principal domestic facilities

## Nishine Plant

Item		Unit	FY04
	Electricity	1,000 kWh	8,807
	Heavy oil	kl	2,108
France	Kerosene	kl	5
Ellergy	LPG	Tons	-
	City gas	1,000 m <sup>3</sup>	-
	Total	1,000 GJ	169
C	D2	Tons	9,058
N	Эх	Tons	4
S	Эх	Tons	3
	Tap water	1,000 m <sup>3</sup>	_
14/	Industrial use	1,000 m <sup>3</sup>	_
water usage	Well water	1,000 m <sup>3</sup>	202
	Total	1,000 m <sup>3</sup>	202
Drainage water		1,000 m <sup>3</sup>	202
BOD		Tons	1
Masta	Generation	Tons	359
vvaste	Landfill	Tons	9

Takahagi Facilities

lte	em	Unit FY04	
Eporgy	Electricity	1,000 kWh	16,395
	Heavy oil	kl	2,581
	Kerosene	kl	-
Ellergy	LPG	Tons	9
	City gas	1,000 m <sup>3</sup>	-
	Total	1,000 GJ	263
C	CO2 Tons		13,220
NOx		Tons	5
S	Эх	Tons	2
Water usage	Tap water	1,000 m <sup>3</sup>	35
	Industrial use	1,000 m <sup>3</sup>	2,861
	Well water	1,000 m <sup>3</sup>	_
	Total	1,000 m <sup>3</sup>	2,896
Drainag	e water	1,000 m <sup>3</sup>	3,103
BC	)D	Tons	
Manta	Generation	Tons	1,849
Waste	Landfill	Tons	30

#### Fuji Plant

<b>·</b>				
Ite	em	Unit FY04		
	Electricity	1,000 kWh	18,288	
	Heavy oil	kl	3,296	
Foorm	Kerosene	kl	152	
Ellergy	LPG	Tons	_	
	City gas	1,000 m <sup>3</sup>	1,024	
	Total	1,000 GJ	356	
C	02	Tons 18,23		
N	0x	Tons		
S	0x	Tons	2	
	Tap water	1,000 m <sup>3</sup>	145	
10/	Industrial use	1,000 m <sup>3</sup>	3,486	
water usage	Well water	water 1,000 m <sup>3</sup>	5	
	Total	1,000 m <sup>3</sup>	3,637	
Drainaç	ge water	1,000 m <sup>3</sup> 3,45		
B	DD	Tons	18	
Marcha.	Generation	Tons	1,410	
Waste	Landfill	Tons	19	

#### Yaizu Facilities

Ite	em	Unit FY04	
Faarmu	Electricity	1,000 kWh	30,939
	Heavy oil	kl	4,522
	Kerosene	kl	-
Ellergy	LPG	Tons	1,826
	City gas	1,000 m <sup>3</sup>	21
	Total	1,000 GJ	573
C	CO2		29,467
NOx		Tons	10
SI	SOx		5
Watar yaaga	Tap water	1,000 m <sup>3</sup>	355
	Industrial use	1,000 m <sup>3</sup>	
water usage	Well water	1,000 m <sup>3</sup>	608
	Total	1,000 m <sup>3</sup>	963
Drainag	je water	1,000 m <sup>3</sup>	926
B	DC	Tons	2
Wasta	Generation	Tons	867
Waste	Landfill	Tons	75

#### Takaoka Plant

Ite	m	Unit	FY04
	Electricity	1,000 kWh	23,757
	Heavy oil	kl	261
France	Kerosene	kl	_
Ellergy	LPG	Tons	2,576
	City gas	1,000 m <sup>3</sup>	_
	Total	1,000 GJ	373
C	D2	Tons 17,41	
N	NOx		4
S	Эх	Tons	0.2
Matan	Tap water	1,000 m <sup>3</sup>	141
	Industrial use	1,000 m <sup>3</sup>	4,114
water usage	Well water	1,000 m <sup>3</sup>	98
	Total	1,000 m <sup>3</sup>	4,352
Drainag	le water	1,000 m <sup>3</sup> 3,86	
BC	)D	Tons 6	
Waata	Generation	Tons	16,742
Waste	Landfill	Tons	480

#### Tokyo Research Center

-			
Ite	em	Unit	FY04
	Electricity	1,000 kWh	8,626
	Heavy oil	kl	0.2
Foorm	Kerosene	kl	123
Ellergy	LPG	Tons	—
	City gas	1,000 m <sup>3</sup>	1,557
	Total	1,000 GJ	153
C	02	Tons	6,620
N	NOx		3
S	0x	Tons -	
	Tap water	1,000 m <sup>3</sup>	41
Water usage	Industrial use	1,000 m <sup>3</sup>	44
water usage	Well water	1,000 m <sup>3</sup>	17
	Total	1,000 m <sup>3</sup>	102
Drainaç	ge water	1,000 m <sup>3</sup>	81
B	DD	Tons	
Masta	Generation	Tons	279
Waste	Landfill	Tons	8

### Kiyosu Facilities

lte	Item		FY04
	Electricity	1,000 kWh	12,045
	Heavy oil	kl	-
Enormy	Kerosene	kl	-
Ellergy	LPG	Tons	-
	City gas	1,000 m <sup>3</sup>	2,937
	Total	1,000 GJ	239
C	CO2		10,309
NOx		Tons	2
S	SOx		-
	Tap water	1,000 m <sup>3</sup>	19
Motor upogo	Industrial use	1,000 m <sup>3</sup>	
water usage	Well water	1,000 m <sup>3</sup>	2,695
	Total	1,000 m <sup>3</sup>	2,714
Drainag	e water	1,000 m <sup>3</sup>	2,627
BC	D	Tons	7
Wasta	Generation	Tons	3,506
Waste	Landfill	Tons	5

### Miyukigaoka Research Center

Ite	em	Unit FY04	
	Electricity	1,000 kWh	23,220
	Heavy oil	kl	_
Foorm	Kerosene	kl	928
Energy	LPG	Tons	
	City gas	1,000 m <sup>3</sup>	3,220
	Total	1,000 GJ	395
C	D2	Tons 17,40	
N	NOx		5
S	Эх	Tons	-
	Tap water	1,000 m <sup>3</sup>	82
Water upage	Industrial use	1,000 m <sup>3</sup>	169
water usage	Well water	1,000 m <sup>3</sup>	-
	Total	1,000 m <sup>3</sup>	251
Drainag	le water	1,000 m <sup>3</sup> 14	
B	D	Tons	5
Weste	Generation	Tons	549
waste	Landfill	Tons	60

#### Kashima Facilities

Item		Unit	FY04
	Electricity	1,000 kWh	37,760
	Heavy oil	kl	_
<b>F</b>	Kerosene	kl	
Energy	LPG	Tons	_
	City gas	1,000 m <sup>3</sup>	5,610
	Total	1,000 GJ	602
C	D2	Tons 25,269	
NOx		Tons	3
S	Эх	Tons -	
	Tap water	1,000 m <sup>3</sup>	122
Water upogo	Industrial use	1,000 m <sup>3</sup>	448
water usage	Well water	1,000 m <sup>3</sup>	—
	Total	1,000 m <sup>3</sup>	570
Drainag	le water	1,000 m <sup>3</sup>	606
BC	)D	Tons	20
Wests	Generation	Tons	10,315
waste	Landfill	Tons	33

## Toyama Plant

Ite	em	Unit	FY04
	Electricity	1,000 kWh	23,146
	Heavy oil	kl	—
Foorm	Kerosene	kl	_
Ellergy	LPG	Tons	_
	City gas	1,000 m <sup>3</sup>	2,483
	Total	1,000 GJ	330
C	D2	Tons	13,616
NOx		Tons	5
S	Эх	Tons	_
	Tap water	1,000 m <sup>3</sup>	139
Water users	Industrial use	1,000 m <sup>3</sup>	2,292
water usage	Well water	1,000 m <sup>3</sup>	—
	Total	1,000 m <sup>3</sup>	2,430
Drainag	Drainage water		2,170
BC	)D	Tons	3
Wests	Generation	Tons	2,604
vvaste	Landfill	Tons	229

#### Tokodai Research Center

Ite	em	Unit FY04	
	Electricity	1,000 kWh	6,184
	Heavy oil	kl	_
Eporal	Kerosene	kl	1,474
Ellergy	LPG	Tons	5
	City gas	1,000 m <sup>3</sup>	_
	Total	1,000 GJ	115
C	CO2		6,026
NOx		Tons	1
S	SOx		_
	Tap water	1,000 m <sup>3</sup>	55
Watar upago	Industrial use	1,000 m <sup>3</sup>	_
water usage	Well water	1,000 m <sup>3</sup>	10
	Total	1,000 m <sup>3</sup>	66
Drainag	je water	1,000 m <sup>3</sup>	66
B	BOD		1
Wasta	Generation	Tons	239
vvaste	Landfill	Tons	18

#### Hoshienu

Ite	em	Unit FY04	
	Electricity	1,000 kWh	2,310
	Heavy oil	kl	_
France	Kerosene	kl	94
Ellergy	LPG	Tons	0.08
	City gas	1,000 m <sup>3</sup>	_
	Total	1,000 GJ	26
C	D2	Tons 1,107	
N	NOx		_
S	Эх	Tons	_
	Tap water	1,000 m <sup>3</sup>	8
Watar upogo	Industrial use	1,000 m <sup>3</sup>	_
water usage	Well water	1,000 m <sup>3</sup>	_
	Total	1,000 m <sup>3</sup>	8
Drainag	e water	1,000 m <sup>3</sup>	_
BC	)D	Tons	0.06
Masta	Generation	Tons	26
Waste	Landfill	Tons	4

## Environmental performance data for each principal facility

#### Volumes of materials for which notification is required under the PRTR Law that were released or transferred (units for figures in the table are tons/year; however for dioxins, the units are mg-TEQ/year)

#### Nishine Plant

Material	Volume pro-	Volume released		Volume	Volume removed	Volume tr	ansferred	
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Dichloromethane (methylene chloride)	45.180	4.072	0.000	0.000	41.088	0.000	0.020	0.000
Takahagi Facilities								

Material	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Ethylene glycol	23.946	0.004	0.003	0.000	0.000	23.939	0.000	0.000
Acetonitrile	6.524	0.003	0.003	0.000	0.000	6.072	0.446	0.000
Chloroform	1.566	0.018	0.009	0.000	0.000	0.703	0.836	0.000
1,4-dioxane	7.029	0.015	0.000	0.000	0.000	6.999	0.015	0.000
Dichloromethane	48.232	1.804	0.003	0.000	0.000	3.560	42.865	0.000
N, N-dimethylformamide	19.281	0.005	0.005	0.000	0.000	19.271	0.000	0.000
Toluene	19.030	0.004	0.005	0.000	0.000	9.566	9.455	0.000
Pyridine	1.623	0.003	0.005	0.000	0.000	1.615	0.000	0.000
Benzene	2.771	0.188	0.002	0.000	0.000	0.370	2.211	0.000
Dioxins	_	2.68	0.0168	0	0	0	0.54	0

#### 📕 Fuji Plant

Matarial	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	1.084	0.000	0.000	0.000	0.000	0.000	1.084	0.000
Chlorodifluoromethane	1.499	0.004	0.000	0.000	0.000	0.000	1.495	0.000
Dichloromethane	100.366	10.867	0.000	0.000	89.494	0.000	0.005	0.000

#### Yaizu Facilities

Matarial	Volume pro-	Volume released			Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	3.861	0.039	0.000	0.000	0.000	0.000	3.822	0.000

#### Kiyosu Facilities

Material	Volume pro-	Volume released			Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	1.869	0.112	0.000	0.000	0.000	0.000	1.757	0.000

#### Toyama Plant

Volume pro-	Volume released			Volume	Volume removed	Volume tr	ansferred
duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
14.559	0.038	0.000	0.000	0.000	8.326	6.195	0.000
3.374	0.022	0.000	0.000	0.000	0.000	3.352	0.000
	Volume pro- duced or used 14.559 3.374	Volume pro- duced or used         Air           14.559         0.038           3.374         0.022	Volume pro- duced or used         Volume released           14.559         0.038         0.000           3.374         0.022         0.000	Volume pro- duced or used         Volume released           14.559         0.038         0.000         0.000           3.374         0.022         0.000         0.000	Volume pro- duced or used         Volume released         Volume consumed           14.559         0.038         0.000         0.000         0.000           3.374         0.022         0.000         0.000         0.000	Volume pro- duced or used         Volume released         Volume removed through processing           14.559         0.038         0.000         0.000         0.000           3.374         0.022         0.000         0.000         0.000	Volume pro- duced or used         Volume released         Volume         Volume removed through processing         Volume transport           14.559         0.038         0.000         0.000         0.000         8.326         6.195           3.374         0.022         0.000         0.000         0.000         0.000         3.352

#### Takaoka Plant

Material	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	1.564	0.020	0.000	0.000	0.000	1.544	0.000	0.000
Ethylene glycol	3.945	0.004	0.000	0.000	0.000	3.941	0.000	0.000
Salicylaldehyde	60.433	0.000	0.000	0.000	18.000	38.412	4.021	0.000
Dichloromethane	594.594	4.679	0.000	0.000	221.462	361.308	7.145	0.000
N,N-dimethylformamide	179.484	0.019	0.000	0.000	0.000	179.325	0.140	0.000
Thiourea	13.375	0.000	0.000	0.000	0.000	13.375	0.000	0.000
Lead and its compounds	2.460	0.000	0.000	0.000	0.000	0.000	2.460	0.000
Boron and its compounds	3.158	0.000	0.922	0.000	0.000	0.000	2.236	0.000
Formaldehyde	158.681	0.132	0.000	0.000	0.000	41.045	117.504	0.000
Manganese and its compounds	113.715	0.000	0.000	0.000	0.000	0.000	113.715	0.000
Dioxins	_	0.00237	0.02893	0	0	0	0.2744	0

#### Miyukigaoka Research Center

Matarial	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	3.287	0.016	0.000	0.000	0.000	0.000	3.271	0.000
Xylene	10.218	0.018	0.000	0.000	0.000	10.192	0.008	0.000
Chloroform	30.509	1.190	0.000	0.000	0.000	0.000	29.319	0.000

#### Tokodai Research Center

Matarial	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	1.692	0.203	0.000	0.000	0.000	0.000	1.489	0.000
Xylene	17.252	0.031	0.000	0.000	0.000	17.217	0.004	0.000
Chloroform	3.403	0.408	0.000	0.000	0.000	0.000	2.994	0.000

#### Tokyo Research Center

Material	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	1.948	0.450	0.000	0.000	0.000	0.000	1.498	0.000
Xylene	1.394	0.056	0.000	0.000	0.000	1.065	0.273	0.000
Chloroform	1.678	0.039	0.000	0.000	0.000	0.000	1.595	0.044

#### Kashima Facilities

Matorial	Volume pro-		Volume released		Volume	Volume removed	Volume tr	ansferred
Wateria	duced or used	Air	Water	Soil	consumed	through processing	Garbage	Sewage
Acetonitrile	14.605	1.007	0.000	0.000	0.000	0.000	13.598	0.000
Chloroform	4.292	0.172	0.000	0.000	0.000	0.000	4.120	0.000
Dichloromethane	2,087.920	68.400	0.000	0.000	1,486.674	0.000	532.846	0.000
N, N-dimethylformamide	574.864	3.948	0.000	0.000	0.000	0.000	570.916	0.000
Thiourea	28.016	0.000	0.000	0.000	0.000	28.016	0.000	0.000
Boron and its compounds	7.127	0.000	0.000	0.000	0.000	0.000	7.127	0.000

### • Environmental performance data for principal overseas facilities

#### Astellas Pharma Manufacturing Inc. (Grand Island Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	7,132	6,996	7,506	7,428	7,599
CO2 (tons)	2,696	2,645	2,837	2,808	2,873
Tap water (1,000 gallons)	7,756	9,826	9,504	10,011	10,064

#### Astellas Pharma Technologies Inc. (Norman Plant)

#### • Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	23,100	23,200	24,000	29,300	31,100
Heavy oil (kl)	8	8	8	8	7
Gas (1,000 m <sup>3</sup> )	3,510	3,480	3,690	4,350	4,800
CO2 (tons)	15,632	15,611	16,325	19,622	21,183
Tap water (1,000 m <sup>3</sup> )	144	164	151	216	250

#### Airborne pollutants

SOx (tons)	0.06
NOx (tons)	4

#### Water pollutants

BOD (tons)	84

#### Yamanouchi Europe B.V. (Meppel Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	8,572	9,300	9,701	10,465	9,774
Gas (1,000 m <sup>3</sup> )	1,024	876	1,035	1,101	970
CO2 (tons)	5,247	5,232	5,696	6,114	5,596
Tap water (1,000 m <sup>3</sup> )	19	20	22	19	18

#### Airborne pollutants

SOx (tons)	_
NOx (tons)	0.51

#### Water pollutants

COD (tons)	72

#### Yamanouchi Ireland Co., Ltd. (Dublin Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	6,214	6,115	6,410	6,602	6,441
Gas (1,000 m <sup>3</sup> )	1,005	1,020	905	842	680
CO2 (tons)	4,319	4,311	4,197	4,146	3,767
Tap water (1,000 m <sup>3</sup> )	87	105	105	105	112
Well water (1,000 m <sup>3</sup> )	6	3	3	5	6



#### Airborne pollutants

SOx (tons)	0.15	BOD (
NOx (tons)	3	COD (

#### Water pollutants

	• Water pendiante	
).15	BOD (tons)	1
3	COD (tons)	10

#### • Chemical substances (tons)

Chemical name Volu	Volume used	Volume released			Volume transferred	Volume consumed	
	volume useu	Air	Water	Soil	Garbage	volume consumed	
Toluene	45.926	0.286	0.000	11.867	31.406	0	





### Fujisawa Ireland Ltd. (Kerry Plant)

#### Energy/natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	5,993	6,352	6,392	6,472	7,557
Heavy oil (kl)	189	491	617	518	645
CO2 (tons)	2,779	3,731	4,088	3,985	4,605
Tap water (1,000 m <sup>3</sup> )	36	35	31	32	33

Chemical substances (tons)

Chemical name	Volume used		Volume released	Volume transferred	Volume consumed	
	volume useu	Air	Water	Soil	Garbage	
Ethanol	2.763	0	0	0	2.531	0.232

#### Fujisawa Deutschland GmbH (Munich Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004		
Electricity (1,000 kWh)	5,490	5,250	5,230	5,590	5,892		
Gas (1,000 m <sup>3</sup> )	1,330	1,360	1,203	1,336	1,406		
CO2 (tons)	4,682	4,650	4,335	4,732	4,983		
Tap water (1,000 m <sup>3</sup> )	37	34	31	29	37		
Airborne pollutants							

NOx (tons)

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4

SOx (tons)

#### Fujisawa Deutschland GmbH (Kerry Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	9,417	8,850	8,902	8,734	9,225
Heavy oil (kl)	1,211	1,365	1,007	954	898
CO2 (tons)	6,841	7,044	6,094	5,887	5,921
Tap water (1,000 m <sup>3</sup> )	55	66	59	36	40

#### Airborne pollutants

· ·			
SOx (tons)	9	NOx (tons)	16

#### Chemical substances (tons)

Chemical name	Volume used	Volume released			Volume transferred	Volumo ooncumod
		Air	Water	Soil	Garbage	volume consumed
Methanol	13.293	1.888	—	—	11.402	0.206
Cyclohexane	2.734	0.147	—	—	2.022	0
Chlorobenzene	29.530	0.126	—	—	0.751	28.062

#### ■ Yamanouchi Pharmaceutical (China) Co., Ltd. (Shenyang Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	1,989	1,901	1,942	1,916	1,962
Heavy oil (kl)	20	18	17	15	19
CO2 (tons)	818	778	790	773	803
Tap water (1,000 m <sup>3</sup> )	33	31	38	27	35

#### Airborne pollutants

SOx (tons) 0.01

#### Fujisawa Taiwan Co., Ltd. (Guanyin Plant)

#### Energy/Natural resources

Year	2000	2001	2002	2003	2004
Electricity (1,000 kWh)	1,853	2,028	2,007	1,966	2,002
Heavy oil (kl)	130	190	210	200	200
Light oil (kl)	40	50	50	50	50
Gas (kl)	2	2	2	2	2
CO2 (tons)	1,158	1,412	1,459	1,416	1,430
Tap water (1,000 m <sup>3</sup> )	21	21	23	22	21











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