



Takara

# THE BIOTECHNOLOGY COMPANY™

Annual Report 2011

TAKARA BIO INC.

# TAKARA BIO INC. CONTRIBUTES TO THE HEALTH OF MANKIND THROUGH THE DEVELOPMENT OF REVOLUTIONARY BIOTECHNOLOGIES SUCH AS GENE THERAPY.

Since its beginnings as the biomedical business of Takara Shuzo Co., Ltd. (now Takara Holdings Inc.), Takara Bio has developed biotechnology-related businesses with a focus on genetic engineering technologies. At present, we have three business segments. In Japan, the Genetic engineering research business has pioneered the introduction and sale of a gene amplification system known as PCR (Polymerase Chain Reaction). This business provides research reagents, scientific instruments, and contract research services that are essential for leading-edge biotechnology research. Today, the sales network of this business boasts a global reach, encompassing North America, Europe, and emerging Asian countries. Meanwhile, since being the first to succeed in the large-scale production of Bunashimeji mushrooms in 1970, the AgriBio business has developed a business centered on technologies for the large-scale production of mushrooms. For example, it produces and sells Hatakeshimeji and Honshimeji mushrooms. Also, the business provides customers with health food products whose functionality has been proven through the use of biotechnology. These include Gagome kombu (kelp) “fucoidan,” agar-derived “agaro-oligosaccharide,” and Ashitaba (angelica herb) “chalcone.” The third arm of our business is the Gene medicine business, which applies technologies developed by the Genetic engineering research business to the medical field. The business develops and commercializes leading-edge medical technologies, such as cell and gene therapies for cancer and AIDS.

## FORWARD-LOOKING STATEMENTS

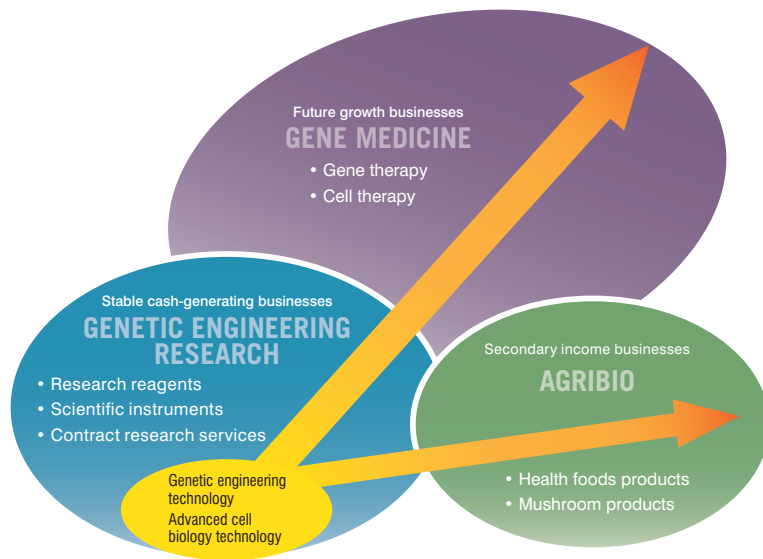
Statements in this report, other than those based on historical fact, concerning the current plans, prospects, strategies, and expectations of the Company and the Group represent forecasts of future results. While such statements are based on the conclusions of management according to information that includes major risks and uncertainties as of August 2011, actual results may vary significantly from these forecasts due to various factors.

Factors that could influence actual results include, but are not limited to, economic conditions, especially trends in consumer spending, as well as exchange rate fluctuations, changes in law and government systems, pressure from competitors' prices and product strategies, decline in selling power of the Company's existing and new products, disruptions to production, violations of our intellectual property rights, rapid advances in technology, and unfavorable verdicts in major litigation.

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# BUSINESS STRATEGY



## TAKARA BIO GROUP'S BUSINESS STRATEGY

Takara Bio strives to expand its business areas from foods to biomedicines by leveraging the core technologies developed in the Genetic engineering research business.

Our business strategy: Invest the stable income generated by the Genetic engineering research and AgriBio businesses into the Gene medicine business, which holds significant growth potential, thereby expanding our future earnings.

Takara Bio works to expand its **GENETIC ENGINEERING RESEARCH BUSINESS**, which underpins stable earnings, to nurture its **AGRIBIO BUSINESS**, which is positioned to become our second profitable business, and thereby to aggressively advance R&D activities of its **GENE MEDICINE BUSINESS**, which is the Group's platform for growth.

### Stable cash-generating businesses

#### GENETIC ENGINEERING RESEARCH



This business segment manufactures and sells research reagents and scientific instruments used by biotechnology researchers around the world. It also provides contract research services to these researchers.

#### MAIN PRODUCTS AND SERVICES

- Research reagents (for genetic engineering, protein engineering, and cell engineering)
- Scientific instruments
- Contract research services

### Secondary income businesses

#### AGRIBIO



This business segment produces and sells health food products whose functionality has been proven through the use of biotechnology. It also conducts a mushroom business based on technologies for the large-scale production of mushrooms.

#### MAIN PRODUCTS AND SERVICES

- Health food products (Gagome kombu "fucoidan" products, agar-derived "agaro-oligosaccharide" products, and Ashitaba "chalcone" products)
- Mushroom products (Hatakeshimeji, Honshimeji)
- Licensing revenues from mushroom cultivation technology and patents

### Future growth businesses

#### GENE MEDICINE



This business segment is conducting clinical development projects as it works toward commercializing cell and gene therapies centered on a highly efficient gene transduction method and a lymphocyte expansion-culture system, both using the RetroNectin® reagent.

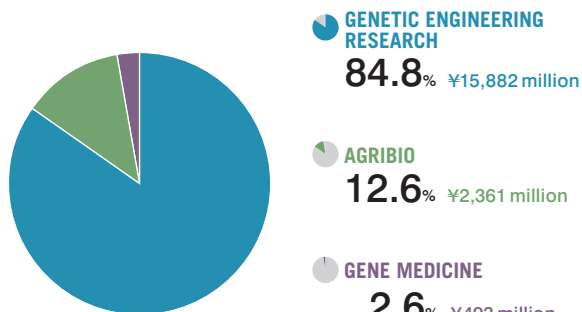
#### MAIN PRODUCTS AND SERVICES

- Cell culture media and gas-permeable bags for cancer immunotherapy
- Technical support services for cancer immunotherapy
- GMP (Good Manufacturing Practice) grade RetroNectin®
- Licensing revenues from gene medicine-related technology and patents
- Technical support services for clinical development of biopharmaceuticals

# TAKARA BIO AT A GLANCE

## Total of Takara Bio Group

NET SALES BY BUSINESS SEGMENT (Fiscal 2011\*)



\* Year ended March 31, 2011

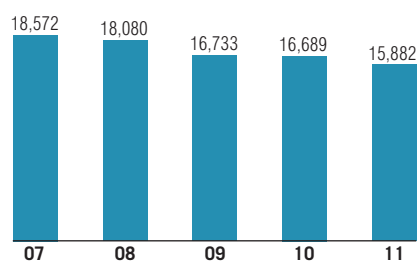
## GENETIC ENGINEERING RESEARCH

NET SALES  
**¥15,882 million**

OPERATING INCOME  
**¥4,132 million**

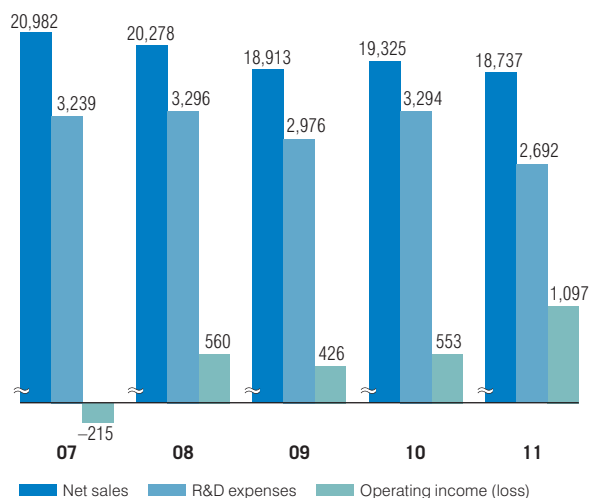


NET SALES  
 (Millions of Yen)



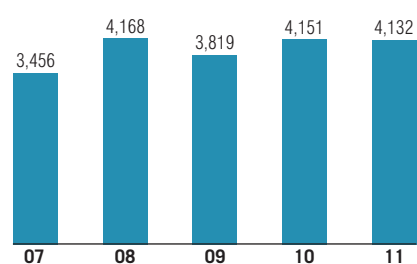
NET SALES / R&D EXPENSES / OPERATING INCOME (LOSS)

(Millions of Yen)



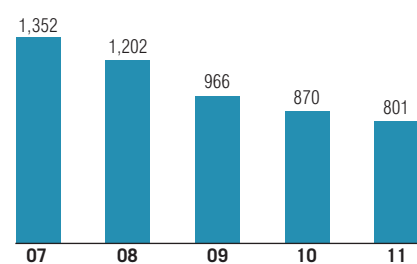
OPERATING INCOME

(Millions of Yen)

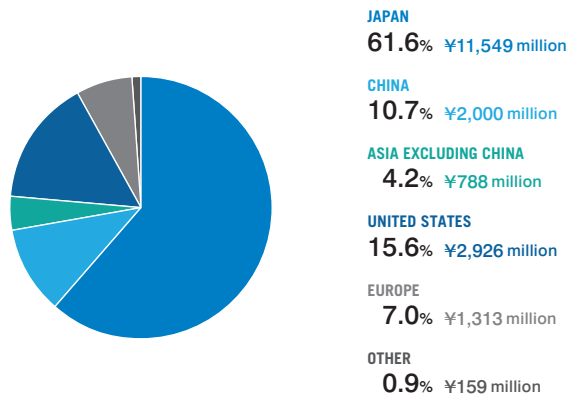


R&D EXPENSES

(Millions of Yen)



SALES BY GEOGRAPHIC SEGMENT (Fiscal 2011\*)



\* Year ended March 31, 2011

### Overview of fiscal 2011

Despite the effect of yen appreciation, mainstay research reagents sales were approximately unchanged year on year. Scientific instrument sales decreased markedly due to the absence of the previous fiscal year's special demand from public agencies. Also, contract research services sales were approximately unchanged year on year. As a result, the business segment recorded year-on-year decreases of 4.8% in sales to external customers, to ¥15,882 million, and 1.8% in gross profit, to ¥9,265 million. Selling, general and administrative expenses were down 2.9% year on year, to ¥5,133 million, thanks to lower research and development expenses and administrative expenses. Operating income edged down 0.5% year on year, to ¥4,132 million.

## AGRIBIO

### NET SALES

¥2,361 million

### OPERATING LOSS

¥-310 million



## GENE MEDICINE

### NET SALES

¥493 million

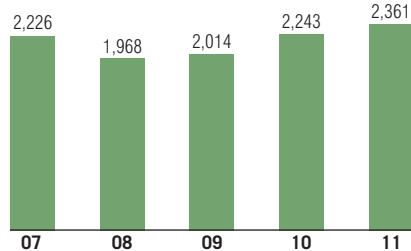
### OPERATING LOSS

¥-1,331 million



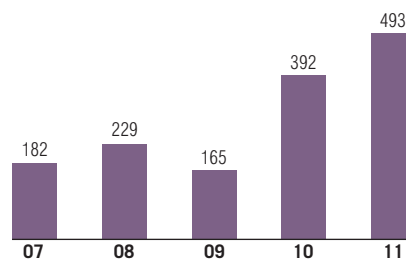
### NET SALES

(Millions of Yen)



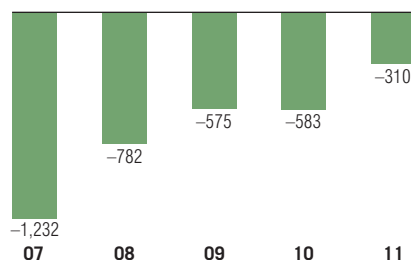
### NET SALES

(Millions of Yen)



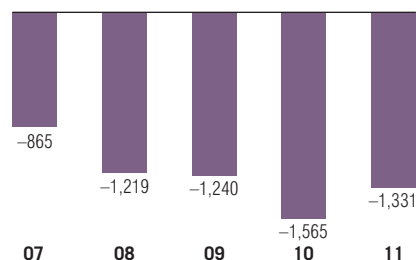
### OPERATING LOSS

(Millions of Yen)



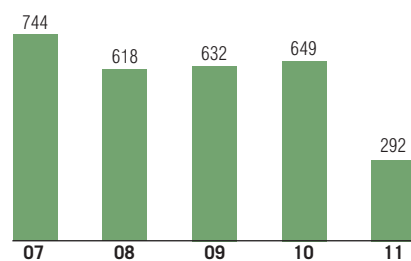
### OPERATING LOSS

(Millions of Yen)



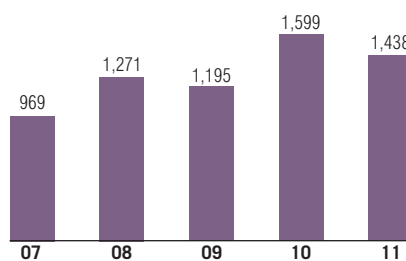
### R&D EXPENSES

(Millions of Yen)



### R&D EXPENSES

(Millions of Yen)



### Overview of fiscal 2011

This business segment posted a 5.3% year-on-year increase in sales to outside customers, to ¥2,361 million, as year-on-year increases in revenues from health food products mushroom-related products counteracted a decline in sales accompanying withdrawal from the agricultural chemical residue analysis business. Gross profit decreased 12.8% year on year, to ¥382 million, due partly to deterioration in the cost of sales ratio that accompanied transferring research and development expenses to the cost of sales. Nevertheless, lower research and development expenses reduced selling, general and administrative expenses 32.2% year on year, to ¥692 million, thereby improving operating loss by ¥273 million year on year, to ¥310 million.

### Overview of fiscal 2011

Reflecting brisk sales of cell culture media and gas-permeable bags as well as technical support services for cancer immunotherapy, this business segment achieved year-on-year increases of 25.7% in sales to outside customers, to ¥493 million and 39.8% in gross profit, to ¥230 million. Centered on research and development expenses, selling, general and administrative expenses decreased 9.7% year-on-year, to ¥1,562 million. As a result, operating loss improved by ¥234 million from the previous fiscal year, to ¥1,331 million.

## AN INTERVIEW WITH THE PRESIDENT

While moving forward with our strategy to increase earnings, we will break new ground in the commercialization of gene therapies.



President & CEO **KOICHI NAKAO**

Adhering to our corporate philosophy of “contributing to the health of mankind through the development of revolutionary biotechnologies such as gene therapy,” we will use earnings from the Genetic engineering research business and the AgriBio business to advance the Gene medicine business dramatically and thereby raise corporate value. Having businesses that generate stable earnings as well as businesses with the potential to expand rapidly is one of the Takara Bio Group’s key advantages. Utilizing such strengths, I pledge to devote my energies to realizing a high-paced and dynamic business management approach that will benefit all of our stakeholders.

August 2011  
President & CEO

A handwritten signature in black ink, reading "Koichi Nakao". The signature is written in a cursive, flowing style. Below the signature, there is a small, faint mark that appears to be a comma or a similar punctuation mark.

**Q** Can you give an overview of business results for fiscal 2011?

**A** Although net sales declined due to a decrease in scientific instrument sales and the effect of currency exchange rates, we posted a new record for operating income.

Due to a decrease in revenues from scientific instruments in the Genetic engineering research business and the significant effect of currency exchange rates, we recorded year-on-year declines of 3.0%, or ¥588 million, in net sales, to ¥18,737 million, and of 1.6%, or ¥160 million, in gross profit, to ¥9,878 million. By reducing the research and development expenses of the AgriBio business, we lowered selling, general and administrative expenses 7.4%, or ¥704 million, year on year, to ¥8,781 million. Thanks to these efforts, operating income was up 98.4%, or ¥544 million year on year, to ¥1,097 million. In non-operating income and expenses, we recorded a foreign exchange loss, compared with the previous fiscal year's foreign exchange gain. Despite this, ordinary income rose 47.6%, or ¥411 million, year on year, to ¥1,276 million. As for extraordinary gain and loss, gain on sales of investment securities decreased, we incurred losses related to lawsuits, and income taxes rose ¥255 million due to higher income before income taxes and minority interests. As a result of the above, net income increased 2.5%, or ¥14 million, year on year, to ¥605 million.

Looking at business results by segment, the Genetic engineering research business posted a 4.8% year-on-year decrease in net sales, to ¥15,882 million. Although mainstay research reagents managed to absorb yen appreciation and remain approximately unchanged year on year, scientific instruments sales were down markedly due to the absence this year of the previous fiscal year's unprecedented demand from public agencies. Despite lower selling, general and administrative expenses, operating income edged down 0.5% year on year, to ¥4,132 million. For the Gene medicine business, net sales were up 25.7% year on year, to ¥493 million, on brisk sales of cell culture media and gas-permeable bags as well as technical support services relating to cancer immunotherapy. Further, the business segment's operating loss improved from the previous fiscal year's ¥1,565 million to ¥1,331 million. Also, the AgriBio business saw net sales grow 5.3% from the previous fiscal year, to ¥2,361 million, thanks to a year-on-year increase in sales of mushroom-related products, which offset a decline in sales due to withdrawal from the agricultural chemical residue analysis business. Selling, general and administrative expenses were down 32.2% year on year, to ¥692 million, due to lower research and development expenses. Consequently, operating loss improved from the previous fiscal year's ¥583 million to ¥310 million.

**FINANCIAL HIGHLIGHTS  
(CONSOLIDATED)**

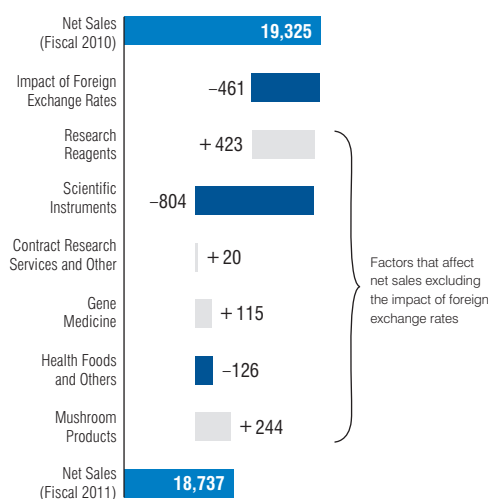
**NET SALES**  
**¥18,737 million**

**OPERATING INCOME**  
**¥1,097 million**

**NET INCOME**  
**¥605 million**

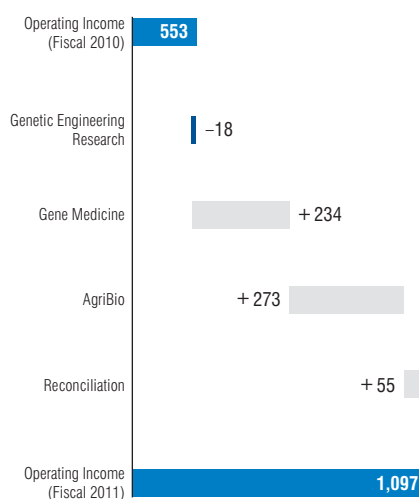
**CONSOLIDATED NET SALES**

(Millions of Yen)



**CONSOLIDATED OPERATING INCOME**

(Millions of Yen)



**Q** What are your plans for developing and commercializing gene therapies?

**A** Over the coming 10 years, we plan to market multiple gene therapies.

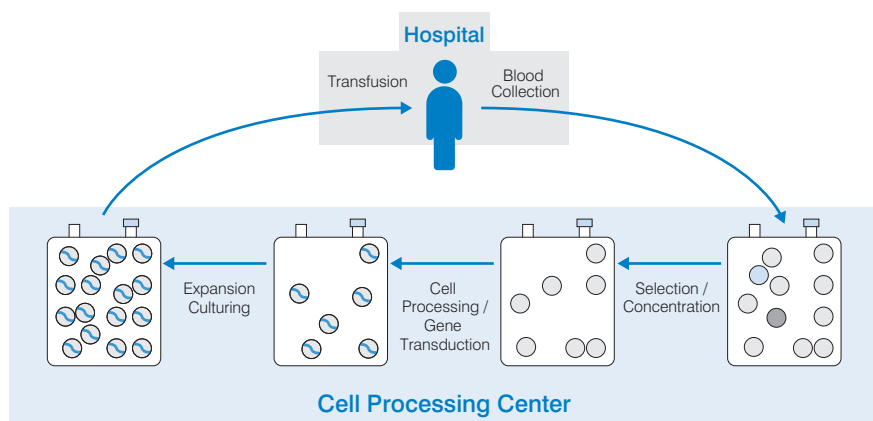
At present, the Takara Bio Group is developing four gene therapies: HSV-TK gene therapy for leukemia, HF10 anti-cancer therapy, MazF gene therapy for HIV, and TCR gene therapy for esophageal cancer.

A range of biotechnology-related venture companies and pharmaceutical companies are developing gene therapies, but most have not yet acquired approval in either Japan or elsewhere overseas. Our business partner, MolMed S.p.A, of Italy, is one of the companies in the vanguard of these efforts and is conducting Phase III clinical trials of HSV-TK gene therapy in Europe. Takara Bio is also advancing clinical development by taking advantage of its core technologies—a gene transduction technology, the RetroNectin® method, and a lymphocyte proliferation technology, the RetroNectin® expansion-culture system that uses the RetroNectin® reagent to expand T lymphocytes in culture—so as to form relations with hospitals in Japan and the United States.

We are also building a new business model for gene therapy whereby hospitals send us blood cells taken from patients or donors, and our cell processing center processes the cells using gene transduction, the RetroNectin® expansion-culture system, and other methods. We then send the processed cells back to the hospitals, which administer the processed cells back to the patient. In other words, we process cells into pharmaceuticals outside the body, or *ex vivo*.

Upcoming milestones include the beginning of Phase I clinical trials of MazF gene therapy in the United States in fiscal 2012 and the completion of Phase I clinical trials of HF10 anti-cancer therapy in the United States in fiscal 2013.

Although developing pharmaceuticals takes a long time for commercialization, over the coming 10 years we shall endeavor to bring multiple gene therapies to market.



**SCHEDULE FOR CLINICAL DEVELOPMENT OF GENE MEDICINE**

Cure (Target disease)	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
HSV-TK gene therapy DLI*: (Relapsed leukemia) haplo add-back: (Hematological malignancies)	Phase I clinical trials (DLI) underway in Japan (scheduled for completion FY2012)			(Phase II clinical trials)			<b>FY2018</b> Commercialization	
HF10 anti-cancer therapy (Head and neck cancer, etc.)	Phase I clinical trials underway in the U.S. (scheduled for completion FY2013)			(Phase II clinical trials, Phase III clinical trials)				<b>FY2019</b> Commercialization
MazF gene therapy (HIV)		FY2012 Begin Phase I clinical trials in the U.S.						
TCR gene therapy (Esophageal cancer, etc.)	Clinical research underway (scheduled for completion FY2013)			FY2014 Begin Phase I clinical trials				
		FY2013 Begin clinical research (next-generation vectors)						

→ Clinical trials (underway)   
 - - - → Clinical trials (scheduled)   
 → Clinical research (underway)   
 - - - → Clinical research (scheduled)

\* Donor lymphocyte infusion



**Q** What are the main aims of the medium-term management plan?

**A** We aim to increase research and development expenses each year and accelerate clinical development while increasing net income and operating income.

Because we face rapidly changing business conditions, we revise our three-year medium-term management plan annually. Announced in May 2011 and covering the period through fiscal 2014, our latest medium-term management plan calls on us to achieve record operating income, ordinary income, and net income for fiscal 2012. While targeting operating income of ¥1.3 billion and net sales of ¥22.7 billion by fiscal 2014, we will increase research and development expenses by approximately ¥500 million each year.

Specific strategies to realize the medium-term management plan targets are as follows.

**1) Genetic engineering research business**

For this business, we will implement three major shifts in emphasis—from genetic engineering toward advanced cell biology, from supporting academic research toward supporting industry, and from supporting basic research toward supporting leading-edge research. In the first of these efforts, we intend to accelerate the development of new products and services for the advanced cell biology field, which promises growth in demand. The second shift will extend our existing customer base of academic researchers to include companies in other industries, including food processors and inspectional bodies. Thirdly, we will develop reagents for leading-edge research that uses real-time PCR (Polymerase Chain Reaction), iPS cells (induced Pluripotent Stem cells), or massive high-throughput sequencing analysis.

Further, demand for research reagents is growing in emerging markets. Having started up operations in India in June 2011, our new subsidiary is targeting sales of ¥600 million by fiscal 2014. Further, we aim to grow sales by more than 10% annually in China. We believe emerging markets will drive our growth.

As for contract research services, we expect to increase sales by ¥100 million each year by providing such new services as high-throughput sequencing analysis.

**2) Gene medicine business**

Reflecting increasing demand for cancer immunotherapy, sales of cell culture media and gas-permeable bags are growing markedly in China. Therefore, we are targeting sales growth of approximately 20% a year in the country. In Japan, partner hospitals using our technical support services for cancer immunotherapy rose from one to three in June 2011. And, we expect these services to generate sales of approximately ¥500 million by fiscal 2014. In another initiative, through our collaboration with Vitrology Limited, of the United Kingdom, we have started a safety testing service for biopharmaceuticals, bolstering our contract production services of vectors for clinical research. From these new services, we aim to realize sales of approximately ¥500 million by fiscal 2014.

**3) AgriBio business**

In the health foods business, we intend to strengthen scientific evidence for health food ingredients through human interventional studies and grow sales in the B-to-B market. In relation to the mushroom business, plans call for increasing sales by using enhanced production technology to boost production volumes of Hatakeshimaji mushrooms and Honshimeji mushrooms. Through these measures, we aim to move the AgriBio business into a position of profitability in fiscal 2012.

(Millions of Yen)	FY2012 forecast	FY2013 target	FY2014 target
Net sales	19,800	21,200	22,700
Genetic engineering research business	16,655	17,632	18,482
Gene medicine business	648	971	1,533
AgriBio business	2,496	2,596	2,685
Operating income	1,100	1,200	1,300
Net income	680	780	830
R&D expenses	3,072	3,498	4,117

## GENETIC ENGINEERING RESEARCH

The Genetic engineering research business supports biotechnology research worldwide, from basic research conducted at universities to industrial companies working in fields such as drug-discovery research. Since we began sales of the first domestically produced restriction enzymes in 1979, we have continued to produce research reagents, scientific instruments and contract research services that utilize new genetic engineering technologies.



Clontech's research reagents



Real-time PCR equipment



Research reagents

### RESEARCH REAGENTS AND SCIENTIFIC INSTRUMENTS

R&D in biotechnology at academic institutions, such as universities, and at private enterprises, such as pharmaceutical companies, is proceeding in a variety of areas, including functional analysis of genes and the unraveling of biological phenomena and mechanisms of disease at the molecular level in living organisms. The role of our Genetic engineering research business is to support such biotechnology research activities worldwide.

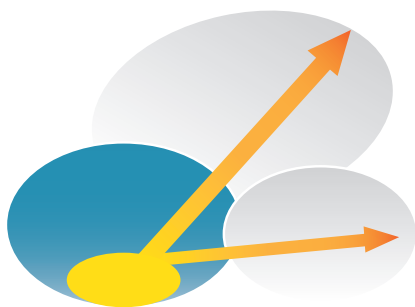
In 1988, Takara Bio became the first company in Japan to introduce a gene amplification system using the PCR method, and in 1993, we obtained a license for the PCR method and began producing and marketing PCR-related products. An essential procedure for biotechnology research, the PCR method amplifies minute amounts of genetic material found in biological samples. We develop and supply products that meet market needs in this area, such as PCR enzymes that enable direct reactions from biological samples without requiring prior purification of nucleic acids; reverse transcriptases that provide superior elongation for cloning and gene expression analysis; and real-time PCR equipment. Further, in recent years, the market for real-time PCR, an experimental method that applies PCR to the quantification of RNA and DNA, has been growing. Viewing real-time PCR as a growth business area, we are growing sales steadily by continuing to market new products actively.

In September 2005, we acquired Clontech Laboratories, Inc (hereinafter "Clontech"). Whereas Takara Bio's strength lies in the field of genetic engineering, including enzymes for genetic engineering and PCR-related technologies; Clontech is strong in the field of cell biology, including systems for the functional analysis of

genes using fluorescent proteins. Merging Clontech's products with our existing products has already greatly expanded and enhanced our lineup of research reagents. As for production, we maintain a high level of cost competitiveness by manufacturing the most of our research reagents in China. This production centers on Takara Biotechnology (Dalian) Co., Ltd., which Takara Bio established in China in 1993 as a manufacturing base for its research reagents. Also, we significantly improved profit margins by transferring the manufacture of Clontech's products from the United States to China when we acquired the company.

We market products in North America and Europe through two subsidiaries: Clontech in the United States, and Takara Bio Europe S.A.S. in France. At the same time, we are focusing efforts on increasing sales in emerging countries. In China, Takara Biotechnology (Dalian) primarily markets research reagents, and sales continue to grow vigorously. Further, in India's market we have begun sales efforts in earnest. Established as a subsidiary for the manufacture and sale of research reagents, DSS Takara Bio India Pvt. Ltd., started up operations in June 2011.

R&D tasks are shared efficiently among the Company, Clontech and Takara Biotechnology (Dalian). These R&D initiatives focus on the field of advanced cell biology, a market likely to grow, and genetic engineering, a field in which we boast particular competence. In the genetic engineering field, we aim for sales growth by expanding the application of PCR technology for industrial use and developing new products related to real-time PCR—a growth market. In the advanced cell biology field, we have been developing new products relating to epigenetics and iPS cells, which are both becoming very active research fields.



**Research Reagents**

- PCR enzymes
- Restriction enzymes
- Reverse transcriptases
- Cloning systems
- iPS cell generation

**Scientific Instruments**

- PCR-related equipment
- Mass spectrometry systems

**Contract Research Services**

- Massive high-throughput sequencing analysis
- DNA sequence analysis
- Gene expression analysis

The products developed by the Company and Clontech are manufactured by Takara Biotechnology (Dalian) and marketed not only in Japan but worldwide through our network of Group companies in Europe, the United States, China, South Korea, and India. Based on this strategy, we aim to build a strong position in the global marketplace.

**CONTRACT RESEARCH SERVICES**

Takara Bio operates a contract research services business in which it conducts analysis and performs research for academia and companies on a contractual basis. We began providing genome analysis services in 1994 and, since opening Asia's largest genome analysis center in 2000, we have received several large genome analysis contracts. The Dragon Genomics Center—the core of our contract research services business—offers not only general research services, such as genome sequencing analysis, gene expression analysis and small RNA analysis using DNA chips, and protein expression analysis, but also state-of-the-art research services, such as massive high-throughput sequencing analysis using

next-generation sequencing systems and contract production services for iPS cells.

In massive high-throughput sequencing analysis, an increasingly prevalent research method, we cater to a broad range of applications, including epigenetics analysis and metagenomic analysis. Also, we are focusing on bioinformatics for data processing. We provide high-value-added services, named next-generation data mining services, which extract useful information from the extremely large amounts of data produced by next-generation sequencing analysis.

We will respond quickly to rapid technical innovation in biotechnology research by continuing to offer new services.



Massive high-throughput sequencing equipment

**FUTURE MEASURES**

- Develop / increase sales of products in the fields of real-time PCR analysis and advanced cell biology
- Develop next-generation sequencing-related technologies and increase sales of contract services
- Increase sales overseas (strengthen sales capabilities in China and India, exploit e-commerce in the United States, reorganize sales network in Europe)
- Advance development of core technology by improving productivity of R&D, through collaboration of Takara Bio (Japan), Clontech Laboratories (US), and Takara Biotechnology (Dalian) (China)

# AGRIBIO

In the AgriBio business, Takara Bio uses its biotechnology to search for functional components in traditional Japanese food stuffs. We then use the identified materials to develop and manufacture health food products. Also, we take advantage of our technologies for breeding and large-scale cultivation of mushrooms in order to produce and sell Hatakeshimeji and Honshimeji mushrooms.



Glucosamin+agar-oligosaccharide



Takara Anshin Nodome (worry-free throat lozenges)



Ashitaba Chalcone

## HEALTH FOOD BUSINESS

Takara Bio has been researching the functional properties of Gagome kombu (kelp) “fucoidan,” agar-derived “agaro-oligosaccharide,” Ashitaba (angelica herb) “chalcone,” mushroom “terpene,” yam (*Dioscorea esculenta*) “Yamsgenin™,” and the herb (*Peucedanum japonicum*) “Isosamidin,” and has been developing and producing health food products featuring these unique properties.

A wholly owned subsidiary of Takara Holdings Inc., Takara Healthcare Inc., provides these products through a web ordering and telephone sales network. We also provide food ingredients with these unique functional properties to food and beverage manufacturers.

### 1. Gagome Kombu (Kelp) “Fucoidan”

Fucoidan is a polysaccharide with a thick consistency that is found mainly in various species of brown kelp, including kombu. It is known that fucoidan enables seaweed to self-repair when it becomes damaged. Fucoidan also provides a barrier against harmful bacteria and protects against dryness. Takara Bio spent many years researching Gagome kombu (kelp), a particularly sticky type of kombu, and was the first to identify three chemical structures in fucoidan found in Gagome kombu (kelp). Moreover, we are continuing research on the properties of Gagome kombu (kelp) “fucoidan.”

### 2. Agar-derived “Agaro-oligosaccharide”

Agar, which is made from red algae such as tengusa, is known as the “king of dietary fibers” and is a popular traditional Japanese food. Takara Bio is not only interested in the dietary fiber properties of agar, but has also focused its research on agaro-oligosaccharides, which are obtained by heating agar in acid. We have already developed an original method for manufacturing agar-derived “agaro-oligosaccharides.”

Moreover, we are identifying the unique functional properties of agaro-oligosaccharides not found in other oligosaccharides.

### 3. Ashitaba (Angelica Herb) “Chalcone”

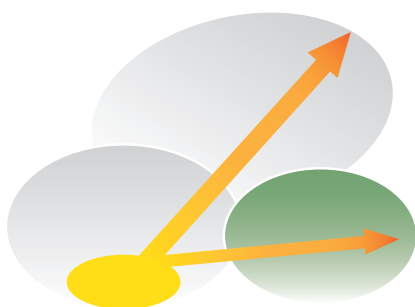
Ashitaba is indigenous to Japan and grows wild on the Pacific coast, mainly in the Izu Islands. Ashitaba is known for its strong vitality as indicated by the saying, “If Ashitaba leaves are picked today, new leaves will be in place by tomorrow.” Ashitaba is rich in vitamins, minerals, and dietary fiber, many of which are important nutrients for both health and beauty. Taking special care over every aspect of cultivation from soil preparation onward, Takara Bio produces Ashitaba on its own farms and contracted farms in Kagoshima Prefecture, Japan. Takara Bio has focused on chalcone, a polyphenol peculiar to Ashitaba, and is pursuing R&D into the function of chalcone.

### 4. Mushroom “Terpene”

“Terpene” is the generic name of a substance based on an isoprene structure, which is found widely in nature. For example, lycopene, a health-promoting constituent of tomatoes, is a “terpene.” Takara Bio’s research focuses on the properties of mushroom “terpene,” which is one of the compounds present in Bunashimeji mushrooms (*Hypsizigus marmoreus*).

### 5. Yam (*Dioscorea esculenta*)

Long known as a healthy food with tonic properties, yams are referred to as “Sanyaku” in traditional Chinese medicine. *Dioscorea esculenta* is a type of yam that is cultivated in Okinawa. Takara Bio has discovered Yamsgenin™, a substance which is found in the *D. esculenta* yam but not found in ordinary yams. We are continuing to conduct research on the properties of the Yamsgenin™.



**Health Food Business**

- Gagome kombu (kelp) "fucoidan"
- Agar-derived "agaro-oligosaccharide"
- Ashitaba (angelica herb) "chalcone"
- Mushroom "terpene"
- Yam (*Dioscorea esculenta*) "Yamsgenin™"
- Herb (*Peucedanum japonicum*) "Isosamidin"

**Mushroom Business**

- Bunashimeji mushrooms
- Hatakeshimeji mushrooms
- Honshimeji mushrooms

**6. Herb (*Peucedanum japonicum*)**

*Peucedanum japonicum* is a perennial plant in the Apiaceae (Umbelliferae) family that grows naturally along the coast, mainly from southern Kyushu to Okinawa. In Japanese, it is called "botanbofu." It is often called the herb of long life, which derives from local folklore, "If you eat a sprig of botanbofu, you will live a day longer." Takara Bio has focused its research on the herb's intense vitality. In particular, we are investigating the properties of a constituent compound called Isosamidin.

**MUSHROOM BUSINESS**

We develop new breeds of mushroom as well as methods for the cultivation and mass-production of new mushroom varieties. Takara Bio was the first company to succeed in the large-scale production of Bunashimeji mushrooms, which are now widely available at most supermarkets. In 1973, we licensed our large-scale production technology to JA ZEN-NOH (National Federation of Agricultural Cooperative Associations) Nagano and succeeded in the commercialization of this mushroom. We still license the technology for the large-scale production of Bunashimeji mushrooms to JA ZEN-NOH Nagano and other companies.

Having succeeded in the large-scale production of Honshimeji mushrooms, which are considered extremely difficult to mass produce, we now produce and sell them. Honshimeji mushrooms are known for their exquisite taste—as the saying goes, "Matsutake for aroma, Shimeji for taste." We have been mass producing Honshimeji mushrooms since 2004 at our facility in Yokkaichi, Mie Prefecture, and in fiscal 2012, we forecast a production volume of approximately 140 tons.

Through Mizuho Nourin Co., Ltd., a joint venture between Takara Bio, Kyotanba-cho, and the Kyotanba Forestry Association, both of which are in Kyoto Prefecture, we are involved in the mass production of Hatakeshimeji mushrooms. Mizuho Nourin anticipates production of approximately 1,400 tons of mushrooms in fiscal 2012.

We have been reinforcing our internal sales organization for Hatakeshimeji and Honshimeji mushrooms and are targeting further increases in sales. By introducing new technology, we are increasing production volume, reducing cost, and further enhancing product quality. In R&D, we are working to utilize the know-how gained through the cultivation of Honshimeji and other mushrooms as well as our genome sequencing technology to develop new production technologies for high-value-added mushrooms.



Kuugaimo



Nokogiriyashi (saw palmetto) + Isosamidin supplement



Hatakeshimeji mushrooms



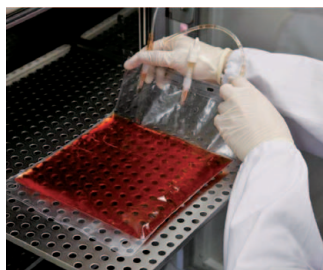
Honshimeji mushrooms

**FUTURE MEASURES**

- Increase sales in B-to-B market by strengthening scientific evidence for health-oriented food ingredients through human interventional studies
- Strengthen quality control / quality assurance systems in order to provide safe, reliable products
- Reduce costs by enhancing production technology for Hatakeshimeji mushrooms and Honshimeji mushrooms and increase sales
- Establish new cultivation methods for high-value-added mushrooms by using genetic data such as the Matsutake genome
- Expand business for licensing mushroom cultivation technology and expertise

# GENE MEDICINE

In the Gene medicine business, Takara Bio is developing state-of-the-art technologies of gene therapy with the aim of commercialization, using the technologies and know-how accumulated through genetic engineering research. In addition to licensing its core technologies, the Company is advancing the clinical development of cell and gene therapies for AIDS, cancer, and other diseases.



Cell culture

## GENE THERAPY

Gene therapy's purpose is to cure disease by administering genes or cells that contain a gene to a patient so as to correct a genetic birth defect, or cure disease (e.g., cancer or AIDS).

There are two types of gene therapy: *ex vivo* and *in vivo*. In *ex vivo* gene therapy, cells are taken from patients, transduced with a target gene, and infused back into the same patients.

In contrast, *in vivo* gene therapy involves the direct administration of therapeutic genes into patients.

## CORE TECHNOLOGY FOR GENE MEDICINE

One of Takara Bio's core technologies for gene medicine is an efficient retroviral transduction method—the RetroNectin® method—that was developed in collaboration with Indiana University in the United States. Takara Bio holds exclusive rights for worldwide applications of this powerful technology, which enables efficient transduction of genes into hematopoietic stem cells, lymphocytes and other blood cells and is becoming the standard gene transduction method in *ex vivo* gene therapy.

Another core technology is a T lymphocyte expansion-culture system (culture for proliferating lymphocytes) that uses the RetroNectin® reagent. The T lymphocyte expansion-culture system can be used both in cell and gene therapies. In the RetroNectin® expansion-culture system, human lymphocytes are expanded in culture in the presence of the RetroNectin® reagent in combination with interleukin-2 and anti-CD3 monoclonal antibody. In this way, cell populations including a high proportion of naive T cells that have a significant *in vivo* persistence and strong antigen recognition are acquired.

## LICENSING THE RETRONECTIN® METHOD

Our RetroNectin® method is used by various public medical institutions that are conducting clinical research in gene therapy as well as by several privately funded clinical trials. To date, the RetroNectin® method has been used by public medical institutions, mainly in Europe and the United States, for over 50 clinical gene therapy studies. In addition, the RetroNectin® method is licensed out to four overseas private corporations. We plan to continue to actively out-license the method worldwide.

## GENE THERAPIES

Takara Bio advances clinical development of the following gene therapies.

### 1. HSV-TK Gene Therapy

MolMed S.p.A, of Italy, which has in-licensed the RetroNectin® method from Takara Bio, is now conducting a Phase III clinical trial of HSV-TK gene therapy for high-risk, acute hematological malignancies in Europe. Takara Bio has exclusive rights to this treatment technology in most Asian countries.

#### 1) Donor lymphocyte infusion method (clinical trial)

Takara Bio is conducting a clinical trial of HSV-TK gene therapy (donor lymphocyte infusion (DLI) method) for treatment of patients with relapsed leukemia after hematopoietic stem cell transplantation at the National Cancer Center Hospital. This is the first *ex vivo* gene therapy clinical trial in Japan, and the first subject has already received gene-transduced cells.

DLI has been shown to be effective for many types of leukemia relapse after transplantation, but graft versus host disease (GVHD) can be a serious side effect. When donor lymphocytes are transduced with the HSV-TK gene, ganciclovir can be used so as to kill any donor lymphocytes that are a source of GVHD.

#### 2) Haplo add-back (clinical research)

The National Cancer Center Hospital, in cooperation with Takara Bio, is conducting clinical research on another type of HSV-TK gene therapy, known as haplo add-back therapy. In this study, a second subject received gene-transduced cells in February 2011. HSV-TK gene therapy (haplo add-back) is a therapy for patients with high-risk hematological malignancies in which patients are infused with donor lymphocytes transduced with the HSV-TK gene after hematopoietic stem cell transplantation from partially compatible (haplo-identical) family donors. A substantially similar therapy is currently undergoing Phase III clinical trials by MolMed in Europe.



#### Gene Therapy

- HSV-TK gene therapy
- HF10 anti-cancer therapy
- TCR gene therapy
- MazF gene therapy

#### Cell Therapy

- T lymphocyte expansion-culture system
- Technical support services for cancer immunotherapy

#### Technical Support Services for Clinical Development of Biopharmaceuticals

- Production of vectors for gene therapy
- Safety testing services for biopharmaceuticals

## 2. HF10 Anti-cancer Therapy

Takara Bio acquired the HF10 business from M's Science Corporation in November 2010. Takara Bio is now conducting a Phase I clinical trial in the United States for the treatment of head and neck cancer and other solid tumors. HF10 is a spontaneously occurring attenuated mutant of Herpes Simplex virus Type 1 that displays strong anti-tumor activity (i.e., oncolytic activity) when locally injected into tumors. Moreover, preclinical data suggests that HF10 also contributed to the acquisition of immunity against the tumors.

Investigator-initiated clinical studies have been conducted in patients with breast cancer, head and neck cancer, and pancreatic cancer at Nagoya University School of Medicine. The results showed oncolytic activity and tolerability of HF10. HF10 has the potential to become a broadly active novel cancer therapy.

## 3. TCR Gene Therapy

Mie University Hospital, in collaboration with Takara Bio, is conducting clinical research on T-cell receptor (TCR) gene therapy targeting esophageal cancer. In this study, a third subject received treatment in April 2011. TCR gene therapy involves the transduction of TCR genes that are capable of recognizing cancer antigens into the patient's own lymphocytes, which are then re-infused into the patient. These gene-transduced lymphocytes specifically recognize cancer cells and attack them, thereby eliminating the cancer cells. The TCR gene therapy approach has been found to be promising, and TCR clinical trials targeting melanoma and other cancers using our RetroNectin® method are currently being conducted at the National Cancer Institute in the United States.

Further, Takara Bio is developing TCR gene therapy technology using next-generation retroviral vectors. In collaboration with Takara Bio,

Mie University Hospital is preparing to conduct clinical research using these new vectors.

## 4. MazF Gene Therapy

The Company is engaged in R&D focused on gene therapy for HIV patients using the MazF endoribonuclease. In AIDS, HIV infects a type of immune cell called helper T-cells or macrophages and multiplies. This causes deficiencies in the helper T-cells and the entire immune system. MazF gene therapy uses expression vectors to transduce patient-derived T-cells *ex vivo* with genes that express MazF conditionally upon HIV infection. The MazF-modified T-cells that are infused back into the patients block the replication of HIV when it infects the transduced T-cells, thereby keeping them functional. Therefore, this method has the potential to become a gene therapy treatment for HIV.

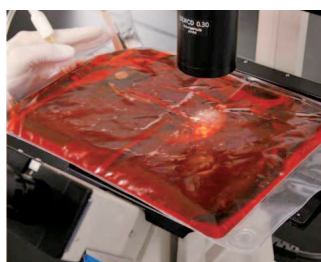
Takara Bio, in a joint effort with the University of Pennsylvania, is preparing to conduct a ribonuclease MazF based gene therapy clinical trial for HIV in the United States. At present, Kagoshima University, the National Institute of Biomedical Innovation, and the University of Pennsylvania are aiming to commence the clinical trial in fiscal 2012 and are jointly conducting pre-clinical translational studies required for the implementation of the clinical trials.

## CELL THERAPIES

Activated lymphocyte therapy, a type of cancer immunotherapy that has extremely few side effects, is gradually spreading and becoming a fourth category of cancer therapy alongside surgical therapy, chemotherapy, and radiation therapy. The Company is involved in the clinical development of cancer immunotherapy using the RetroNectin® expansion-culture system, which has been named "RetroNectin® induced T cell therapy." Takara Bio also provides technical support services for other cancer immunotherapies.



Cell therapy-related products



Cell culture

## CELL THERAPY

Cell therapy entails treatment of patients with living cells. In a broad sense, blood transfusions and bone marrow transplantation are both cell therapies. In a narrower definition of the term, however, cell therapy consists of processes such as the separation of specific cells, their storage, and their amplification and processing in culture.

### 1. RetroNectin® Induced T cell Therapy

The Kyoto Prefectural University of Medicine, in cooperation with Takara Bio, conducted clinical research on RetroNectin® induced T cell therapy targeting gastrointestinal cancer and lung cancer. The research, which concluded in April 2010, demonstrated the safety of this therapy. The Kyoto Prefectural University of Medicine is continuing clinical research in this area with the aim of confirming the effectiveness of RetroNectin® induced T cell therapy. In addition, the Mie University Hospital and Kyoto Prefectural University of Medicine, in collaboration with Takara Bio, have been conducting clinical research on RetroNectin® induced T cell therapy for other intractable cancers.

### 2. Technical Support Services for Cancer Immunotherapy

Takara Bio provides medical institutions with technical support services for cell processing and markets cell culture media, gas-permeable bags, and other products for cancer immunotherapy.

#### 1) Technical support services for cell processing

The Company is providing technical support, on a fee basis, for RetroNectin® induced T cell therapy to the Iseikai Hyakumanben Clinic in Kyoto. This technical support includes conducting the cell processing necessary for the therapy. Further, Takara Bio has also been providing

cell-processing technical support services to the Takeda Hospital Group's Takeda Clinic in Kyoto since April 2011 to Aino Hospital in Ibaraki city in Osaka from June 2011.

The Company plans to continue developing and commercializing cell-processing technology that is effective in cancer immunotherapy.

#### 2) Sales of cell culture media and gas-permeable bags for cancer immunotherapy

Takara Bio markets cell culture media and gas-permeable bags for cancer immunotherapy. In particular, the Company has been concentrating efforts on opening up the Chinese market, which promises future growth, and sales have been increasing favorably.

### TECHNICAL SUPPORT SERVICES FOR CLINICAL DEVELOPMENT OF BIOPHARMACEUTICALS

Takara Bio has facilities and systems for manufacturing vectors in accordance with Good Manufacturing Practice (GMP). As well as manufacturing vectors for the clinical trials of its own gene therapy projects, Takara Bio provides contract vector manufacturing services for the clinical research activities of universities, etc. Further, since May 2011, in collaboration with Vitrology Ltd., of the United Kingdom, Takara Bio has launched safety testing services for biopharmaceuticals in the Japanese market.

## FUTURE MEASURES

### Gene Therapy

- Advance clinical development of HSV-TK gene therapy (target: commercialization in fiscal 2018)
- Advance clinical development of TCR gene therapy (target: begin clinical trials in fiscal 2014)
- Advance clinical development of MazF gene therapy in the United States (target: begin clinical trials in fiscal 2012)
- Advance clinical development of HF10 anti-cancer therapy in the United States (target: commercialization in fiscal 2019)

### Cell Therapy

- Advance clinical development of RetroNectin® induced T cell therapy (RIT)
- Advance clinical development of natural killer (NK) cell therapy
- Expand revenue from comprehensive technical support services for RIT, etc.
- Expand revenue from cell culture media, gas-permeable bags, and other products for cancer immunotherapy

### Technical Support Services for Clinical Development of Biopharmaceuticals

- Expand business of gene therapy vectors and safety testing services for biopharmaceuticals



## TOPICS

### AGRIBIO

#### Animal experiments confirmed the effectiveness of Gagome kombu (kelp) “fucoidan” against the influenza virus

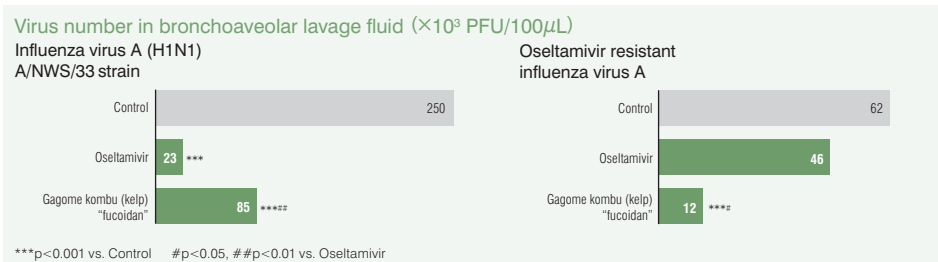


Gagome kombu (kelp)

Joint research by Takara Bio and Professor Toshimitsu Hayashi of the Laboratory of Pharmacognosy, Graduate School of Medicine and Pharmaceutical Sciences for Research, University of Toyama, has revealed for the first time that Gagome kombu (kelp) “fucoidan” suppresses influenza virus infection as well as enhances the production of antibodies against influenza virus in animal experiments.

#### <Gagome kombu (kelp) “fucoidan” suppresses multiplication of the influenza virus>

Mice were infected nasally with two types of influenza virus, and the amount of virus in the respiratory tract and lungs was measured three days later. Administration of Gagome kombu (kelp) “fucoidan” prior to infection was found to have a powerfully suppressive effect on the influenza virus infection.



Combined with earlier results, these latest results show that Gagome kombu (kelp) “fucoidan” may be able to prevent influenza through a variety of actions. These include activation of natural killer cells, inhibition of virus penetration into cells, and enhancing the production of secretory IgA antibodies. We announced our findings at the 57th Annual Meeting of the Japanese Society of Pharmacognosy in September 2010.

### GENE MEDICINE

#### Takara Bio acquired anti-cancer therapy business from M's Science

Takara Bio acquired the HF10 oncolytic virus business from M's Science Corporation on November 30, 2010.

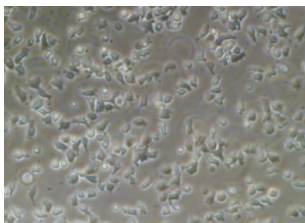
Oncolytic virotherapy is a treatment for cancer using replication-competent viruses. These viruses have tumor selectivity: they do not replicate in normal cells but can do so only in tumor cells, thereby destroying the infected cells. A spontaneously occurring attenuated mutant of Herpes Simplex virus Type 1, HF10 is one such oncolytic virus. HF10 displays strong anti-tumor activity when locally injected into tumors, and induces tumor immunity in animal models. Before this acquisition, M's Science had been conducting a Phase I clinical trial for the treatment of head and neck cancer in the United States.

Having acquired all of the intellectual property, licenses, contracts, and materials related to HF10 from M's Science, we are continuing the Phase I clinical trial.

Because the clinical development and manufacture of HF10 requires the ability to analyze and manufacture viral vectors, we will be able to make extensive use of our gene therapy related technologies and expertise. This business acquisition will allow us to expand the development pipeline of our gene therapy related business, diversify development risks, and increase earnings from development successes.

### GENE MEDICINE

#### Takara Bio developed new technology for the high-purity production of natural killer cells



Natural killer cells

We have developed a new technology that enables us to expand natural killer (NK) cells at greater than 90% purity. We announced this technology at the 23rd Annual Meeting of the Japan Society for Biological Therapy in December 2010.

Recent years have seen increasingly widespread use of cancer immunotherapy, which strengthens the immune system of a patient by first enhancing the activity of, or expanding, the patient's immune cells outside of the body (*ex vivo*), and then reinfusing them back into the patient. At present, T cells are mainly used for cancer immunotherapy. Cancer immunotherapy using NK cells has not become widespread because consistently producing NK cells at high levels of purity from the patient's cells has been difficult.

The new technology we have developed uses T cells cultured by the RetroNectin® expansion-culture method and enables us to obtain the large amount of NK cells at purity levels of at least 90%. We have confirmed that NK cells processed using this new technology have cellular cytotoxicity for a variety of cancer cell lines and potent antibody-dependent cell-mediated cytotoxicity (ADCC) in combination with antibodies. We will advance this research with a view to clinical applications for this newly developed NK-cell production technology.

## GENE MEDICINE

### MolMed received FDA approval to conduct a Phase III clinical trial in the U.S. of HSV-TK gene therapy for leukemia



Retrovirus vector

Our partner in the development of gene therapy, MolMed S.p.A, of Italy, announced on January 6, 2011 that it has received approval from the Food and Drug Administration (FDA) to conduct a Phase III clinical trial of HSV-TK gene therapy (haplo add-back) for high-risk, acute leukemia in the United States. MolMed is currently conducting the same clinical trial in Italy. FDA approval enables the enrollment of patients in the United States and implementation of this clinical trial internationally.

## GENETIC ENGINEERING RESEARCH

### Takara Bio established subsidiary in India for manufacture and sale of research reagents

Takara Bio and DSS Imagetech Pvt. Ltd. established a joint venture in India, DSS Takara Bio Pvt. Ltd., for the manufacture and sale of research reagents for biotechnology research in May 2011. The Takara Bio Group has a 51% stake in the subsidiary.

Our joint-venture partner, DSS Imagetech, imports and sells research reagents, scientific instruments, and medical and diagnostic equipment and has sales bases in India's 12 major cities. DSS Imagetech has been the distributor for our products in India since 2005.

We established this joint-venture company in order to strengthen our collaborative relationship with DSS Imagetech and thereby carve out a larger share of India's growing market. Aiming to achieve sales of ¥1 billion within five years of its establishment, the new company will increase sales of Takara Bio products as well as manufacture and sell products for India's domestic market.

## GENE MEDICINE

### Takara Bio established an endowed chair at Jichi Medical University, advances new gene medicine project

Aiming to further research and development along with clinical development of chimeric antigen receptor (CAR) gene therapy, Takara Bio established and endowed a chair, Division of Immuno-Gene & Cell Therapy (Takara Bio), at Jichi Medical University on April 1, 2011. We have donated ¥90 million to the chair, which will cover three years.

At present, clinical trials of gene therapies in which lymphocytes from a cancer patient are transduced with a gene encoding a receptor that specifically recognizes the patient's cancer cells are proceeding worldwide. Our joint clinical development with the Mie University School of Medicine is targeting one such gene therapy known as T-cell receptor (TCR) gene therapy.

In CAR gene therapy, T-cells derived from a patient are transduced with CAR genes outside of the body, or *ex vivo*, and reinfused back into the patient. Besides TCR gene therapy, recent years have seen increasing clinical trials of CAR gene therapy with some promising data indicating its efficacy. One of the features of CAR gene therapy is that it is not dependent on human leucocyte antigen (HLA) type, which means that the therapy is applicable to more patients.

Under this endowed chair, clinical development of CAR gene therapy targeting such hematological malignancies as malignant lymphoma, as well as research and development of innovative technologies for CAR gene therapy are planned.

## Takara Bio launched a new research reagent for next-generation sequencing



High-throughput sequencing equipment

The Takara Bio Group's subsidiary Clontech Laboratories, Inc., launched a research reagent specially designed for next-generation sequencing, the SMARTer™ Ultra Low RNA Kit for Illumina® Sequencing, in March 2011. Clontech Laboratories and Illumina, Inc., of the United States, jointly developed the new product.

Next-generation sequencing significantly increases the throughput of genomic sequence analysis. Taking advantage of large-scale genomic sequence analysis capability enables genomic analysis of microorganisms, identification of diseases' causative genes, and investigation of drugs' effectiveness.

The SMARTer™ cDNA preparation research reagent is designed to be compatible with gene expression analysis conducted using any of Illumina's instruments. Based on Clontech's proprietary SMART technology, the research reagent enables gene expression analysis of mRNA obtained from as little as a single cell or several cells, thereby making possible highly sensitive gene expression analysis.

## Takara Bio launched services for testing safety of biopharmaceuticals



Vitrology

We signed an agreement with Vitrology Limited, of the United Kingdom, for exclusive rights to offer Vitrology's safety testing services for biopharmaceuticals to the Japanese market from May 2011.

Biopharmaceuticals include protein drugs, antibody drugs, drugs for gene therapy, and iPS cells or cell sheets for regenerative medicine, etc. Because biopharmaceuticals are produced using raw biological materials derived from organisms or animal cells, respective countries' regulatory agencies are implementing specific regulations for securing safety in terms of production and quality of biopharmaceuticals.

On behalf of manufacturers of biopharmaceuticals, Vitrology conducts safety tests at its facilities, which are compliant with GLP/GMP standards. These tests typically check for unintended contamination by viruses, bacteria, or nucleic acids in the finished products or in the organism-derived raw materials, such as cells or viruses, that are used in biopharmaceutical manufacturing processes.

Going forward, we intend to expand our business that offers support services for the development of biopharmaceuticals. These services will include the above-mentioned safety tests as well as the production of vectors for gene therapy that are compliant with GMP standards.

## Takara Bio launched whole human genome sequence analysis service

In June 2011, Takara Bio began a human genome sequence analysis service that uses a next-generation sequencer.

Takara Bio Group's Dragon Genomics Center currently uses three types of next-generation sequencers in order to provide services for the genomic sequence analysis of a variety of organisms.

Adding a new-model next-generation sequencer has increased our overall analysis capabilities tenfold. The Dragon Genomics Center is now able to conduct entire sequence analyses of at least ten large genomes, such as the human genome, per month.

Demand for analysis of whole genomes is increasing in such areas as cancer and genetic disease research and genomic analysis aimed at the practical application of iPS cells, ES cells, and other stem cells. By offering high-quality genomic sequence data, we will cater to this demand.

# CORPORATE GOVERNANCE

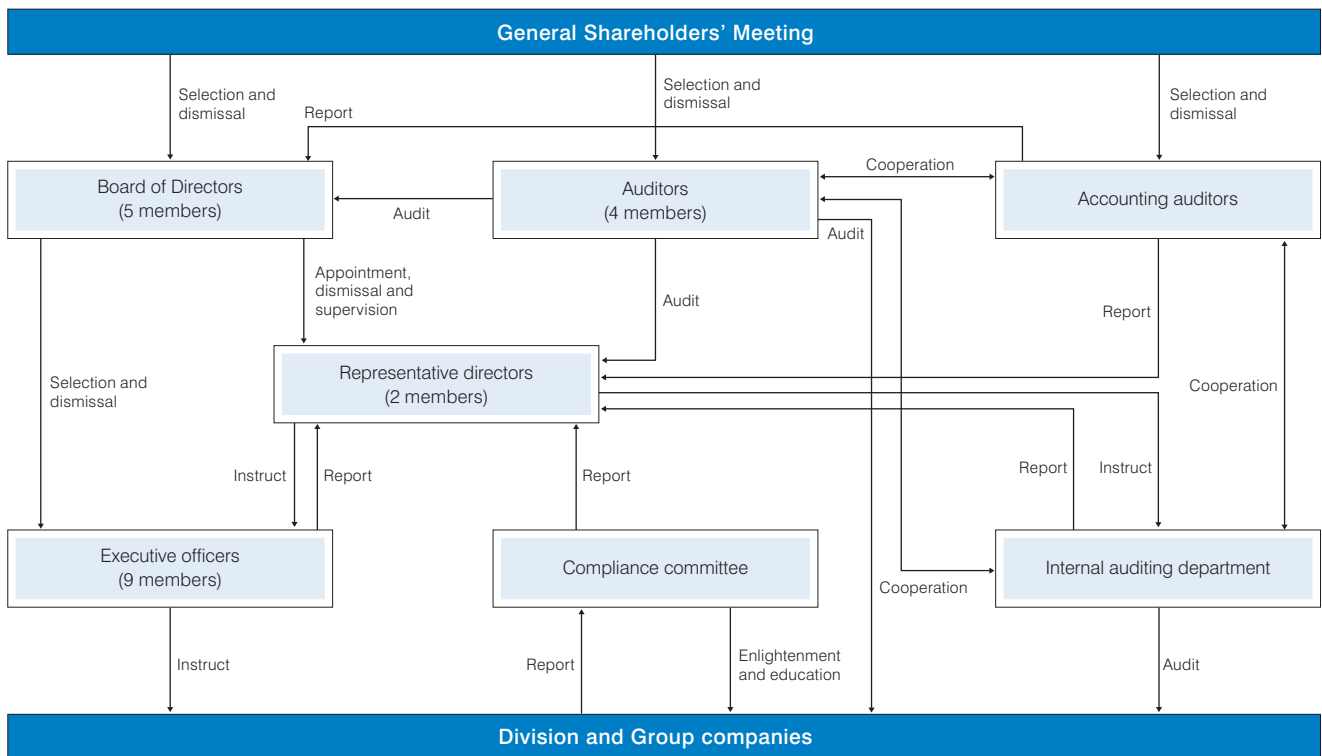
## Corporate Governance System

At Takara Bio, “contributing to the health of mankind through the development of revolutionary biotechnologies such as gene therapy” is our corporate philosophy. Guided by this philosophy, Takara Bio is dedicated to the development of biotechnology-related products and technologies as an R&D-oriented organization. In an industry dependent on constant technical innovation, our management policy is to conduct R&D aggressively while returning profits to our shareholders by increasing corporate value through improved business results. To achieve this, we are striving to expedite our decision making and to improve our business efficiency.

The Board of Directors consists of five members (including one external director) who meet whenever necessary in addition to the regular monthly Board meetings. The Board makes decisions on important issues concerning the management of the Company and its management policies as well as overseeing execution of the Company’s business. One external director has been designated as an independent director in accordance with the rules stipulated by the Tokyo Stock Exchange (TSE).

The Company has adopted an auditing system, and two of our four auditors are external to the Company. The Company has established an internal auditing department comprising three personnel. The Company endeavors to enhance internal control through a system in which the auditors conduct audits while coordinating with the internal auditing department as required.

Our parent company is Takara Holdings Inc., which owns 70.85% of voting rights as of the end of March 2011. Takara Holdings’ policy in managing its group companies is to seek to maximize the corporate value of the whole Takara Group while enabling each and every member corporation of the Takara Group to maintain its uniqueness and independence. Since our business of biotechnology requires highly advanced expertise and quick decision making, we are especially unique and independent in the Takara Group. While we report the decisions made at our Board meetings and other issues to the parent company, no prior approval is required in order to execute our decisions.



# BOARD OF DIRECTORS

As of June 24, 2011



**KOICHI NAKAO**  
President & CEO



**HISASHI OHMIYA**  
Chairman



**MUTSUMI KIMURA**  
Executive Vice President



**KAZUTOH TAKESAKO, Ph.D.**  
Senior Managing Director



**JAWAHARLAL BHATT**  
Director (External Director)

**SUSUMU SANO, Ph.D.**  
Auditor (Standing Auditor)

**KIYOZO ASADA, Ph.D.**  
Auditor (Standing Auditor)

**HIDEO TOMOMURA**  
Auditor (External Auditor)

**TOMIO KAMADA**  
Auditor (External Auditor)

**KAZUKI YAMAMOTO**  
Senior Executive Officer

**MAKOTO MORIGUCHI**  
Senior Executive Officer

**YOH HAMAOKA, Ph.D.**  
Senior Executive Officer

**HIROYUKI MUKAI, Ph.D.**  
Senior Executive Officer

**MASAHIDE TAMAKI**  
Executive Officer

**HIROAKI MIYAZAWA**  
Executive Officer

**TSUYOSHI MIYAMURA**  
Executive Officer

**JUNICHI MINENO, Ph.D.**  
Executive Officer

**MASANARI KITAGAWA, Ph.D.**  
Executive Officer

# FIVE-YEAR FINANCIAL SUMMARY

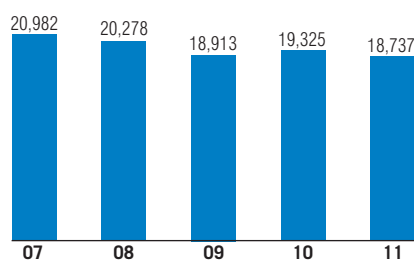
(Millions of Yen)

	2007	2008	2009	2010	2011
<b>For the Years Ended March 31:</b>					
Net sales (sales to customers)	20,982	20,278	18,913	19,325	18,737
Genetic engineering research	18,572	18,080	16,733	16,689	15,882
Gene medicine	182	229	165	392	493
AgriBio	2,226	1,968	2,014	2,243	2,361
Cost of sales	11,160	10,055	8,973	9,286	8,858
Selling, general and administrative expenses	10,037	9,663	9,513	9,485	8,781
Operating income (loss)	(215)	560	426	553	1,097
Income before income taxes and minority interests	375	671	99	697	978
Net income	320	679	642	591	605
Depreciation	1,608	1,429	1,346	1,230	1,122
Capital expenditures	952	1,505	1,059	1,069	918
R&D expenses	3,239	3,296	2,976	3,294	2,692
<b>As of March 31:</b>					
Total assets	45,539	45,289	43,117	43,651	42,594
Total equity	38,613	39,108	37,149	37,799	37,620
<b>Per Share of Common Stock (Yen):</b>					
Basic net income	1,142.96	2,412.91	2,278.57	2,095.72	2,147.05
Equity	136,644.85	138,373.58	131,732.45	133,971.25	133,227.96
<b>Ratios (%):</b>					
Return on assets (ROA)	0.7	1.5	1.5	1.4	1.4
Return on equity (ROE)	0.8	1.8	1.7	1.6	1.6
Equity ratio	84.4	86.1	86.2	86.6	88.3

Note: Figures have been rounded down to the nearest million yen.

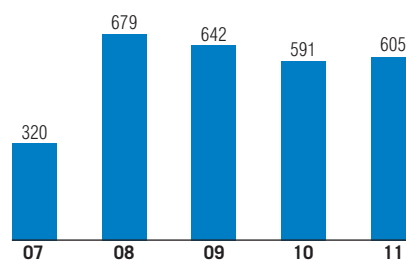
## NET SALES

(Millions of Yen)



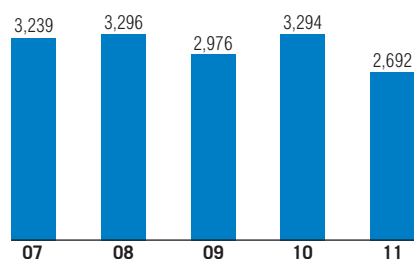
## NET INCOME

(Millions of Yen)



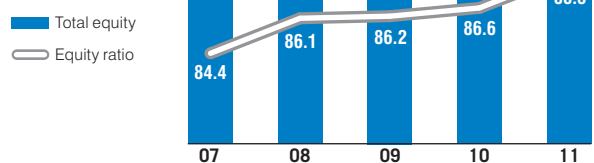
## R&D EXPENSES

(Millions of Yen)



## TOTAL EQUITY / EQUITY RATIO

(Millions of Yen / %)



# MANAGEMENT'S DISCUSSION AND ANALYSIS

## Net Sales

Capitalizing on biotechnology developed over many years, the Takara Bio Group has focused its management resources on three businesses: Genetic engineering research, AgriBio, and Gene medicine. For fiscal 2011, ended March 31, 2011, net sales declined 3.0%, or ¥588 million, year on year, to ¥18,737 million, due to a significant decrease in revenues from the Genetic engineering research business, reflecting the absence of the previous fiscal year's special procurement demand for scientific instruments from public agencies and the effect of currency exchange rates.

## Income Statement Analysis

Cost of sales was down 4.6%, or ¥428 million, year on year, to ¥8,858 million, due to the decrease in net sales. Gross profit also declined 1.6%, or ¥160 million, year on year, to ¥9,878 million. Selling, general and administrative (SG&A) expenses decreased 7.4%, or ¥704 million, year on year, to ¥8,781 million, thanks to lower R&D expenses. As a result, operating income rose 98.4%, or ¥544 million, year on year, to ¥1,097 million.

Other expenses, net of ¥119 million were recorded because of a litigation settlement of ¥113 million and loss on adjustment for changes in the accounting standard for asset retirement obligations of ¥77 million, etc., offset interest income of ¥87 million and government research grant income of ¥97 million, etc.

As a result, income before income taxes and minority interests amounted to ¥978 million. Due to the increase in income before income taxes and minority interests, the total of current and deferred income taxes was up ¥255 million, to ¥361 million. Consequently, net income was ¥605 million.

## Segment Information

### Analysis by Business Segment

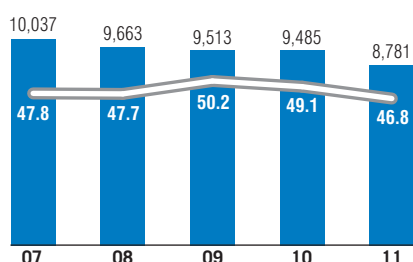
#### Genetic Engineering Research

Given the ever-widening scope of biotechnology R&D, the Group has positioned as its core business the Genetic engineering research business, which mainly markets products and contract research services supporting such R&D.

Analyzing sales by product category, net sales of mainstay research reagents remained approximately unchanged year on year, despite the effect of yen appreciation. However, scientific instruments sales decreased significantly due to the absence this year of the previous fiscal year's unprecedented demand from public agencies. Further, contract research services sales were approximately unchanged year on year. As a result, the business segment recorded year-on-year decreases of 4.8% in sales to external customers, to ¥15,882 million, and 1.8%, in gross profit, to ¥9,265 million. Although lower research and development expenses and administrative expenses enabled a 2.9% year-on-year reduction in SG&A expenses, to ¥5,133 million, operating income edged down 0.5% year on year, to ¥4,132 million.

### SG&A EXPENSES / SG&A EXPENSES RATIO

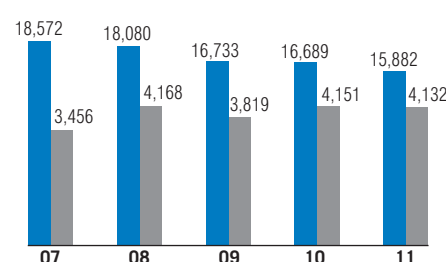
(Millions of Yen / %)



■ SG&A expenses  
○ SG&A expenses ratio

### Genetic Engineering Research NET SALES / OPERATING INCOME

(Millions of Yen)



■ Net sales  
■ Operating income

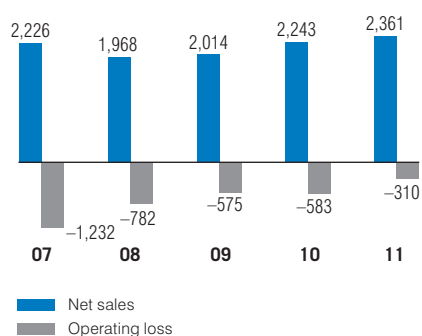
## AgriBio

In the AgriBio business, the Group uses leading-edge biotechnology to develop, produce, and market health food products based on traditional Japanese food. Moreover, the segment has established clear scientific evidence for the bioactive properties of those products. The concept that food is the primary source of health guides those efforts. Business development centers on products related to Gagome kombu (kelp) “fucoidan,” agar-derived “agaro-oligosaccharide,” Ashitaba (angelica herb) “chalcone,” and mushroom “terpene” derivatives.

In the fiscal year under review, the business segment posted a 5.3% year-on-year increase in sales to external customers, to ¥2,361 million, as increases in revenues from health food products and mushroom products compared with the previous fiscal year counteracted a decline in sales accompanying withdrawal from the agricultural chemical residue analysis business. Partly as the result of transferring research and development expenses to cost of sales, the cost of sales ratio deteriorated, and gross profit decreased 12.8% year on year, to ¥382 million. However, lower research and development expenses led to a 32.2% year-on-year reduction in SG&A expenses, to ¥692 million, which improved operating loss from the previous fiscal year’s ¥583 million to ¥310 million.

### AgriBio NET SALES / OPERATING LOSS

(Millions of Yen)



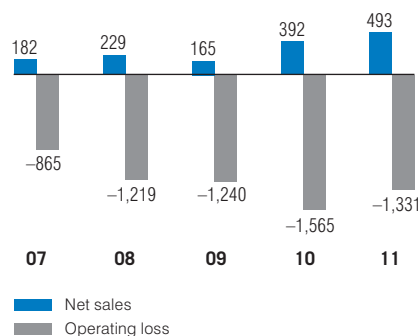
## Gene Medicine

Recently, the cell and gene therapy field has seen rapid advances. As a result, lead times from basic research to clinical application are shortening, thereby accelerating progress toward practical applications for regenerative medicine. Against this backdrop, the Gene medicine business is marketing cell culture media and gas-permeable bags as well as rolling out technical support services for hospitals that conduct cancer immunotherapy. In addition, this business segment is focusing on the early commercialization of cell and gene therapies. The segment has been promoting the clinical development of cancer and AIDS gene therapies based on the Group’s original technologies, such as the RetroNectin® method, a highly efficient gene transduction method; the highly efficient RetroNectin® lymphocyte expansion-culture system; and the MazF endoribonuclease.

Reflecting brisk sales of cell culture media and gas-permeable bags as well as technical support services for cancer immunotherapy, the business segment achieved year-on-year increases of 25.7% in sales to external customers, to ¥493 million, and of 39.8% in gross profit, to ¥230 million. Mainly due to lower research and development expenses, SG&A expenses decreased 9.7% year-on-year, to ¥1,562 million. As a result, operating loss improved from the previous fiscal year’s ¥1,565 million to ¥1,331 million.

### Gene Medicine NET SALES / OPERATING LOSS

(Millions of Yen / %)





## Financial Position

Total current assets as of March 31, 2011, amounted to ¥27,422 million, up ¥189 million compared with the previous fiscal year-end. This rise resulted from a ¥3,665 million increase in cash and cash equivalents, which absorbed decreases of ¥3,048 million in marketable securities and ¥194 million in inventories. Total noncurrent assets at fiscal year-end stood at ¥15,172 million, down ¥1,246 million compared with the previous fiscal year-end. This decline was due in part to a decrease of ¥810 million in net property, plant and equipment and intangible noncurrent assets resulting from depreciation. The decline was also the result of a ¥435 million decrease in total investments and other assets due to depreciation of long-term prepaid expenses.

As a result, total assets at fiscal year-end stood at ¥42,594 million, down ¥1,056 million compared with the previous fiscal year-end.

Total current liabilities at fiscal year-end amounted to ¥3,108 million, down ¥748 million compared with the previous fiscal year-end. This decline was principally attributable to decreases of ¥245 million in accrued income taxes, ¥238 million in other current liabilities, ¥167 million in notes and accounts payable, and ¥119 million in allowance for bonuses to employees. Total

long-term liabilities at fiscal year-end stood at ¥1,865 million, down ¥129 million compared with the previous fiscal year-end. This decline was the result of decreases of ¥167 million in deferred tax liabilities and ¥45 million in long-term debt resulting from repayment, which counteracted increases of ¥53 million in liability for retirement benefits and ¥30 million in other long-term liabilities.

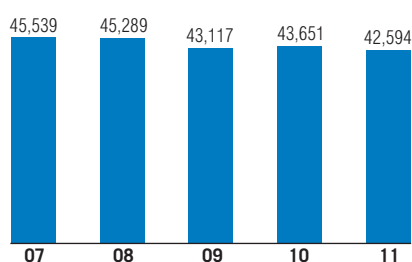
As a result, total liabilities at fiscal year-end amounted to ¥4,973 million, a decrease of ¥877 million compared with the previous fiscal year-end.

Total equity as of March 31, 2011, amounted to ¥37,620 million, a decrease of ¥178 million compared with the previous fiscal year-end. This was due to a ¥825 million decrease in foreign currency translation adjustments, which counteracted increases of ¥30 million in capital and capital surplus due to newly issued shares, ¥605 million in retained earnings reflecting net income, and ¥11 million in minority interests.

The equity ratio—total equity as a percentage of total assets—increased 1.7 percentage points, to 88.3%, maintaining the Company's high level of financial stability.

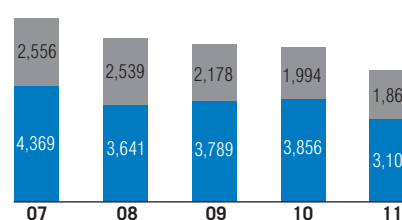
### TOTAL ASSETS

(Millions of Yen)



### TOTAL LIABILITIES

(Millions of Yen)



■ Total current liabilities  
■ Total long-term liabilities

## Cash Flows

Cash and cash equivalents at fiscal year-end stood at ¥4,047 million, down ¥3,772 million compared with the previous fiscal year-end. This decrease stemmed from an increase in trade receivables, a decrease in trade payables, an increase in income taxes paid, payments for time deposits, purchases of marketable securities, and purchases of property, plant and equipment, which cancelled the effect of income before income taxes and minority interests, depreciation and amortization (including other depreciation), decrease in inventories, and proceeds from time deposits.

Net cash provided by operating activities amounted to ¥2,093 million, because income before income taxes and minority interests of ¥978 million, depreciation and amortization (including other depreciation) of ¥1,531 million, and a decrease in inventories of ¥103 million offset income taxes paid of ¥578 million, an increase in trade receivables of ¥183 million, and a ¥121 million decrease in trade payables. The ¥1,080 million year-on-year decrease in net cash provided by operating activities was attributable to a ¥494 million increase in income taxes paid, a ¥361 million rise in cash outflow due to an increase in trade receivables, and a ¥113 million decline in cash inflow due to a decrease in inventories.

Net cash used in investing activities totaled ¥5,639 million, reflecting payments for time deposits of ¥19,196 million, purchases of property, plant and equipment and purchases of other property of ¥1,182 million, and purchases of marketable securities of ¥526 million, which counteracted proceeds from time deposits of ¥15,267 million. The ¥1,421 million year-on-year decrease in net cash used in investing activities mainly resulted from a ¥2,977 million increase in proceeds from time deposits, which absorbed a ¥649 million increase in payments for time deposits, a ¥526 million increase in purchases of marketable securities, and a ¥472 million decrease in proceeds from sales of marketable securities.

Net cash used in financing activities amounted to ¥60 million, resulting from repayments of long-term debt of ¥45 million and repayments of lease obligations of ¥44 million, which offset proceeds from issuance of common stock of ¥29 million. The ¥2 million year-on-year increase in net cash used in financing activities was due to a ¥6 million increase in repayments of lease obligations, which cancelled the effect of a ¥4 million rise in proceeds from issuance of common stock.

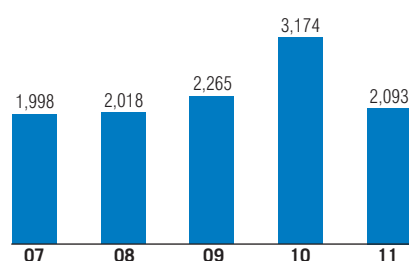
### CASH FLOWS FROM BUSINESS ACTIVITIES

(Millions of Yen)

	2007	2008	2009	2010	2011
Net cash provided by operating activities	¥ 1,998	¥2,018	¥ 2,265	¥ 3,174	<b>¥ 2,093</b>
Net cash provided by (used in) investing activities	(4,011)	678	(5,511)	(7,060)	<b>(5,639)</b>
Net cash provided by (used in) financial activities	335	344	(168)	(57)	<b>(60)</b>

### NET CASH PROVIDED BY OPERATING ACTIVITIES

(Millions of Yen)



## Business Risks

The following are the major potential risks to which the Group may be exposed to in its business and other activities. In addition, conditions that may not become risks, from the standpoint of the positive disclosure of information significant to investor decisions, are also described below. Upon identifying the possibility of such risks, the Group will make the utmost effort to avoid them and will take countermeasures against them. There is, however, no guarantee that we can avoid all risks. Please note that the following descriptions do not cover all of the risk factors concerning the Group.

Unless specifically noted otherwise, this section refers to the end of fiscal 2011, and any information related to future occurrences are based on the Group's assessments as of the end of fiscal 2011.

In addition, the text contains explanations of terminology when appropriate. Such explanations are for investors to use as reference to understand the information in this section. As such, they are a work of Takara Bio based on the Company's judgment and understanding.

### 1. Research and development

A diverse range of industries are biotechnology-related. A list would include the medical field, which includes cell and gene therapy; the research supporting field, which has a direct target market among research institutions and universities that are seeking to promote basic research and to develop new drugs; the environment and energy field, which includes bioremediation and biomass research and development; the bioinformatics field; and the food field, which includes agriculture and functional foods.

Under these circumstances, the Group conducts extensive R&D, which it considers vital to maintaining its competitive edge. In fact, the Group's R&D expenses for fiscal 2011 were ¥2,692 million, or 14.4% of net sales, which is extremely high. At the same time, there is no guarantee that R&D will proceed as planned, and, as clinical development in the Group's Gene medicine business requires a particularly long period, there is no guarantee that R&D will yield adequate results in a timely manner. Therefore, a delay in R&D could affect the Group's business strategy and performance. In addition, there is no guarantee that the R&D currently under way will produce the anticipated results. As a result, the Group could fail to meet its revenue projections.

### 2. Dependence on manufacturing

Calculated on a sales price base for fiscal 2011, Takara Biotechnology (Dalian), a Chinese subsidiary, accounted for 28.5% of manufacturing products in the Group. Takara Biotechnology (Dalian) manufactures products in the Genetic engineering research business, which represented 84.8% of the Group's net sales. The consolidation of production bases enables the Group to manufacture products that are highly cost-competitive, and the diversification of manufacturing centers is also considered to be inexpedient on the Group's production scale. As a result, changes in earnings trends at a subsidiary or an interruption to its business activities for any reason could adversely affect the Group's business strategy and performance.

### 3. Long-term prepaid expenses

Due to the nature of the Group's business activities, execution of license agreements relating to patents owned by others is positioned as a key strategy. In such license agreements, the Group may make an initial payment and certain milestone payments. These expenditures are booked to assets as long-term prepaid expenses at the time of the expenditure and are treated systematically as expenses in each fiscal year, based on the term of the agreement. In addition, the Group reviews the asset component of the technologies it uses under license in each settlement period, taking into account use of the technology within the Group and obsolescence due to advances in biotechnology. When the asset component of a technology is in doubt, the Group treats the relevant long-term prepaid expense as a one-off expense. Consequently, long-term prepaid expenses may increase in the future depending on the conclusion of license agreements and the occurrence of subsequent milestone payments. A high level of expense may also arise depending on the status of use of technologies within the Group and advances in biotechnology. This could affect the Group's performance.

#### 4. Competition

The Group holds a unique position in the industry with a firm, stable revenue base, a solid presence in the Asian market and an extensive, proprietary technological lineup. Nevertheless, the Group is in competition with a number of other companies in the same industry, not only in Japan, but also overseas.

In the Genetic engineering research business, the license agreement related to the Polymerase Chain Reaction Method (hereinafter "PCR Method") is non-exclusive, and a large number of companies hold such licenses. As a result, competition is becoming increasingly severe. In addition, new technologies are emerging that could be alternatives to the LA PCR Method and the ICAN method, for which Takara Bio holds the patent rights and which it has positioned as its core technologies. Furthermore, entry into the manufacturing and sale of scientific instruments is relatively easy as it does not require licensing and approval, unlike medical instruments, and Takara Bio has a large number of competitors in this space also.

In the Gene medicine business, a variety of gene transduction methods and effective vectors have been developed, and the applications of gene therapy are expanding from congenital genetic disorders, infectious diseases, and various types of cancer to non-fatal chronic illnesses. Also, cell therapy is not only used to cure the diseases themselves, but also to improve patients' quality of life (QOL). Thus, a potentially enormous market has opened up, which has resulted in many enterprises investing R&D resources in cell and gene therapies, including European and U.S. venture businesses.

In the AgriBio business, the health food industry is booming and many businesses, not just food manufacturers but many pharmaceutical companies as well, are entering this rapidly growing market. Legal regulations impose restrictions on the descriptions of efficacies and effects. Moreover, the use of experimental data for differentiation in sales promotion is prohibited. As a result, it is easy to enter this market, further intensifying the competition.

Therefore, the Group strives to start new business projects and attain early commercialization of projects in their R&D stage. However, if a competitor commercializes a similar product or technology before the Group, or commercializes a technology that is better than the Group's technology, the Group could fail to meet its earnings plans.

#### 5. Parent company of Takara Bio

As of March 31, 2011, Takara Holdings Inc. (listed on the First Section, Tokyo Stock Exchange and Osaka Stock Exchange) is the parent company of Takara Bio, owning 70.85% of the voting rights in the Company. The relationship between Takara Bio and Takara Holdings is as follows.

##### (1) Position of Takara Bio in the Takara Holdings Group (Takara Holdings and its associated companies)

The extraordinary general meeting of shareholders of Takara Shuzo Co., Ltd. (now Takara Holdings), held on February 15, 2002, approved the proposal to spin off the operations of the company's alcoholic beverage and food business, and the biomedical business with the aim of making the most of the special characteristics of each respective business as well as creating an operating environment for increasing growth potential and competitiveness in both. On this basis, Takara Shuzo and Takara Bio were established on April 1, 2002, through a corporate split, with each company becoming a fully owned subsidiary of Takara Holdings. Takara Holdings decreased the ownership of voting shares in Takara Bio to 70.85% through third-party allotment of new shares by private and public offering.

The Takara Holdings Group consists of Takara Holdings, which is a pure holding company, and 42 affiliated companies (37 subsidiaries and 5 associated companies). Within the Group, Takara Bio is positioned as a subsidiary specializing in the biotechnology business, and it promotes the biotechnology business along with its 9 affiliated companies (subsidiaries).

##### (2) The food business of the Takara Holdings Group

Takara Healthcare Inc., which specializes in marketing and sales of health foods of Takara Holdings' Group companies, was founded on September 7, 2006, as a 100%-owned subsidiary of Takara Holdings. Following the establishment of Takara Healthcare, Takara Bio appointed Takara Healthcare as its sales agent for the Company's health foods. The Group's health foods are now sold to customers through Takara Healthcare. The amount of transactions with Takara Healthcare in fiscal 2011 was ¥515 million.

### (3) Management of Group companies by Takara Holdings

Takara Holdings has established and operates the Takara Holdings Group Company Management Rules from the standpoint of consolidated business management. However, its objective is to maintain the independence and autonomy of Takara Holdings' Group companies while seeking to maximize the corporate value of the entire Takara Holdings Group. The rules are also applicable to Takara Bio, and Takara Bio

reports on the decisions made at the meetings of its Board of Directors to Takara Holdings. However, Takara Bio is not required to gain prior approval from Takara Holdings for the resolutions of its Board of Directors, and runs its operations independently.

In addition, Takara Holdings has established a variety of meetings within the Takara Holdings Group, and the ones that relate to Takara Bio are as follows.

Name of meeting	Participants	Role	Frequency of meetings
Group Strategy Meeting	Takara Holdings' directors, President & CEO and Executive Vice President of Takara Bio, President of Takara Shuzo	Confirmation of matters related to entire Group	In principle, once every two months
Biotechnology Business Report Meeting	Takara Holdings' directors, Takara Bio's directors and officers	Reporting on the status of Takara Bio's activities, etc.	In principle, once a month

These meetings above are for the purpose of reporting between Takara Holdings' Group companies and do not currently obstruct the autonomy and independence of Takara Bio.

In addition, the following officers serve concurrently at Takara Bio and Takara Holdings as of June 29, 2011.

Name	Position at Takara Bio	Position at Takara Holdings
Hisashi Ohmiya	Chairman	President
Koichi Nakao	President & CEO	Director
Hideo Tomomura	Corporate Auditor	Corporate Auditor
Tomio Kamada	Corporate Auditor	Standing Auditor

Hisashi Ohmiya was appointed as a chairman of the Board of Directors of the Company based on its assessment that his experience and knowledge in the management of the Biomedical Group as a director of Takara Shuzo before the establishment of the Company would be of use to the Company. Similarly, Hideo Tomomura was appointed as corporate auditor of the Company, as it was decided it would benefit from the knowledge and experience he gained in senior positions in the Group, including as the Head of the General Affairs, Personnel, and Labor Division at Takara Shuzo and Takara Holdings and as a corporate officer at Takara Shuzo. Tomio Kamada was appointed as corporate auditor of the Company based on his valuable experience and knowledge, gained in the Accounting Division of Takara Shuzo and through his concurrent appointments as standing auditor at Takara Holdings and corporate auditor at Takara Shuzo.

Moreover, Koichi Nakao was appointed as director of Takara Holdings from the standpoint of consolidated business management within the holding-company structure of Takara Holdings. These decisions were not made with the objective of giving Takara Holdings control over the Company.

The Company accepted two employees on temporary transfer from Takara Shuzo, a subsidiary of Takara Holdings. The Company asked Takara Shuzo for this temporary transfer for the purpose of adopting know-how for its AgriBio business and Accounting Division. Of the temporarily transferred employees, one holds an administrative position.

However, a change in the Group management strategy of Takara Holdings, although not currently envisaged, could affect the business and performance of Takara Bio.

#### (4) Transactions with the Takara Holdings Group

##### 1) Real estate lease transactions related to sales and manufacturing sites

Takara Bio was established as a spin-off company of Takara Shuzo (now Takara Holdings) on April 1, 2002. As a result, the majority of Takara Shuzo's former real estate, including plants, sales offices and company housing, was newly transferred to both Takara Shuzo and the Company. Whereas the alcoholic beverage and food business, and the biomedical business

had previously been developed on one site, real estate lease transactions have occurred with Takara Shuzo and the Company since these transfers. The real estate lease transactions relating to the lease of manufacturing and sales sites by the Company are as follows. In the event of difficulties in the renewal of these transactions, the performance of the Company could be affected with regard to revenue until the Company is able to secure an alternative site and relocation expenses.

Property	Use	Lessor	Amount of transaction (Year ended March 31, 2011, Millions of Yen)	Transaction terms, etc.
Takara Shuzo Kusu Factory site (Yokkaichi-shi, Mie Prefecture)	Takara Bio, Kusu Factory	Takara Shuzo	8	Site area: 7,728.32m <sup>2</sup> Land category classification: Residential Type of agreement: Ordinary fixed-term leasing rights Basis for computation of rental fees: Market price of land, etc.
6F, Takara Meiji Yasuda Building (Chuo-ku, Tokyo)	Takara Bio, East Japan Sales Department	Takara Shuzo	10	Area: 113.55m <sup>2</sup> Type of agreement: Lease agreement Basis for computation of rental fees: Market price of land, buildings, etc.

Notes: 1. The above amounts do not include consumption tax, etc.

2. Terms of agreement and method of determining terms of agreement are decided by consultation based on appraisal by real estate appraiser.

##### 2) Transactions related to use of trademark rights

The trademarks used by Takara Bio were purchased from Takara Holdings. Apart from these trademarks, Takara Holdings owns and controls some trademarks used by the Company. The Company has concluded trademark licensing agreements with Takara Holdings with regard to these trademarks and makes a fixed monthly payment per trademark,

country and category based on the number of licenses. As of March 31, 2011, the Company had licenses for the use of 90 registered and 43 unregistered trademarks in Japan and overseas. In the event that the Company is unable to obtain licenses for the use of trademarks from Takara Holdings for any reason, it might affect the Company's performance.

Company name (Address)	Details of transaction	Amount of transaction (Year ended March 31, 2011, Millions of Yen)	Terms of transaction, etc.
Takara Holdings Inc. (Shimogyo-ku, Kyoto)	License for use of trademarks	10	Type of agreement: License agreement for use of trademarks (concluded March 29, 2004) Basis for computation of license fees: Costs for application and registration of trademark rights, with inclusion of future maintenance and management expenses Monthly license fee per trademark, country and category: ¥8,500 for registered trademarks, ¥1,700 for unregistered trademarks (neither includes consumption tax)

### 3) Other

Takara Bio engages in the following agreement-based transactions with the Takara Holdings Group companies (excludes Takara Bio Group companies).

Company name (Address)	Details of transaction	Amount of transaction (Year ended March 31, 2011, Millions of Yen)	Terms of transaction, etc.
Takara Shuzo Co., Ltd. (Fushimi-ku, Kyoto)	Lease of company housing	1	Type of agreement: Lease agreement Basis for computation of rental fees: Market price of land, building, etc.
	Temporary transfer of employees to Takara Bio	25	Type of agreement: Employment secondment agreement
Takara Network System Co., Ltd. (Shimogyo-ku, Kyoto)	Contracting of computer-related services and lease of equipment	222	Type of agreement: Basic agreement concerning contracting of services and lease of equipment Details of services: Account-related system operation support; client-server system operation support; lease of PCs; purchasing of consumables, etc.

Notes: 1. The above amounts do not include consumption tax, etc.

2. Apart from this, Takara Bio conducts business through order placement and acceptance of orders for the production of printed material with Takara Holdings' Group companies on a per order basis.

## 6. Financing

The demand for funds, including R&D expenditure, capital expenditure, loans and investment, working funds, etc., is expected to rise due to the initiation of new businesses and expansion in business size. Thus, the procurement of funds through a paid-in capital increase or other measures will be possible in the future. However, if financing does not proceed according to plan, it could affect the development of the Group's business.

## 7. Key operational agreements

An outline of the agreements considered crucial to the Takara Bio Group's operations is described below. If these agreements end due to the expiry of the agreement term, cancellation, or some other reason, or if revisions to the agreements are disadvantageous to the Group, it could affect the business strategy and performance of the Group.

### 1) Genetic engineering research business

#### a) Research reagents

Counterparty	Life Technologies Corporation
Contract	Restated and Amended Patent License Agreement
Conclusion date	September 21, 2006
Term	From September 21, 2006, until all the licensed patents have expired.
Summary	F. Hoffman-La Roche Ltd. granted Takara Bio worldwide non-exclusive rights for the Polymerase Chain Reaction (PCR) Method, excluding the diagnostic area. However, F. Hoffman-La Roche granted exclusive rights for the PCR Method that it owned to Applera Corporation, through its Applied Biosystems Group, based on an agreement between F. Hoffman-La Roche and Applera Corporation. As a result, Applera assumed the license agreement that Takara Bio and F. Hoffman-La Roche concluded in 1997. Subsequently, this license agreement was amended and, in addition to rights for the PCR Method, Takara Bio was granted rights relating to the real-time PCR Method and other items in September 2006. Subsequently, Applera transferred its contractual status with Takara Bio to Life Technologies Corporation. As a result, Takara Bio pays Life Technologies Corporation a certain running royalty linked to sales.

Counterparty	Wayne M. Barnes
Contract	Assignment and License of Patent Agreement
Conclusion date	April 9, 1996
Term	Not specified
Summary	Takara Bio assumed the patent rights and the status of licensor for license contracts covering the LA PCR Method owned by Wayne M. Barnes. In addition to paying Wayne M. Barnes a certain amount at the time of assuming the above-mentioned rights, Takara Bio pays Wayne M. Barnes half of the royalties it receives.

#### b) Scientific instruments

Counterparty	AB SCIEX
Contract	Sales Agreement
Conclusion date	December 28, 2009
Term	From January 1, 2010 to December 31, 2011. If either party has not submitted a written refusal of renewal at least six months before the end of the term, the contract is automatically renewed for a further year, with the same process applying for subsequent years. However, irrespective of the period, Takara Bio can cancel this contract by providing AB SCIEX with six months prior notice in writing. Further, AB SCIEX can cancel this contract by providing Takara Bio with six months prior notice in writing.
Summary	Applied Biosystems/MDS-SCIEX granted non-exclusive sales rights to sell its mass spectrometry systems in Japan to Takara Bio. Takara Bio is not permitted to sell competing products. The Company had previously entered into an agreement with Applied Biosystems Japan Ltd. equivalent to the contents of this agreement. Due to reorganization of Applied Biosystems, however, the newly established AB SCIEX assumed the contract.

#### 2) Genetic medicine business

Counterparty	Indiana University Foundation
Contract	License Agreement
Conclusion date	May 26, 1995
Term	From May 26, 1995, until all the licensed patents have expired.
Summary	Indiana University Foundation granted Takara Bio worldwide exclusive rights for the implementation of a highly efficient gene transduction method using retroviral vectors. In addition to paying Indiana University Foundation a certain amount as an initial license charge, Takara Bio pays Indiana University Foundation a certain running royalty linked to sales. Further, Takara Bio is obliged to pay a certain amount as a milestone payment when it files a New Drug Application (NDA) in order to receive approval for the marketing of a new drug in respective countries. In addition, Takara Bio was obliged to donate a certain amount to Indiana University Foundation for two years. Takara Bio has completed making this donation. In addition, when this contract ends, Takara Bio will transfer the patents acquired by Takara Bio based on this contract with Indiana University Foundation.



Counterparty	MolMed S.p.A
Contract	License Agreement
Conclusion date	December 9, 2001
Term	From December 9, 2001, until all the licensed patents have expired.
Summary	Takara Bio granted MolMed non-exclusive rights in the United States and Europe for the implementation of the RetroNectin® method. In addition to receiving license charges linked to development milestones, Takara Bio receives fees for providing MolMed with RetroNectin® that complies with the standards of clinical trials in the respective countries.

Counterparty	VIRxSYS Corporation
Contract	LICENSE Agreement
Conclusion date	May 26, 2003
Term	From May 26, 2003, until completion of clinical trials of AIDS gene therapy using lentivirus vectors
Summary	Takara Bio granted VIRxSYS non-exclusive rights in the United States and Europe (excluding Russia) for the use of RetroNectin® in clinical trials of AIDS gene therapy. In addition to receiving a one-time contract payment and license charges linked to development milestones, during the period of clinical trials, Takara Bio also receives fees for providing VIRxSYS with RetroNectin® that complies with the standards of clinical trials in the respective countries.

Counterparty	MolMed S.p.A
Contract	Master License Agreement
Conclusion date	July 10, 2003
Term	From the conclusion date of the contract to the end of the royalty term. The royalty term refers to whichever is the longest period: the period that the product in question or its manufacture is under patent protection in each country, or 10 years from the initial date of sale in the market of the product in question.
Summary	Takara Bio is conducting research relating to clinical trials of gene therapy for hematological malignancies. MolMed supports these activities and has granted Takara Bio exclusive rights to its patents in Japan and other specified countries. Takara Bio paid MolMed a certain amount in accordance with the conclusion of the contract as a license charge. Also, since then Takara Bio has paid MolMed a total of more than US\$9,000,000 in milestone payments that are due each time Takara Bio files a New Drug Application (NDA) in order to sell a new drug for the first time in a country and when Takara Bio receives approval to sell a new drug for the first time in a country. Also Takara Bio pays MolMed a certain running royalty linked to sales.

Counterparty	University of Medicine and Dentistry of New Jersey
Contract	Research Collaboration and License Agreement
Conclusion date	October 1, 2005
Term	From October 1, 2005, until all the licensed patents have expired.
Summary	University of Medicine and Dentistry of New Jersey (UMDNJ) researches and develops protein expression systems and technology applications for gene therapy, based on technology for RNA cleavage enzymes (ribonucleases). Takara Bio has obtained exclusive worldwide rights to the expertise relating to technology for the MazF ribonuclease that UMDNJ has obtained as well as the results, expertise, and patents obtainable from the above-mentioned research and development. Takara Bio pays UMDNJ a certain amount in accordance with conclusion of the contract and research and development progress. Also, Takara Bio pays UMDNJ a certain running royalty linked to sales.

## **8. Organizational structure of the Takara Bio Group**

### **(1) Dependence on a certain group of personnel**

Koichi Nakao, the president & CEO, plays an important role, as the chief executive officer, in formulating management strategy and promoting R&D and business development. In order to reduce the dependence of the Group on the president & CEO and to provide him with assistance, the following officers play an important part in promoting the respective operations. Mutsumi Kimura (Executive Vice President) is responsible for business execution as a whole. Kazutoh Takesako (Senior Managing Director) is responsible for the Gene medicine business.

In order to build a management structure that is not overly dependent on these directors, the Group has strengthened its management organization by introducing an executive officer system, for example. However, the Group is likely to remain highly dependent on these directors for the time being. In these circumstances, if for any reason there were difficulties concerning the running of the Company's operations by these directors, it could affect the Group's business strategy and performance.

### **(2) Securing human resources**

The Group is based on R&D, and technological innovation is steadily advancing in the biotechnology industry. Therefore, to maintain its competitive edge, the Group considers it essential to secure outstanding human resources with specialist knowledge and skills for R&D. In addition, a small number of personnel within the Group have experience in clinical development, and the Group is committed to securing these human resources and to conducting in-house training. Nevertheless, the Group cannot rule out the possibility that it may not be able to secure human resources according to plan or that its personnel may leave the Company. In this event, the Group's business strategy and performance could be affected.

## **9. Intellectual property rights**

In the biotechnology industry, in which the success of business depends highly on the success of R&D, the Group regards securing intellectual property rights, including patents, as a critical factor, and the Group protects technologies developed in-house with patent rights to prevent competitors from imitating them. The Group will continue to place the highest priority on applications for patents based on R&D activities. However, not all of the applications may result in granted patents, and when a granted patent is made invalid for any reason, or expires, the Group's business strategies and performance may be affected.

In addition, the Group is aware that in the biotechnology industry, an area in which competition over R&D is continually growing, its patented technologies may be overridden at any time by a competitor's development that is better than its own. When a competitor achieves such R&D, it could affect the Group's business strategy and performance.

Moreover, the Group intends to acquire promising patent rights held by others, or acquire licenses for the patent rights, to enable future expansion of its business. However, these strategies may incur large expenses. In addition, there is a possibility that the Group may not be able to acquire licenses for necessary patent rights held by others, and this could affect its business strategy and performance.

## **10. Product liability risks**

All of the products that the Group handles are exposed to risks of compensation for product liability. If any defect is found in a product during its manufacture or sale, or during the clinical trial processes; or if any health impairment is caused by a drug, medical device, food, or research reagent, cell or gene therapy product used in a clinical trial, or cell therapy product prepared under a doctor's guidance, then the Group may be subject to product liability claims, and this could affect the promotion of the Group's operations and its performance.

In addition, due to the nature of drugs and medical devices, it is usual practice to conduct a voluntary recall when any problem arises with them in view of the physical effects and damage, and any such recall may require time and entail huge expense.

One example of the potential for product liability risk comes from a clinical research of gene therapy for the serious genetic disease known as Severe Combined Immune Deficiency (SCID). This study was carried out at Hospital Necker-Enfants Malades in France in 2000 and is an example of where the therapeutic efficacy of gene therapy using the RetroNectin<sup>®</sup> method developed by the Company was confirmed. The patients with this disease have severe defects in their immune system, forcing them to live in transparent germ-free capsules separated from the outside world in order to prevent infections. Nonetheless, many die around the age of ten. The disease is caused by an abnormality of a gene called gamma-C. Therefore, the gamma-C gene was transferred into the hematopoietic stem cells of patients using the RetroNectin<sup>®</sup> method. Improvement in the immune system was reported in all of the ten or more cases. However, between 2002 and 2007, four of the patients undergoing post-treatment observation were found to have developed leukemia as a side effect. Further, it was reported in December 2007 that one of ten patients undergoing the same treatment in the U.K. had developed leukemia. Nevertheless, retrovirus vectors have been used in a large number of patients (exceeding several hundred) in other diseases, and the incidence of leukemia as a side effect and other safety issues have not been reported. Additionally, the Company and Hospital Necker-Enfants Malades research scientists have concluded that RetroNectin<sup>®</sup> was not the direct cause of the side effects. Gene therapy is a new and cutting-edge treatment, so it is important to promote development while carefully scrutinizing the results of clinical research. In addition, R&D may not proceed as planned in such cases, for instance, when it is necessary to obtain the informed consent of patients again after the occurrence of unexpected events, such as side effects. This could affect the Group's promotion of operations and its business performance. Furthermore, the negative image produced by these kinds of side effects could have an adverse impact on the reliability of the Group's clinical trials, and could affect the promotion of the Group's operations and its performance.

## **11. Legal regulations**

### **(1) Genetic engineering research business**

R&D in the Genetic engineering research business is regulated by relevant legislation, such as the Law Concerning the Prevention of Radiation Hazards due to Radioisotopes, etc, and the Law Concerning the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms; and the Group is committed to observing these laws and regulations. In addition, in the production and sale of research reagents, the Company is required to follow relevant legislation, such as the Poisonous and Deleterious Substance Control Law. However, research reagents are not drugs as defined by the Pharmaceutical Affairs Law, and therefore are not regulated by that law. Nevertheless, if these regulations are tightened or new regulations are introduced following expansion of the biotechnology industry, it could affect the Group's business.

### **(2) Gene medicine business**

The relevant laws and regulations such as the Pharmaceutical Affairs Law and the Law Concerning the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms regulate commercialization of the cell and gene therapies that the Company is aiming to accomplish, and the Group intends to comply with such laws and regulations. The relevant laws and regulations, such as the Pharmaceutical Affairs Law, are targeted at securing the quality, effectiveness, and safety of drugs, quasi-drugs, cosmetics, and medical devices, and the trading of these products requires approval or permission from the relevant authorities. At present, it is uncertain whether or not the Group will be able to obtain permission or approval based on the Pharmaceutical Affairs Law for each individual project in which it is carrying out R&D in the Gene medicine business.

In addition, it is possible that the requirement for approval under the Pharmaceutical Affairs Law and the Medical Practitioners Law will extend to new treatments such as adaptive cell immunotherapy. Such a tightening of the regulations, or the introduction of new regulations, could affect the Company's business strategy.

### (3) AgriBio business

In its health food business, the Group maintains business facilities, manages tools, containers, and packages, and controls production processes and sales activities in accordance with the provisions of the Food Sanitation Law. The Group observes the Food Sanitation Law and takes extra care to manage food hygiene. Food hygiene matters are an unavoidable issue for a company that handles food, and the Group is committed to strengthening its system for the management of food hygiene in the future. However, if any problem should arise related to this issue, the business performance of the Group could be affected.

Beginning in October 2006, Takara Bio has been marketing and selling all its health foods through Takara Healthcare, a 100%-owned subsidiary of Takara Holdings. In selling health foods and functional food materials in bulk, the Company and Takara Healthcare are making every effort to comply with the sales methods based on the Specified Commercial Transaction Law, the Pharmaceutical Affairs Law, Act on Standardization and Proper Labelling of Agricultural and Forest Products, the Health Promotion Law, and the Act against Unjustifiable Premiums and Misleading Representation. The Group must also handle labeling and advertising in compliance with all the relevant laws. However, due to the nature of health foods in general, the Group cannot completely rule out a possibility of violating a provision on mandatory labeling requirements. If any violation occurs, the reliability of the Group could deteriorate, which may adversely affect the Group's business performance.

### 12. Risks of lawsuits, etc.

Troll Busters LLC filed a lawsuit against 13 U.S. companies including the Company's subsidiary Clontech Laboratories, Inc., in the Superior Court of California—County of San Diego, in the United States—on January 10, 2011, local time. The lawsuit of Troll Busters seeks damages on behalf of the United States from the companies for their alleged continued use of U.S. patents on their web sites and other places, despite the fact that the effective periods of the patents—mainly PCR-related patents—had expired, with the purpose of deceiving the U.S. public. In response, Clontech will make a plea asserting that it includes patents based on license contracts and not with the purpose of deceiving the U.S. public. The Company believes that Clontech is in a favorable position with regard to this lawsuit. However, if Clontech were

to lose this lawsuit, it could have to pay damages, which could affect the development of the business in question, business strategy of the Takara Group, or its business results.

Also, GE Healthcare, of the United States, filed a lawsuit against the Company's subsidiary Clontech in the Superior Court of California—County of Santa Clara—on May 22, 2009, local time, asserting that Clontech was liable to indemnify GE Healthcare for losses that GE Healthcare incurred as a result of a settlement of patent litigation reached between GE Healthcare and Life Technologies Corporation (formerly Invitrogen Corporation), of the United States. However, a settlement was reached on September 1, 2010.

As of June 29, 2011, there are no ongoing lawsuits with third parties relating to the Company's business, other than the case described above. However, the Group carries out wide-ranging R&D activities and business expansion. Therefore, there is no guarantee that similar lawsuits will not arise again in the future. The Group is striving to enhance its internal control and strengthen its compliance system as it carries out its business activities. However, in spite of all these efforts, there still remains a possibility of lawsuits being brought against the Group. The very fact that a lawsuit is brought against the Group and/or the results of such a lawsuit may seriously affect the Group's business performance.

In order to prevent the Group from being sued concerning intellectual property rights, the Group has been conducting patent investigations through patent offices, etc., and the Group is not aware that any of its products are in conflict with the patent rights of others. However, it is difficult for an R&D-based company such as the Takara Bio Group to completely avoid the occurrence of such issues involving the infringement of intellectual property rights. When such problems with the infringement of intellectual property rights do arise, the Group could be subject to demands for compensation for damages, sales injunctions, and payment of royalties. As a result of this, the expansion of the relevant business and the Group's business strategy and performance could be affected.

In addition, if the Group's business partners or licensors are involved in disputes, the Group may no longer be able to sell the relevant products or may itself become involved in lawsuits. In such cases, the resolution of the problem could take a long time and may incur huge expenses, and the Group's business strategy and performance could be affected depending on the circumstances.

### **13. Dividend policy**

As the consistent implementation of R&D activities in each business segment will continue to be important well into the future, the Group has a basic policy for the time being of endeavoring to enhance the retained earnings required to perform these activities. On the other hand, the Company recognizes the return of profits to shareholders as an important management issue, and it is considering the distribution of profits taking into account the business performance and financial position. The Company will make effective use of internal reserves in investment in R&D and capital expenditures at each Group company, in consideration of strengthening its financial structure and future expansion.

### **14. Application of funds**

The business environment that surrounds the Group in the biotechnology industry is undergoing intense change, and the operating environment for the Group could be affected significantly by factors such as new technological innovation and new entrants into the industry. Therefore, there is no guarantee that the investment of the funds financed by public offering, etc., in capital expenditures and R&D currently being planned will produce the anticipated results. Consequently, the Group may fail to meet its revenue projections.

### **15. Stock option system**

The Company operates a stock option system.

The extraordinary general meeting of shareholders on September 19, 2003, approved a resolution on the grant of stock options based on the provisions in Articles 280-20, 280-21, and 280-27 of the Commercial Code of Japan.

The Company believes that this system is effective in providing the Company's executives and employees with an incentive to improve business performance. However, when the stock options are exercised, there is a possibility that the value per share of the Company's stock will be diluted. Moreover, the Company is discussing whether to continue similar incentive plans in the future in order to secure highly talented human resources. Consequently, when new stock options are granted and exercised in the future, there is a possibility that the value per share of the Company's stock will be diluted.

### **16. Intangible fixed assets related to Clontech Laboratories**

Observing the U.S. Financial Accounting Standards Board (FASB) Codification Topic 350 "Intangibles—Goodwill and Other" (formerly FASB Standard Statement No. 142, "Goodwill and Other Intangible Assets"), the Company did not amortize the trademark rights obtained by Clontech Laboratories, a subsidiary of the Company. Looking ahead, the Company intends to determine whether any impairment loss is incurred once every year, as well as whenever an event takes place that suggests the possibility of an impairment loss. As of June 29, 2011, the Company has not incurred any impairment losses. However, if the Company determines that an impairment loss has been incurred, such an event could adversely affect the Group's business performance. With regard to goodwill recognized by Clontech Laboratories, from fiscal 2009, the Company has applied "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements" (ASBJ Practical Issues Task Force No. 18, May 17, 2006). Consequently, the Company is amortizing this goodwill amount using the straight-line method over a 20-year period.

# CONSOLIDATED BALANCE SHEETS

Takara Bio Inc. and Subsidiaries  
March 31, 2011 and 2010

ASSETS	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2011	2010	2011
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents (Note 17)	¥ 4,047	¥ 7,819	\$ 48,759
Marketable securities	488		5,879
Time deposits (Note 17)	14,492	10,591	174,602
Notes and accounts receivable:			
Trade (Note 17)	4,732	4,661	57,012
Other	143	236	1,722
Allowance for doubtful accounts (Note 17)	(27)	(24)	(325)
Inventories (Note 5)	2,882	3,076	34,722
Deferred tax assets (Note 15)	453	689	5,457
Prepaid expenses and other current assets	209	181	2,518
Total current assets	<b>27,422</b>	27,232	<b>330,385</b>
<b>PROPERTY, PLANT AND EQUIPMENT (Note 8):</b>			
Land	4,492	4,493	54,120
Buildings and structures	8,300	8,060	100,000
Machinery, equipment and vehicles	6,167	6,909	74,301
Tools, furniture and fixtures	4,186	4,594	50,433
Lease assets	97	100	1,168
Construction in progress	51	196	614
Total	<b>23,297</b>	24,355	<b>280,686</b>
Accumulated depreciation	(12,407)	(12,898)	(149,481)
Net property, plant and equipment	<b>10,889</b>	11,457	<b>131,192</b>
<b>INVESTMENTS AND OTHER ASSETS:</b>			
Investment securities (Note 4)	2	2	24
Goodwill (Note 7)	1,501	1,830	18,084
Long-term prepaid expenses	926	1,167	11,156
Customer contracts and related relationships	288	522	3,469
Trademarks	450	513	5,421
Deferred tax assets (Note 15)	466	410	5,614
Allowance for doubtful accounts	(26)		(313)
Other assets	674	513	8,120
Total investments and other assets	<b>4,283</b>	4,961	<b>51,602</b>
<b>TOTAL</b>	<b>¥ 42,594</b>	¥ 43,651	<b>\$ 513,180</b>

See notes to consolidated financial statements.

<b>LIABILITIES AND EQUITY</b>	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	<b>2011</b>	<b>2010</b>	<b>2011</b>
<b>CURRENT LIABILITIES:</b>			
Current portion of long-term debt (Notes 8 and 17)	¥ 79	¥ 91	\$ 951
Notes and accounts payable (Note 17):			
Trade	1,168	1,335	14,072
Construction and other	978	956	11,783
Accrued income taxes (Note 17)	117	363	1,409
Accrued expenses	540	725	6,506
Other current liabilities	223	383	2,686
Total current liabilities	<b>3,108</b>	3,856	<b>37,445</b>
<b>LONG-TERM LIABILITIES:</b>			
Long-term debt (Notes 8 and 17)	399	481	4,807
Liability for retirement benefits (Note 10)	1,131	1,077	13,626
Deferred tax liabilities (Note 15)	44	212	530
Other long-term liabilities	290	223	3,493
Total long-term liabilities	<b>1,865</b>	1,994	<b>22,469</b>
<b>COMMITMENTS AND CONTINGENT LIABILITIES (Note 16)</b>			
<b>EQUITY (Notes 9 and 20.a):</b>			
Common stock, authorized, 1,000,000 shares; issued, 282,289 shares in 2011 and 282,139 shares in 2010	9,068	9,053	109,253
Capital surplus	26,995	26,980	325,240
Retained earnings	3,561	2,956	42,903
Accumulated other comprehensive income—			
Foreign currency translation adjustments	(2,017)	(1,191)	(24,301)
Total	<b>37,608</b>	37,798	<b>453,108</b>
Minority interests	11		132
Total equity	<b>37,620</b>	37,799	<b>453,253</b>
<b>TOTAL</b>	<b>¥42,594</b>	¥43,651	<b>\$513,180</b>

# CONSOLIDATED STATEMENTS OF INCOME

Takara Bio Inc. and Subsidiaries  
Years ended March 31, 2011 and 2010

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2011	2010	2011
NET SALES (Note 22)	<b>¥18,737</b>	¥19,325	<b>\$225,746</b>
COST OF SALES (Notes 9, 16 and 22)	<b>8,858</b>	9,286	<b>106,722</b>
Gross profit	<b>9,878</b>	10,039	<b>119,012</b>
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (Notes 9, 14, 16 and 22)	<b>8,781</b>	9,485	<b>105,795</b>
Operating income	<b>1,097</b>	553	<b>13,216</b>
OTHER INCOME (EXPENSES):			
Interest income	<b>87</b>	116	<b>1,048</b>
Subsidy income	<b>97</b>	125	<b>1,168</b>
Gain on sales of investments in an associated company		105	
Foreign exchange (loss) gain	<b>(29)</b>	54	<b>(349)</b>
Interest expense	<b>(7)</b>	(9)	<b>(84)</b>
Loss on sales and disposals of property, plant and equipment	<b>(107)</b>	(149)	<b>(1,301)</b>
Loss on impairment of long-lived assets (Note 6)		(122)	
Litigation expenses	<b>(113)</b>		<b>(1,361)</b>
Other, net	<b>(45)</b>	23	<b>(542)</b>
Other income (expenses), net	<b>(119)</b>	144	<b>(1,433)</b>
INCOME BEFORE INCOME TAXES AND MINORITY INTERESTS	<b>978</b>	697	<b>11,783</b>
INCOME TAXES (Note 15):			
Current	<b>361</b>	451	<b>4,349</b>
Refund		(70)	
Prior periods		(63)	
Deferred		(211)	
Total income taxes	<b>361</b>	105	<b>4,349</b>
NET INCOME BEFORE MINORITY INTERESTS	<b>616</b>		<b>7,421</b>
MINORITY INTERESTS IN NET INCOME	<b>11</b>		<b>132</b>
NET INCOME	<b>¥ 605</b>	¥ 591	<b>\$ 7,289</b>

	Yen		U.S. Dollars (Note 1)
	2011	2010	2011
PER SHARE OF COMMON STOCK (Notes 2.s and 21):			
Basic net income	<b>¥5.37</b>	¥5.24	<b>\$0.06</b>
Diluted net income	<b>5.37</b>	5.23	<b>0.06</b>

See notes to consolidated financial statements.



# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Takara Bio Inc. and Subsidiaries  
Year ended March 31, 2011

	Millions of Yen	Thousands of U.S. Dollars (Note 1)
	2011	2011
NET INCOME BEFORE MINORITY INTERESTS	¥ 616	\$ 7,421
OTHER COMPREHENSIVE INCOME (LOSS) (Note 19):		
Foreign currency translation adjustments	(825)	(9,939)
COMPREHENSIVE INCOME (LOSS) (Note 19)	¥(208)	\$(2,506)
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO (Note 19):		
Owners of the parent	¥(219)	\$(2,638)
Minority interests	11	132

See notes to consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

Takara Bio Inc. and Subsidiaries  
Years ended March 31, 2010 and 2011

	Thousands	Millions of Yen								
	Number of Shares of Common Stock Outstanding	Common Stock	Capital Surplus	Retained Earnings	Accumulated Other Comprehensive Income			Total	Minority Interests	Total Equity
					Unrealized Gain on Available- for-sale Securities	Foreign Currency Translation Adjustments				
BALANCE, APRIL 1, 2009	282	¥9,040	¥26,967	¥2,364	¥109	¥(1,332)	¥37,149	¥ Nil	¥37,149	
Net income				591			591		591	
Exercise of stock options (Notes 11 and 12)		13	13				26		26	
Net change in the year					(109)	141	31		32	
BALANCE, MARCH 31, 2010	282	9,053	26,980	2,956	Nil	(1,191)	37,798	Nil	37,799	
Net income				<b>605</b>			<b>605</b>		<b>605</b>	
Exercise of stock options (Notes 11 and 12)		<b>15</b>	<b>15</b>				<b>30</b>		<b>30</b>	
Net change in the year						<b>(825)</b>	<b>(825)</b>	<b>11</b>	<b>(814)</b>	
BALANCE, MARCH 31, 2011	<b>282</b>	<b>¥9,068</b>	<b>¥26,995</b>	<b>¥3,561</b>	<b>¥ Nil</b>	<b>¥(2,017)</b>	<b>¥37,608</b>	<b>¥ 11</b>	<b>¥37,620</b>	

	Thousands of U.S. Dollars (Note 1)									
		Common Stock	Capital Surplus	Retained Earnings	Accumulated Other Comprehensive Income			Total	Minority Interests	Total Equity
					Unrealized Gain on Available- for-sale Securities	Foreign Currency Translation Adjustments				
BALANCE, MARCH 31, 2010		\$109,072	\$325,060	\$35,614	\$Nil	\$(14,349)	\$455,397	\$ Nil	\$455,409	
Net income				<b>7,289</b>			<b>7,289</b>		<b>7,289</b>	
Exercise of stock options (Notes 11 and 12)		<b>180</b>	<b>180</b>				<b>361</b>		<b>361</b>	
Net change in the year						<b>(9,939)</b>	<b>(9,939)</b>	<b>132</b>	<b>(9,807)</b>	
BALANCE, MARCH 31, 2011		<b>\$109,253</b>	<b>\$325,240</b>	<b>\$42,903</b>	<b>\$Nil</b>	<b>\$(24,301)</b>	<b>\$453,108</b>	<b>\$132</b>	<b>\$453,253</b>	

See notes to consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CASH FLOWS

Takara Bio Inc. and Subsidiaries  
Years ended March 31, 2011 and 2010

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2011	2010	2011
<b>OPERATING ACTIVITIES:</b>			
Income before income taxes and minority interests	¥ 978	¥ 697	\$ 11,783
Adjustments for:			
Income taxes paid	(578)	(83)	(6,963)
Depreciation and amortization	1,668	1,852	20,096
Provision for retirement benefits	54	83	650
Increase (decrease) in allowance for doubtful accounts	32	(23)	385
(Decrease) increase in allowance for bonuses to employees	(119)	37	(1,433)
Gain on sales of investment securities		(105)	
Loss on impairment of long-lived assets		122	
Loss on adjustment for changes of accounting standard for asset retirement obligations	77		927
Loss on sales and disposals of property, plant and equipment	107	149	1,289
Changes in assets and liabilities:			
(Increase) decrease in trade receivables	(183)	178	(2,204)
Decrease in inventories	103	216	1,240
Decrease in trade payables	(121)	(110)	(1,457)
Other, net	74	158	891
Total adjustments	1,115	2,476	13,433
Net cash provided by operating activities	2,093	3,174	25,216
<b>INVESTING ACTIVITIES:</b>			
Payments for time deposits	(19,196)	(18,546)	(231,277)
Proceeds from sales of marketable securities		577	
Purchases of property, plant and equipment	(962)	(1,123)	(11,590)
Proceeds from time deposits	15,267	12,289	183,939
Purchases of short-term investments	(526)		(6,337)
Purchases of other property	(219)	(223)	(2,638)
Other, net	(1)	(35)	(12)
Net cash used in investing activities	(5,639)	(7,060)	(67,939)
<b>FINANCING ACTIVITIES:</b>			
Repayments of long-term debt	(89)	(83)	(1,072)
Proceeds from issuance of common stock	29	25	349
Net cash used in financing activities	(60)	(57)	(722)
<b>FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS</b>	(166)	48	(2,000)
<b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(3,772)</b>	<b>(3,895)</b>	<b>(45,445)</b>
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR</b>	<b>7,819</b>	<b>11,715</b>	<b>94,204</b>
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	<b>¥ 4,047</b>	<b>¥ 7,819</b>	<b>\$ 48,759</b>

See notes to consolidated financial statements.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Takara Bio Inc. and Subsidiaries  
Years ended March 31, 2011 and 2010

## 01 BASIS OF PRESENTING THE CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations, and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements of International Financial Reporting Standards.

Under Japanese GAAP, a consolidated statement of income and comprehensive income is required from the fiscal year ended March 31, 2011 and has been presented herein.

Accordingly, accumulated other comprehensive income is presented in the consolidated balance sheet and the consolidated statement of changes in equity. Information with respect to other comprehensive income for the year ended March 31, 2010 is disclosed in Note 19. In addition, "net income before minority interests" is disclosed in the consolidated statement of income from the year ended March 31, 2011.

In preparing these consolidated financial statements, certain reclassifications and rearrangements have been made to the consolidated financial statements issued domestically in order to

present them in a form which is more familiar to readers outside Japan. In addition, certain reclassifications have been made in the 2010 consolidated financial statements to conform to the classifications used in 2011.

The consolidated financial statements are stated in Japanese yen, the currency of the country in which Takara Bio Inc. (the "Company") is incorporated and operates. Japanese yen figures less than a million yen are rounded down to the nearest million yen, except for per share data, stock option exercise price, and stock price in Note 12. The translations of Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan and have been made at the rate of ¥83 to \$1, the approximate rate of exchange at March 31, 2011. U.S. dollar figures less than a thousand dollars are rounded down to the nearest thousand dollars, except for per share data and stock option exercise price and stock price in Note 12. Such translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at that or any other rate.

## 02 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**a. Consolidation**—The consolidated financial statements as of March 31, 2011 include the accounts of the Company and all nine (nine in 2010) subsidiaries (together, the "Group").

Under the control or influence concept, those companies in which the Group, directly or indirectly, is able to exercise control over operations are fully consolidated.

The difference of the cost of an acquisition over the fair value of the net assets of the acquired subsidiary at the date of acquisition is recorded as goodwill and amortized on a straight-line basis principally over a period of five years. Goodwill recorded by Clontech Laboratories, Inc., the Company's consolidated subsidiary, is amortized on a straight-line basis over a period of 20 years in accordance with Practical Issues Task Force (PITF) No. 18, "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements," issued by the Accounting Standards Board of Japan (the "ASBJ") as described in Note 2.b.

All significant intercompany balances and transactions have been eliminated in consolidation. All material unrealized profit included in assets resulting from transactions within the Group is eliminated.

**b. Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements**—In May 2006, the ASBJ issued PITF No. 18. PITF No. 18 prescribes: (1) the accounting policies and procedures applied to a parent

company and its subsidiaries for similar transactions and events under similar circumstances should in principle be unified for the preparation of the consolidated financial statements, (2) financial statements prepared by foreign subsidiaries in accordance with either International Financial Reporting Standards or the generally accepted accounting principles in the United States of America tentatively may be used for the consolidation process, (3) however, the following items should be adjusted in the consolidation process so that net income is accounted for in accordance with Japanese GAAP unless they are not material: 1) amortization of goodwill; 2) scheduled amortization of actuarial gain or loss of pensions that has been directly recorded in the equity; 3) expensing capitalized development costs of R&D; 4) cancellation of the fair value model of accounting for property, plant, and equipment and investment properties and incorporation of the cost model of accounting; 5) recording the prior years' effects of changes in accounting policies in the income statement where retrospective adjustments to financial statements have been incorporated; and 6) exclusion of minority interests from net income, if included.

**c. Business Combination**—In October 2003, the Business Accounting Council (the "BAC") issued a Statement of Opinion, "Accounting for Business Combinations," and in December 2005, the ASBJ issued ASBJ Statement No. 7, "Accounting Standard for Business Divestitures" and ASBJ Guidance No. 10, "Guidance for Accounting Standard for Business Combinations and Business

Divestitures.” The accounting standard for business combinations allows companies to apply the pooling of interests method of accounting only when certain specific criteria are met such that the business combination is essentially regarded as a uniting-of-interests. For business combinations that do not meet the uniting-of-interests criteria, the business combination is considered to be an acquisition and the purchase method of accounting is required. This standard also prescribes the accounting for combinations of entities under common control and for joint ventures.

In December 2008, the ASBJ issued a revised accounting standard for business combinations, ASBJ Statement No. 21, “Accounting Standard for Business Combinations.” Major accounting changes under the revised accounting standard are as follows: (1) The revised standard requires accounting for business combinations only by the purchase method. As a result, the pooling of interests method of accounting is no longer allowed. (2) The current accounting standard accounts for the research and development costs to be charged to income as incurred. Under the revised standard, in-process research and development (IPR&D) acquired in the business combination is capitalized as an intangible asset. (3) The previous accounting standard provided for a bargain purchase gain (negative goodwill) to be systematically amortized over a period not exceeding 20 years. Under the revised standard, the acquirer recognizes the bargain purchase gain in profit or loss immediately on the acquisition date after reassessing and confirming that all of the assets acquired and all of the liabilities assumed have been identified after a review of the procedures used in the purchase allocation. This standard was applicable to business combinations undertaken on or after April 1, 2010 with early adoption permitted for fiscal years beginning on or after April 1, 2009.

The Company acquired a part of business of M's Science Corporation on November 30, 2010 and accounted for it by the purchase method of accounting.

**d. Cash Equivalents**—Cash equivalents are short-term investments that are readily convertible into cash and that are exposed to insignificant risk of changes in value. Cash equivalents include time deposits, certificate of deposits, commercial paper, bond funds, and trust beneficiary rights, all of which mature or become due within three months of the date of acquisition.

**e. Marketable and Investment Securities**—The Group's investment securities consist of marketable and non-marketable available-for-sale securities. Marketable available-for-sale securities are reported at fair value, with unrealized gains and losses, net of applicable taxes, reported in a separate component of equity. The cost of securities sold is determined by the moving-average method. Non-marketable available-for-sale securities are stated at cost determined by the moving-average method.

For other than temporary declines in fair value, marketable and investment securities are reduced to net realizable value by a charge to income.

**f. Inventories**—Inventories are stated at the lower of cost, determined by the weighted-average method, or net selling value.

**g. Property, Plant and Equipment**—Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment of the Company is computed principally by the declining-balance method at rates based on the estimated useful lives of the assets, except that the straight-line method is applied to property, plant and equipment located in Dragon Genomics Center. Subsidiaries compute depreciation principally by the straight-line method.

The range of useful lives is principally from 3 to 60 years for buildings and structures, from 4 to 10 years for machinery, equipment and vehicles, and from 2 to 20 years for tools, furniture and fixtures.

**h. Goodwill**—Clontech Laboratories, Inc., the Company's consolidated subsidiary located in the United States of America, records goodwill according to Financial Accounting Standards Board (the “FASB”) Accounting Standards Codification 350 “Intangibles—Goodwill and Other” (formerly FASB Statement No. 142, “Goodwill and Other Intangible Assets.”) Goodwill is tested for impairment at least annually. (See Note 2.a.)

**i. Long-Lived Assets**—The Group reviews its long-lived assets for impairment whenever events or changes in circumstance indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss would be recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

**j. Retirement and Pension Plans**—The employees' retirement benefits programs of the Company and certain subsidiaries consist of an unfunded lump-sum severance payment plan and a non-contributory trustee pension plan as described in Note 9.

The Group accounted for the liability for retirement benefits based on the projected benefit obligations and plan assets at the balance sheet date.

**k. Allowance for Doubtful Accounts**—The allowance for doubtful accounts is stated in amounts considered to be appropriate based on the Group's past credit loss experience and an evaluation of potential losses in the receivables outstanding.

**l. Asset Retirement Obligations**—In March 2008, the ASBJ published the accounting standard for asset retirement obligations, ASBJ Statement No. 18, “Accounting Standard for Asset Retirement Obligations” and ASBJ Guidance No. 21, “Guidance on Accounting Standard for Asset Retirement Obligations.” Under this accounting standard, an asset retirement obligation is defined as a legal obligation imposed either by law or contract that results from the acquisition, construction, development, and the normal operation

of a tangible fixed asset and is associated with the retirement of such tangible fixed asset. The asset retirement obligation is recognized as the sum of the discounted cash flows required for the future asset retirement and is recorded in the period in which the obligation is incurred if a reasonable estimate can be made. If a reasonable estimate of the asset retirement obligation cannot be made in the period the asset retirement obligation is incurred, the liability should be recognized when a reasonable estimate of asset retirement obligation can be made. Upon initial recognition of a liability for an asset retirement obligation, an asset retirement cost is capitalized by increasing the carrying amount of the related fixed asset by the amount of the liability. The asset retirement cost is subsequently allocated to expense through depreciation over the remaining useful life of the asset. Over time, the liability is accreted to its present value each period. Any subsequent revisions to the timing or the amount of the original estimate of undiscounted cash flows are reflected as an increase or a decrease in the carrying amount of the liability and the capitalized amount of the related asset retirement cost. This standard was effective for fiscal years beginning on or after April 1, 2010.

The Company and domestic subsidiaries applied this accounting standard effective April 1, 2010. The effect of this change was to decrease operating income by ¥2 million (\$24 thousand) and income before income taxes and minority interests by ¥79 million (\$951 thousand).

**m. Research and Development Costs**—Research and development costs are charged to income as incurred.

**n. Leases**—In March 2007, the ASBJ issued ASBJ Statement No.13, "Accounting Standard for Lease Transactions," which revised the previous accounting standard for lease transactions issued in June 1993. The revised accounting standard for lease transactions was effective for fiscal years beginning on or after April 1, 2008.

Under the previous accounting standard, finance leases that were deemed to transfer ownership of the leased property to the lessee were capitalized. However, other finance leases were permitted to be accounted for as operating lease transactions if certain "as if capitalized" information was disclosed in the note to the lessee's financial statements. The revised accounting standard requires that all finance lease transactions be capitalized to recognize lease assets and lease obligations in the balance sheet.

In addition, the revised accounting standard permits leases which existed at the transition date and do not transfer ownership of the leased property to the lessee to continue to be accounted for as operating lease transactions.

The Company and domestic subsidiaries applied the revised accounting standard effective April 1, 2008. Lease assets related to finance lease transactions without title transfer are depreciated on a straight-line basis over the leased periods as their useful lives and with no residual value. In addition, the Company continues to

account for leases which existed at the transition date and do not transfer ownership of the leased property to the lessee as operating lease transactions.

All other leases are accounted for as operating leases.

**o. Income Taxes**—The provision for income taxes is computed based on the pretax income included in the consolidated statements of income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Deferred taxes are measured by applying currently enacted tax laws to the temporary differences.

**p. Foreign Currency Transactions**—All short-term and long-term monetary receivables and payables denominated in foreign currencies are translated into Japanese yen at the exchange rates at the balance sheet date. The foreign exchange gains and losses from translation are recognized in the consolidated statements of income to the extent that they are not hedged by forward exchange contracts.

**q. Foreign Currency Financial Statements**—The balance sheet accounts of the consolidated foreign subsidiaries are translated into Japanese yen at the current exchange rate as of the balance sheet date except for equity, which is translated at the historical rate. Differences arising from such translation were shown as "Foreign currency translation adjustments" under accumulated other comprehensive income in a separate component of equity. Revenue and expense accounts of consolidated foreign subsidiaries are translated into Japanese yen at the average exchange rate.

**r. Derivative and Hedging Activities**—The Group uses derivative financial instruments, such as foreign currency forward contracts as a means of hedging exposure to foreign currency risks. The Group does not enter into derivatives for trading or speculative purposes.

Derivative financial instruments and foreign currency transactions are classified and accounted for as follows: 1) all derivatives are recognized as either assets or liabilities and measured at fair value, and gains or losses on derivative transactions are recognized in the consolidated statements of income, and 2) for derivatives used for hedging purposes, if derivatives qualify for hedge accounting because of high correlation and effectiveness between the hedging instruments and the hedged items, gains or losses on derivatives are deferred until maturity of the hedged transactions.

The foreign currency forward contracts are utilized to hedge foreign currency exposures in collection of purchases and payments of royalties. Payables denominated in foreign currencies are translated at the contracted rates if the forward contracts qualify for hedge accounting.

**s. Per Share Information**—Basic net income per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding for the period.

Diluted net income per share reflects the potential dilution that could occur if securities were exercised or converted into common stock. Diluted net income per share of common stock assumes full conversion of the outstanding convertible notes and bonds at the beginning of the year (or at the time of issuance) with an applicable adjustment for related interest expense, net of tax, and full exercise of outstanding warrants.

**t. New Accounting Pronouncements**

**Accounting Changes and Error Corrections**—In December 2009, ASBJ issued ASBJ Statement No. 24, "Accounting Standard for Accounting Changes and Error Corrections" and ASBJ Guidance No. 24, "Guidance on Accounting Standard for Accounting Changes and Error Corrections." Accounting treatments under this standard and guidance are as follows;

(1) Changes in Accounting Policies

When a new accounting policy is applied with revision of accounting standards, a new policy is applied

retrospectively unless the revised accounting standards include specific transitional provisions. When the revised accounting standards include specific transitional provisions, an entity shall comply with the specific transitional provisions.

(2) Changes in Presentations

When the presentation of financial statements is changed, prior period financial statements are reclassified in accordance with the new presentation.

(3) Changes in Accounting Estimates

A change in an accounting estimate is accounted for in the period of the change if the change affects that period only, and is accounted for prospectively if the change affects both the period of the change and future periods.

(4) Corrections of Prior Period Errors

When an error in prior period financial statements is discovered, those statements are restated.

This accounting standard and the guidance are applicable to accounting changes and corrections of prior period errors which are made from the beginning of the fiscal year that begins on or after April 1, 2011.

**03 BUSINESS COMBINATION**

On November 30, 2010, the Company acquired a part of business of M's Science Corporation, which has developed anticancer agent "Oncolytic virus HF10."

This acquisition was made to expand R&D pipeline in gene medicine segment, reduce development risks, and increase profits when placed on the market.

The acquisition cost was ¥250 million (\$3,012 thousand) by cash. In addition, acquisition-related costs were ¥15 million (\$180 thousand).

The estimated fair values of the assets acquired and the liabilities assumed at the acquisition date were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Patents	¥188	\$2,265
Patent license	77	927
<b>Total</b>	<b>¥265</b>	<b>\$3,192</b>

**04 MARKETABLE AND INVESTMENT SECURITIES**

Marketable and investment securities as of March 31, 2011 and 2010 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Current—			
Certificate of deposits	¥488		\$5,879
Non-current:			
Non-marketable equity securities	¥ 2	¥2	\$ 24

Available-for-sale securities whose fair value is not readily determinable as of March 31, 2011 and 2010 were as follows:

	Carrying Amount		
	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Available-for-sale:			
Equity securities	¥2	¥2	\$24

The information of available-for-sale securities which were sold during the year ended March 31, 2010 was as follows:

March 31, 2010	Millions of Yen		
	Proceeds	Realized Gains	Realized Loss
Available-for-sale— Equity securities	<b>¥105</b>	<b>¥105</b>	

## 05 INVENTORIES

Inventories at March 31, 2011 and 2010 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Finished products and merchandise	<b>¥1,931</b>	¥2,095	<b>\$23,265</b>
Work in process	<b>234</b>	246	<b>2,819</b>
Raw materials and supplies	<b>716</b>	734	<b>8,626</b>
Total	<b>¥2,882</b>	¥3,076	<b>\$34,722</b>

## 06 LONG-LIVED ASSETS

The Group reviewed its long-lived assets for impairment as of March 31, 2010. As a result, the Group recognized an impairment loss of ¥122 million for land as other expense. The land located in Yakushima-cho, Kagoshima-prefecture was purchased by the Group's AgriBio segment to grow ashitaba (a unique celery-like vegetable of the Angelica family), but only a portion of the land

was utilized and the rest of the property remained unused. As there were no plans for utilization of such idle property, the land was written down to the recoverable amount for the year ended March 31, 2010. The recoverable amount of that asset group was measured at its net selling price determined by quotation from a real-estate appraiser. No impairment loss was recognized in 2011.

## 07 GOODWILL

Goodwill at March 31, 2011 and 2010 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Goodwill on purchase of a specific business	<b>¥1,435</b>	¥1,733	<b>\$17,289</b>
Consolidation goodwill	<b>65</b>	96	<b>783</b>
Total	<b>¥1,501</b>	¥1,830	<b>\$18,084</b>

## 08 LONG-TERM DEBT

Long-term debt at March 31, 2011 and 2010 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Loans principally from banks and the local government, due serially to January 2022 with interest rates ranging from 0% to 1.75% in 2011 and 2010			
Collateralized	<b>¥215</b>	¥232	<b>\$2,590</b>
Unsecured	<b>195</b>	223	<b>2,349</b>
Obligation under finance leases	<b>68</b>	116	<b>819</b>
Total	<b>478</b>	571	<b>5,759</b>
Less current portion	<b>79</b>	91	<b>951</b>
Long-term debt, less current portion	<b>¥399</b>	¥481	<b>\$4,807</b>

Annual maturities of long-term debt as of March 31, 2011 for the next five years and thereafter were as follows:

Years Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2012	¥ 79	\$ 951
2013	61	734
2014	65	783
2015	46	554
2016	47	566
2017 and thereafter	178	2,144
<b>Total</b>	<b>¥478</b>	<b>\$5,759</b>

At March 31, 2011, buildings and structures of ¥392 million (\$4,722 thousand) and land of ¥250 million (\$3,012 thousand) were pledged as collateral for long-term debt (including current portion of long-term debt) of ¥215 million (\$2,590 thousand).

## 09 RETIREMENT AND PENSION PLANS

The Company and certain overseas subsidiaries have severance payment plans for employees.

Under most circumstances, employees terminating their employment are entitled to certain lump-sum severance payments based on their rate of pay at the time of termination, length of service, and certain other factors. In most circumstances, if the termination is involuntary, caused by retirement at the mandatory retirement

age or caused by death, employees are entitled to greater payments than in the case of voluntary termination.

In addition, the Company has non-contributory trustee pension plans covering all employees. Under the plans, employees terminating their employment are, in most circumstances, entitled to pension payments based on their rates of pay at the time of termination and length of service.

The liability for employees' retirement benefits at March 31, 2011 and 2010 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Projected benefit obligation	<b>¥1,590</b>	¥1,526	<b>\$19,156</b>
Fair value of plan assets	<b>(366)</b>	(354)	<b>(4,409)</b>
Unrecognized actuarial loss	<b>(159)</b>	(160)	<b>(1,915)</b>
Prepaid pension cost	<b>67</b>	65	<b>807</b>
<b>Net liability</b>	<b>¥1,131</b>	¥1,077	<b>\$13,626</b>

The components of net periodic benefit costs were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Service cost	<b>¥138</b>	¥137	<b>\$1,662</b>
Interest cost	<b>24</b>	23	<b>289</b>
Expected return on plan assets	<b>(8)</b>	(10)	<b>(96)</b>
Recognized actuarial loss	<b>22</b>	19	<b>265</b>
<b>Net periodic benefit costs</b>	<b>¥176</b>	¥169	<b>\$2,120</b>

Assumptions used for the years ended March 31, 2011 and 2010 were set forth as follows:

	2011	2010
Discount rate	<b>1.6%</b>	1.6%
Expected rate of return on plan assets	<b>2.5%</b>	3.0%
Recognition period of actuarial gain/loss	<b>10 years</b>	10 years



## 10 ASSET RETIREMENT OBLIGATIONS

The changes in asset retirement obligations for the year ended March 31, 2011 were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Balance at beginning of year	¥92	\$1,108
Balance at end of year	93	1,120

## 11 EQUITY

Japanese companies are subject to the Companies Act of Japan (the "Companies Act"). The significant provisions in the Companies Act that affect financial and accounting matters are summarized below:

### (a) Dividends

Under the Companies Act, companies can pay dividends at any time during the fiscal year in addition to the year-end dividend upon resolution at the shareholders meeting. For companies that meet certain criteria such as; (1) having the Board of Directors, (2) having independent auditors, (3) having the Board of Corporate Auditors, and (4) the term of service of the directors is prescribed as one year rather than two years of normal term by its articles of incorporation, the Board of Directors may declare dividends (except for dividends in kind) at any time during the fiscal year if the company has prescribed so in its articles of incorporation. However, the Company cannot do so because it does not meet all the above criteria. The Companies Act permits companies to distribute dividends-in-kind (non-cash assets) to shareholders subject to a certain limitation and additional requirements.

Semiannual interim dividends may also be paid once a year upon resolution by the Board of Directors if the articles of incorporation of the company so stipulate. The Companies Act provides certain limitations on the amounts available for dividends or the purchase of treasury stock. The limitation is defined as the amount available for distribution to the shareholders, but the amount of net assets after dividends must be maintained at no less than ¥3 million.

### (b) Increases / decreases and transfer of common stock, reserve, and surplus

The Companies Act requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus) depending on the equity

account charged upon the payment of such dividends until the total of aggregate amount of legal reserve and additional paid-in capital equals 25% of the common stock. Under the Companies Act, the total amount of additional paid-in capital and legal reserve may be reversed without limitation. The Companies Act also provides that common stock, legal reserve, additional paid-in capital, other capital surplus, and retained earnings can be transferred among the accounts under certain conditions upon resolution of the shareholders.

### (c) Treasury stock and treasury stock acquisition rights

The Companies Act also provides for companies to purchase treasury stock and dispose of such treasury stock by resolution of the Board of Directors. The amount of treasury stock purchased cannot exceed the amount available for distribution to the shareholders, which is determined by a specific formula.

Under the Companies Act, stock acquisition rights are presented as a separate component of equity.

The Companies Act also provides that companies can purchase both treasury stock acquisition rights and treasury stock. Such treasury stock acquisition rights are presented as a separate component of equity or deducted directly from stock acquisition rights.

For the year ended March 31, 2011, the Company issued 150 shares of common stock upon exercise of 15 stock options at the price of ¥200,000 (\$2,409.63) per share. The amount of ¥15 million (\$180 thousand) was credited to common stock and the remaining amount of ¥15 million (\$180 thousand) was credited to additional paid-in capital.

For the year ended March 31, 2010, the Company issued 130 shares of common stock upon exercise of 13 stock options at the price of ¥200,000 per share. The amount of ¥13 million was credited to common stock and the remaining amount of ¥13 million was credited to additional paid-in capital.

## 12 STOCK OPTIONS

The stock options outstanding at March 31, 2011 were as follows:

Stock Option	Persons Granted	Number of Options Granted	Date of Grant	Exercise Price	Exercise Period
The First Stock Option	8 directors 273 employees	8,500 shares	2003.9.19	¥200,000 (\$2,409.63)	From September 20, 2005 To September 20, 2013
The Second Stock Option	8 directors 3 corporate auditors 120 employees	3,220 shares	2003.9.19	¥200,000 (\$2,409.63)	From April 1, 2004 To September 20, 2013
The Third Stock Option	3 directors 28 employees	500 shares	2004.5.17	¥200,000 (\$2,409.63)	From September 20, 2005 To September 20, 2013
The Fourth Stock Option	9 directors 3 corporate auditors 8 employees	780 shares	2004.5.17	¥200,000 (\$2,409.63)	From April 1, 2004 To September 20, 2013

The stock option activity is as follows:

	Shares			
	The First Stock Option	The Second Stock Option	The Third Stock Option	The Fourth Stock Option
For the year ended March 31, 2010				
Non-vested				
March 31, 2009—Outstanding				
Granted				
Canceled				
Vested				
March 31, 2010—Outstanding				
Vested				
March 31, 2009—Outstanding	3,950	1,440	120	390
Vested				
Exercised	(120)		(10)	
Canceled				
March 31, 2010—Outstanding	3,830	1,440	110	390
Exercise price	¥200,000	¥200,000	¥200,000	¥200,000
Average stock price at exercise	¥223,350		¥248,700	

	Shares			
	The First Stock Option	The Second Stock Option	The Third Stock Option	The Fourth Stock Option
For the year ended March 31, 2011				
Non-vested				
March 31, 2010—Outstanding				
Granted				
Canceled				
Vested				
March 31, 2011—Outstanding				
Vested				
March 31, 2010—Outstanding	<b>3,830</b>	<b>1,440</b>	<b>110</b>	<b>390</b>
Vested				
Exercised	<b>150</b>			
Canceled	<b>20</b>	<b>10</b>		
March 31, 2011—Outstanding	<b>3,660</b>	<b>1,430</b>	<b>110</b>	<b>390</b>
Exercise price	<b>¥ 200,000</b>	<b>¥ 200,000</b>	<b>¥ 200,000</b>	<b>¥ 200,000</b>
	<b>(\$2,409.63)</b>	<b>(\$2,409.63)</b>	<b>(\$2,409.63)</b>	<b>(\$2,409.63)</b>
Average stock price at exercise	<b>¥ 210,193</b>			
	<b>(\$2,532.44)</b>			

### 13 RELATED PARTY DISCLOSURES

(1) The Company is majority-owned by Takara Holdings Inc., which is listed on the first section of the Tokyo Securities Exchange and the Osaka Securities Exchange.

its directors in 2010) of common stock upon exercise of 0 (6 in 2010) stock options at the price of ¥200,000 per share. The total transaction amounts for the years ended March 31, 2010 were ¥12 million.

(2) In connection with the stock option plans as described in Note 11, the Company issued to its director 0 shares (60 shares to

### 14 RESEARCH AND DEVELOPMENT COSTS

Research and development costs charged to income were ¥2,692 million (\$32,433 thousand) and ¥3,294 million for the years ended March 31, 2011 and 2010, respectively.

### 15 INCOME TAXES

The Company and its domestic subsidiaries are subject to Japanese national and local income taxes which, in the aggregate, resulted in a normal effective statutory tax rate of

approximately 40% for the years ended March 31, 2011 and 2010. Overseas subsidiaries are subject to income taxes of the countries where they operate.

The tax effects of significant temporary differences and tax loss carryforwards, which resulted in deferred tax assets and liabilities at March 31, 2011 and 2010 are as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Current deferred tax assets:			
Inventories	¥163	¥235	\$1,963
Accrued bonuses	71	118	855
Unrealized profit on sales of inventories	138	125	1,662
Other	109	246	1,313
Less valuation allowance	(17)	(20)	(204)
Total	¥465	¥705	\$5,602
Current deferred tax liabilities	¥ 11	¥ 16	\$ 132
Net current deferred tax assets	¥453	¥689	\$5,457

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Non-current deferred tax assets:			
Retirement benefits	¥ 454	¥ 431	\$ 5,469
Depreciation	68	66	819
Impairment loss	49	49	590
Foreign tax carryforwards	341	361	4,108
Tax loss carryforwards	362	346	4,361
Loss on disposals of long-term prepaid expenses	109	70	1,313
Other	152	61	1,831
Less valuation allowance	(644)	(598)	(7,759)
Total	¥ 893	¥ 788	\$10,759
Non-current deferred tax liabilities:			
Goodwill	¥ 258	¥ 402	\$3,108
Undistributed profit of foreign subsidiary	160	125	1,927
Other	52	62	626
Total	¥ 471	¥ 589	\$ 5,674
Net non-current deferred tax assets	¥ 466	¥ 410	\$ 5,614
Net non-current deferred tax liabilities	¥ 44	¥ 212	\$ 530

A reconciliation between the normal effective statutory tax rate and the actual effective tax rate reflected in the accompanying consolidated statements of income for the years ended March 31, 2011 and 2010 was as follows:

	2011	2010
Normal effective statutory tax rate in Japan	40.0%	40.0%
Expenses not deductible for income tax purposes	1.0	1.4
Permanently non-taxable income, such as dividend income		(3.7)
Valuation allowance	5.0	15.0
Per capita rate of local tax	1.4	2.2
Tax rate difference of subsidiaries	(17.4)	(26.9)
Elimination in consolidation	13.1	22.9
Tax credit	(18.0)	(33.6)
Goodwill depreciation	5.7	
Undistributed profit of foreign subsidiary	3.6	
Other-net	2.5	(2.2)
Actual effective tax rate	36.9%	15.1%

At March 31, 2011, certain subsidiaries have tax loss carryforwards aggregating approximately ¥461 million (\$5,554 thousand), which are available to be offset against taxable income of such subsidiaries in future years. These tax loss carryforwards, if not utilized, will expire as follows:

Years Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2014	¥ 64	\$ 771
2015	3	36
2016	197	2,373
2017	106	1,277
2018	89	1,072
Total	¥461	\$5,554

## 16 LEASES

The Group leases certain machinery, computer equipment, and other assets.

Total rental expense for the years ended March 31, 2011 and 2010 was ¥342 million (\$4,120 thousand) and ¥254 million, respectively, including ¥3 million (\$36 thousand) and ¥4 million of lease payments under finance leases, respectively.

ASBJ Statement No. 13, "Accounting Standard for Lease Transactions" requires that all finance lease transactions be capitalized to recognize lease assets and lease obligations in the balance sheet. However, the ASBJ Statement No. 13 permits

leases without ownership transfer of the leased property to the lessee whose lease inception was before March 31, 2008 to be accounted for as operating lease transactions if certain "as if capitalized" information is disclosed in the note to the financial statements. The Company and its domestic subsidiaries applied the ASBJ Statement No. 13 effective April 1, 2008 and accounted for such leases as operating lease transactions. Pro forma information of leased property whose lease inception was before March 31, 2008 was as follows:

	Millions of Yen		Millions of Yen	
	2011		2010	
	Machinery and Vehicles	Total	Machinery and Vehicles	Total
Acquisition cost	¥24	¥24	¥24	¥24
Accumulated depreciation	15	15	11	11
Net leased property	¥ 9	¥ 9	¥12	¥12

	Thousands of U.S. Dollars	
	2011	
	Machinery and Vehicles	Total
Acquisition cost	\$289	\$289
Accumulated depreciation	180	180
Net leased property	\$108	\$108

Obligations under finance leases as of March 31, 2011 and 2010 were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Due within one year	¥3	¥ 3	\$ 36
Due after one year	5	9	60
Total	¥9	¥12	\$108

The amount of obligations under finance leases includes the imputed interest expense portion.

Depreciation expense was ¥3 million (\$36 thousand) and ¥4 million for the years ended March 31, 2011 and 2010, respectively.

The minimum rental commitments under noncancellable operating leases at March 31, 2011 were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Due within one year	¥ 121	\$ 1,457
Due after one year	1,018	12,265
Total	¥1,140	\$13,734

On March 10, 2008, the ASBJ revised ASBJ Statement No. 10, "Accounting Standard for Financial Instruments" and issued ASBJ Guidance No. 19, "Guidance on Accounting Standard for Financial Instruments and Related Disclosures." This accounting standard and the guidance are applicable to financial instruments and related disclosures at the end of the fiscal years ending on or after March 31, 2010. The Group applied the revised accounting standard and the new guidance effective March 31, 2010.

**(1) Group policy for financial instruments**

Cash surpluses, if any, are invested in low risk financial assets. Derivatives are used, not for speculative purposes, but to hedge foreign exchange risk associated with certain assets and liabilities denominated in foreign currencies.

**(2) Nature and extent of risks arising from financial instruments**

Receivables such as trade notes and trade accounts are exposed to customer credit risk. Although receivables in foreign currencies are exposed to the market risk of fluctuation in foreign currency exchange rates, the position, net of payables in foreign currencies, is hedged by using forward foreign currency contracts.

Marketable and investment securities are exposed to the issuer's credit risk.

Payment terms of payables, such as trade notes and trade accounts, are almost less than three months.

Although payables in foreign currencies are exposed to the market risk of fluctuation in foreign currency exchange rates, those risks are netted against the balance of receivables denominated in the same foreign currency and is hedged by foreign currency contracts as noted above.

Maturities of bank loans are less than twelve years after the balance sheet date.

Derivatives mainly include forward foreign currency contracts, which are used to hedge foreign exchange risk associated with certain assets and liabilities denominated in foreign currencies. Please see Note 16 for more detail about derivatives.

**(3) Risk management for financial instruments****Credit risk management**

Credit risk is the risk of economic loss arising from a counterparty's failure to repay or service debt according to the contractual terms. The Group manages its credit risk from receivables on the basis of internal guidelines, which include monitoring of payment term and balances of major customers by each business administration department to identify the default risk of customers in early stage.

Because the counterparties to derivative transactions are limited to major international financial institutions, the Company does not anticipate any losses arising from credit risk.

**Market risk management****(foreign exchange risk and interest rate risk)**

Foreign currency trade receivables and payables are exposed to market risk resulting from fluctuations in foreign currency exchange rates. Such foreign exchange risk is hedged principally by forward foreign currency contracts.

Since interest rates for loans are fixed, there is no market risks from changes in interest rates.

Derivative transactions are performed and managed with the approval of the prescribed authority based on the internal guidelines.

**Liquidity risk management**

Liquidity risk comprises the risk that the Company cannot meet its contractual obligations in full on maturity dates.

The Group manages its liquidity risk by holding adequate volumes of liquid assets, along with adequate financial planning by the corporate treasury department.

**(4) Fair values of financial instruments**

Fair values of financial instruments are based on quoted price in active markets. If quoted price is not available, other rational valuation techniques are used instead. Also please see Note 16 for the detail of fair value for derivatives.

(a) Fair value of financial instruments

March 31, 2011	Millions of Yen		
	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	¥ 4,047	¥ 4,047	
Time deposits	14,492	14,492	
Notes and accounts receivable–trade	4,732	4,732	
Allowance for doubtful accounts	(26)	(26)	
<b>Total</b>	<b>¥23,244</b>	<b>¥23,244</b>	
Notes and accounts payable–trade	¥ 1,168	¥ 1,168	
Current portion of long-term borrowings	45	45	
Notes and accounts payable–construction and other	978	978	
Accrued income taxes	117	117	
Long-term borrowings	364	352	¥11
<b>Total</b>	<b>¥ 2,675</b>	<b>¥ 2,663</b>	<b>¥11</b>

March 31, 2010	Millions of Yen		
	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	¥ 7,819	¥ 7,819	
Time deposits	10,591	10,591	
Notes and accounts receivable–trade	4,661	4,661	
Allowance for doubtful accounts	(24)	(24)	
<b>Total</b>	<b>¥23,048</b>	<b>¥ 23,048</b>	
Notes and accounts payable–trade	¥ 1,335	¥1,335	
Current portion of long-term borrowings	45	45	
Notes and accounts payable–construction and other	956	956	
Accrued income taxes	363	363	
Long-term borrowings	410	395	¥15
<b>Total</b>	<b>¥ 3,112</b>	<b>¥3,096</b>	<b>¥15</b>

March 31, 2011	Thousands of U.S. Dollars		
	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	\$ 48,759	\$ 48,759	
Time deposits	174,602	174,602	
Notes and accounts receivable–trade	57,012	57,012	
Allowance for doubtful accounts	(313)	(313)	
<b>Total</b>	<b>\$280,048</b>	<b>\$280,048</b>	
Notes and accounts payable–trade	\$ 14,072	\$ 14,072	
Current portion of long-term borrowings	542	542	
Notes and accounts payable–Construction and other	11,783	11,783	
Accrued income taxes	1,409	1,409	
Long-term borrowings	4,385	4,240	\$132
<b>Total</b>	<b>\$ 32,228</b>	<b>\$ 32,084</b>	<b>\$132</b>

**Cash and cash equivalent, time deposits, and notes and accounts receivables – trade**

The carrying values of cash and cash equivalents, time deposits, and notes and accounts receivable – trade approximate fair value because of their short maturities.

**Notes and accounts payable (trade and construction and other) and other current liabilities**

The carrying values of notes and accounts payable and other current liabilities approximate fair value because of their short maturities.

**Current portion of long-term borrowings and long-term borrowings**

The fair values of current portion of long-term borrowings and long-term borrowings are determined by discounting the cash flows related to the debt at the Group's assumed corporate borrowing rate.

**Derivatives**

The information of the fair value for derivatives is included in Note 16.

(b) Financial instruments whose fair value cannot be reliably determined

Since unlisted stocks (carrying amount ¥2 million (\$24 thousand) at March 31, 2011) do not have a quoted market price in an active market and their fair value cannot be reliably determined, they are excluded from disclosure of fair value.

**(5) Maturity analysis for financial assets and securities with contractual maturities**

Due in One Year or Less

	Millions of Yen		Thousands of U.S. Dollars
	2011	2010	2011
Cash and cash equivalents	¥ 4,047	¥ 7,819	\$ 48,759
Time deposits	14,492	10,591	174,602
Notes and accounts receivables – trade	4,732	4,661	57,012
Total	¥23,272	¥23,072	\$280,385

Please see Note 8 for annual maturities of long-term debt and Note 16 for obligations under finance leases, respectively.

**18 DERIVATIVES**

The Group enters into foreign currency forward contracts to hedge foreign exchange risk associated with certain assets and liabilities denominated in foreign currencies.

All derivative transactions are entered into to hedge foreign currency exposures incorporated within its business. Accordingly, market risk in these derivatives is basically offset by opposite movements in the value of hedged assets and liabilities.

Because the counterparties to these derivatives are limited to major international financial institutions, the Group does not anticipate any losses arising from credit risk.

Derivative transactions entered into by the Group have been made in accordance with internal policies of the Finance Department, which regulate the authorization, purposes, credit limit amount, evaluation of the counterparties, and reporting procedures.

Foreign currency forward contracts which qualify for hedge accounting are excluded from the disclosure of market value information.

**Derivative transactions to which hedge accounting is not applied**

At March 31, 2011	Millions of Yen			Unrealized Gain/Loss
	Contract Amount	Contract Amount Due after One Year	Fair Value	
Foreign currency forward contracts:				
Buying EUR	¥17			
Selling EUR	40			
CNY	20			
Non-deliverable forward				
Selling WON	¥60		¥(1)	¥(1)

At March 31, 2011	Thousands of U.S. Dollars			Unrealized Gain/Loss
	Contract Amount	Contract Amount Due after One Year	Fair Value	
Foreign currency forward contracts:				
Buying EUR	\$204			
Selling EUR	481			
CNY	240			
Non-deliverable forward				
Selling WON	\$722		\$(12)	\$(12)



## Derivative transactions to which hedge accounting is applied

		Millions of Yen			
At March 31, 2011		Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value
Foreign currency forward contracts:					
Buying	U.S.\$	<b>Payables</b>	<b>¥151</b>		
	EUR	<b>Payables</b>	<b>10</b>		

		Millions of Yen			
At March 31, 2010		Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value
Foreign currency forward contracts:					
Buying	U.S.\$	Payables	¥152		¥2

		Thousands of U.S. Dollars			
At March 31, 2011		Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value
Foreign currency forward contracts:					
Buying	U.S.\$	<b>Payables</b>	<b>\$1,819</b>		
	EUR	<b>Payables</b>	<b>120</b>		

The fair value of derivative transactions is measured at the quoted price obtained from the financial institution.

## 19 COMPREHENSIVE INCOME

### For the year ended March 31, 2010

Total comprehensive income for the year ended March 31, 2010 was the following:

	Millions of Yen
Total comprehensive income attributable to – Owners of the parent	¥622

Other comprehensive income for the year ended March 31, 2010 consisted of the following:

	Millions of Yen
Other comprehensive income:	
Unrealized gain (loss) on available-for-sale securities	¥(109)
Foreign currency translation adjustments	141
Total other comprehensive income	¥ 31

## 20 SUBSEQUENT EVENT

### a. Stock Split

On April 1, 2011, the Company made a four hundred-for-one stock split of the Company's common stock and issued 112,633,311 shares to the shareholders of record on March 31, 2011. The average number of common shares outstanding for the years ended March 31, 2011 and 2010, used for the computation of net income per share were retroactively adjusted as a result of this stock split. Information presented in the consolidated financial statements and in the notes to the consolidated financial statements has not been restated to reflect the four hundred-for-one stock split except for per share data.

### b. Revision Retirement and Pension Plans

In conjunction with the enactment of the Defined Benefit Corporation Pension Act, the Company plans to review and revise part of its retirement benefit regulations effective April 1, 2011. The Company plans to transfer from the current lump-sum payment plans and tax-qualified pension plans to new lump-sum payment plans and defined benefit corporate pension plans and apply ASBJ Guidance No. 1, "Accounting for Transfer between Retirement Benefit Plans."

As a result, the reduction in prior service costs is calculated to be ¥665 million (\$8,012 thousand). It is planned to credit such amount to net periodic benefit costs over 10 years period from the incurrence of the reduction in the amount by the straight-line method. This allocation period is within the average remaining service period of employees at the time of incurrence.

## 21 NET INCOME PER SHARE

Reconciliation of the differences between basic and diluted net income per share ("EPS") for the years ended March 31, 2011 and 2010 is as follows:

	Millions of Yen	Thousands of Shares	Yen	U.S. Dollars
	Net Income	Weighted Average Shares	EPS	
For the year ended March 31, 2011:				
Basic EPS				
Net income available to common shareholders	¥605	112,869	¥5.37	\$0.06
Effect of dilutive securities				
Warrants				
Diluted EPS				
Net income for computation	¥605	112,894	¥5.37	\$0.06
For the year ended March 31, 2010:				
Basic EPS				
Net income available to common shareholders	¥591	112,827	¥5.24	
Effect of dilutive securities				
Warrants				
Diluted EPS				
Net income for computation	¥591	112,975	¥5.23	

## 22 SEGMENT INFORMATION

### For the years ended March 31, 2011 and 2010

In March 2008, the ASBJ revised ASBJ Statement No. 17, "Accounting Standard for Segment Information Disclosures" and issued ASBJ Guidance No. 20, "Guidance on Accounting Standard for Segment Information Disclosures." Under the standard and guidance, an entity is required to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria. Operating segments are components of an entity about which separate financial information is available and such information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Generally, segment information is required to be reported on the same basis as is used internally for evaluating operating segment performance and deciding how to allocate resources to operating segments. This accounting standard and the guidance are applicable to segment information disclosures for the fiscal years beginning on or after April 1, 2010. The segment information for the year ended March 31, 2010 under both the revised and prior accounting standard is also disclosed hereunder as required.

### (1) Description of reportable segments

The Group's reportable segments are those for which separate financial information is available and regular evaluation by the Company's management is performed in order to decide how resources are allocated among the Group. Therefore, the Group consists of the Genetic Engineering Research, Gene Medicine, and AgriBio segments.

The segment of Genetic Engineering Research consists of the businesses of research reagents (for genetic engineering research, protein engineering research, cell biology research and glycobiology research), research instruments and service business.

The segment of Gene Medicine consists of the businesses of medical devices, gene therapy related products, and service business.

The segment of AgriBio consists of the businesses of mushrooms, technical training of mushroom cultivation, ashitaba (a unique celery-like vegetable of the Angelica family), Agar, health food and cosmetics.

### (2) Methods of measurement for the amounts of sales, profit (loss), assets, liabilities and other items for each reportable segment

The accounting policies of each reportable segment are consistent to those disclosed in Note 2, "Summary of Significant Accounting Policies."

(3) Information about sales, profit (loss), assets, liabilities and other items is as follows.

Millions of Yen						
2011						
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Reconciliations	Consolidated
Sales:						
Sales to external customers	¥15,882	¥ 493	¥2,361	¥18,737		¥18,737
Segment profit (loss)	4,132	(1,331)	(310)	2,491	¥ (1,393)	1,097
Segment assets	18,931	1,825	5,068	25,825	16,769	42,594
Other:						
Depreciation	595	97	342	1,035	86	1,122
Amortization of goodwill	136			136		136
Increase in property, plant and equipment and intangible assets	485	348	72	906	11	918

Millions of Yen						
2010						
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Reconciliations	Consolidated
Sales:						
Sales to external customers	¥16,689	¥ 392	¥2,243	¥19,325		¥19,325
Intersegment sales or transfers			1	1	¥ (1)	
Total	16,689	392	2,245	19,327	(1)	19,325
Segment profit (loss)	4,151	(1,565)	(583)	2,002	(1,449)	553
Segment assets	19,643	1,924	5,413	26,980	16,670	43,651
Other:						
Depreciation	661	115	374	1,151	79	1,230
Amortization of goodwill	143			143		143
Increase in property, plant and equipment and intangible assets	670	168	147	986	83	1,069

Thousands of U.S. Dollars						
2011						
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Reconciliations	Consolidated
Sales:						
Sales to external customers	\$191,349	\$ 5,939	\$28,445	\$225,746		\$225,746
Segment profit (loss)	49,783	(16,036)	(3,734)	30,012	\$(16,783)	13,216
Segment assets	228,084	21,987	61,060	311,144	202,036	513,180
Other:						
Depreciation	7,168	1,168	4,120	12,469	1,036	13,518
Amortization of goodwill	1,638			1,638		1,638
Increase in property, plant and equipment and intangible assets	5,843	4,192	867	10,915	132	11,060

Notes: 1. Reconciliations of segment profit include unallocated operating expenses of ¥1,393 million (\$16,783 thousand) and ¥1,449 million for the years ended March 31, 2011 and 2010, respectively, consisting principally of fundamental research and development expenses and administrative expenses incurred by the administrative and accounting departments of the Company.

2. Reconciliations of segment assets include corporate assets of ¥16,769 million (\$202,036 thousand) and ¥16,670 million for the years ended March 31, 2011 and 2010, respectively, consisting principally of assets attributed to fundamental research and development, surplus funds held by the Company and assets attributed to the Company's administration departments.

(4) Information about products and services is as follows.

Millions of Yen				Thousands of U.S. Dollars				
2011				2011				
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Genetic Engineering Research	Gene Medicine	AgriBio	Total
Sales to external customers	¥15,882	¥493	¥2,361	¥18,737	\$191,349	\$5,939	\$28,445	\$225,746

(5) Information about geographical areas is as follows.

(a) Sales

Millions of Yen						
2011						
Japan	U.S.A.	China	Asia (except for China)	Europe	Other	Total
¥11,549	¥2,926	¥2,000	¥788	¥1,313	¥159	¥18,737

Thousands of U.S. Dollars						
2011						
Japan	U.S.A.	China	Asia (except for China)	Europe	Other	Total
\$139,144	\$35,253	\$24,096	\$9,493	\$15,819	\$1,915	\$225,746

(b) Property, plant and equipment

Millions of Yen					
2011					
Japan	U.S.A.	China	Asia (except for China)	Europe	Total
¥8,476	¥227	¥2,029	¥146	¥9	¥10,889

Thousands of U.S. Dollars					
2011					
Japan	U.S.A.	China	Asia (except for China)	Europe	Total
\$102,120	\$2,734	\$24,445	\$1,759	\$108	\$131,192

(6) Information about amortization of goodwill and goodwill at March 31, 2011 is as follows.

Millions of Yen						
2011						
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Reconciliations	Consolidated
Amortization of goodwill	¥ 136			¥ 136		¥ 136
Goodwill at March 31, 2011	1,501			1,501		1,501

Thousands of U.S. Dollars						
2011						
	Genetic Engineering Research	Gene Medicine	AgriBio	Total	Reconciliations	Consolidated
Amortization of goodwill	\$ 1,638			\$ 1,638		\$ 1,638
Goodwill at March 31, 2011	18,084			18,084		18,084

For the year ended March 31, 2010

Information about industry segments, geographical segments, and sales to foreign customers of the Group for the year ended March 31, 2010 is as follows:

(1) Industry segments

a. Sales and operating income

Millions of Yen					
	Genetic Engineering Research	Gene Medicine	AgriBio	Eliminations/Corporate	Consolidated
Sales to customers	¥16,689	¥ 392	¥2,243		¥19,325
Intersegment sales			1	¥ (1)	
Total sales	16,689	392	2,245	(1)	19,325
Operating expenses	12,538	1,958	2,828	1,447	18,772
Operating income (loss)	¥ 4,151	¥(1,565)	¥ (583)	¥(1,449)	¥ 553

b. Assets, depreciation and capital expenditures

Millions of Yen					
	Genetic Engineering Research	Gene Medicine	AgriBio	Eliminations/Corporate	Consolidated
Assets	¥19,643	¥1,924	¥5,413	¥16,670	¥43,651
Depreciation	661	115	374	79	1,230
Capital expenditures	670	168	147	83	1,069

Notes: 1. The Company operates in the following industries:

The industry of Genetic Engineering Research consists of the businesses of research reagents (for genetic engineering research, protein engineering research, cell biology research and glycobiology research), research instruments, and service business.

The industry of Gene Medicine consists of the businesses of medical devices, gene therapy related products, and service business.

The industry of AgriBio consists of the businesses of mushrooms, technical training of mushroom cultivation, ashitaba (a unique celery-like vegetable of the Angelica family), Agar, health food and cosmetics.

2. Eliminations/Corporate includes unallocated operating expenses of ¥1,449 million for the year ended March 31, 2010, consisting principally of fundamental research and development expenses and administrative expenses incurred by the administrative and accounting departments of the Company.

3. Eliminations/Corporate includes corporate assets of ¥16,670 million for the year ended March 31, 2010, consisting principally of assets attributed to fundamental research and development, surplus funds held by the Company, and assets attributed to the Company's administration departments.

(2) Geographical segments

The geographical segments of the Company and its subsidiaries for the year ended March 31, 2010 are summarized as follows:

Millions of Yen						
	Japan	Asia	North America	Europe	Eliminations/Corporate	Consolidated
Sales to customers	¥12,411	¥2,088	¥3,279	¥1,546		¥19,325
Intersegment sales	2,010	1,211	1,019		¥ (4,241)	
Total sales	14,421	3,300	4,298	1,546	(4,241)	19,325
Operating expenses	12,881	2,573	4,763	1,343	(2,790)	18,772
Operating income (loss)	¥ 1,539	¥ 726	¥ (465)	¥ 203	¥ (1,450)	¥ 553
Assets	¥15,498	¥5,648	¥5,952	¥ 723	¥15,828	¥43,651

Notes: 1. The countries belonging to geographical segments other than Japan are as follows:

Asia .....China and South Korea

North America .....United States of America

Europe .....France

2. Eliminations/Corporate includes unallocated operating expenses of ¥1,449 million for the year ended March 31, 2010, consisting principally of fundamental research and development expenses and administrative expenses incurred by the administrative and accounting departments of the Company.

3. Eliminations/Corporate includes corporate assets of ¥16,670 million for the year ended March 31, 2010, consisting principally of assets attributed to fundamental research and development, surplus funds held by the Company and assets attributed to the Company's administrative departments.

(3) Sales to foreign customers

Millions of Yen					
	Asia	North America	Europe	Other	Total
2010	¥2,401	¥3,181	¥1,570	¥15	¥7,169

Note: The countries belonging to the classifications above are as follows:

Asia .....China, South Korea, Taiwan, etc.

North America .....United States of America and Canada

Europe .....France, Germany, United Kingdom, etc.

Other .....Countries in Oceania, Africa, and South America

## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of  
Takara Bio Inc.:

We have audited the accompanying consolidated balance sheets of Takara Bio Inc. (the "Company") and subsidiaries as of March 31, 2011 and 2010, and the related consolidated statements of income for the years then ended, the consolidated statement of comprehensive income for the year ended March 31, 2011, and the related consolidated statements of changes in equity, and cash flows for the years then ended, all expressed in Japanese yen. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Takara Bio Inc. and subsidiaries as of March 31, 2011 and 2010, and the consolidated results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in Japan.

Our audits also comprehended the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made in conformity with the basis stated in Note 1. Such U.S. dollar amounts are presented solely for the convenience of readers outside Japan.

*Deloitte Touche Tohmatsu LLC*

June 10, 2011

# INVESTOR INFORMATION

## Corporate Data (As of March 31, 2011)

Trade Name	Takara Bio Inc.
Head Office	Seta 3-4-1, Otsu, Shiga 520-2193, Japan Telephone: +81-77-543-7212
Established	April 1, 2002
Issued Capital	¥9,068 million
Number of Employees of Takara Bio Group	1,078
URL	www.takara-bio.co.jp

## Inquiries

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Dragon Genomics Center	Sakura-cho 7870-15, Yokkaichi, Mie 512-1211, Japan
Sales Department	Nihonbashi 2-15-10, Chuo-ku, Tokyo 103-8232, Japan
Kusu Factory	Minamigomizuka 1350-2, Kusu-cho, Yokkaichi, Mie 510-0104, Japan

Consolidated Subsidiaries	Location	Issued Capital and Subscription	Line of Business
Takara Biotechnology (Dalian) Co., Ltd.	Dalian, People's Republic of China	¥2,350 million	Genetic engineering research
Takara Korea Biomedical Inc.	Seoul, Korea	₩3,860 million	Genetic engineering research
Takara Bio USA Holdings Inc.	Mountain View, U.S.A.	US\$70,857 thousand	Genetic engineering research
Clontech Laboratories, Inc.	Mountain View, U.S.A.	US\$83 thousand	Genetic engineering research
Takara Bio Europe S.A.S.	Saint-Germain-en-Laye, France	EUR600 thousand	Genetic engineering research
DSS Takara Bio India Pvt. Ltd.*	New Delhi, India	RP450 million	Genetic engineering research
Takara Biomedical Technology (Beijing) Co., Ltd.	Beijing, People's Republic of China	¥1,030 million	Gene medicine
Mizuho Nourin Co., Ltd.	Kyotanba-cho, Funai-gun, Kyoto, Japan	¥10 million	AgriBio
Takara Bio Farming Center Inc.	Osaki-cho, Soh-gun, Kagoshima, Japan	¥3 million	AgriBio
KINOKO CENTER KIN INC.	Okinawa, Japan	¥5 million	AgriBio

\* became a subsidiary of Takara Bio Inc., in June 2011.

## Investor Information (As of March 31, 2011)

Common Stock	
Authorized Shares	1,000,000 shares (As of April 1, 2011: 400,000,000 shares)
Issued and Outstanding	282,289 shares (As of April 1, 2011: 112,915,600 shares)
Number of Shareholders	17,447
Major Shareholder	Takara Holdings Inc. (70.8% equity owned)
Stock Listing	Tokyo Stock Exchange Mothers (securities code number: 4974)
Annual Meeting of Shareholders	Every June
Record Date	<ul style="list-style-type: none"> <li>Record date for shareholders entitled to vote March 31</li> <li>Record date for shareholders entitled to receive payment of dividends March 31</li> <li>Record date for shareholders entitled to receive payment of interim dividends September 30</li> <li>Other record date (if necessary) A date posted in advance</li> </ul>
Transfer Agent and Registrar	Mizuho Trust & Banking Co., Ltd. Yaesu 1-2-1, Chuo-ku, Tokyo, Japan
Transfer Agent Office	Mizuho Trust & Banking Co., Ltd., Osaka Branch, Stock Agency Transfer Department, Sonezaki 2-11-16, Kita-ku, Osaka, Japan
Inquiries to Transfer Agent and Registrar	Mizuho Trust & Banking Co., Ltd., Stock Agency Transfer Department, Izumi 2-8-4, Suginami-ku, Tokyo 168-8507, Japan, Telephone: 0120-288-324 (toll free, within Japan only)

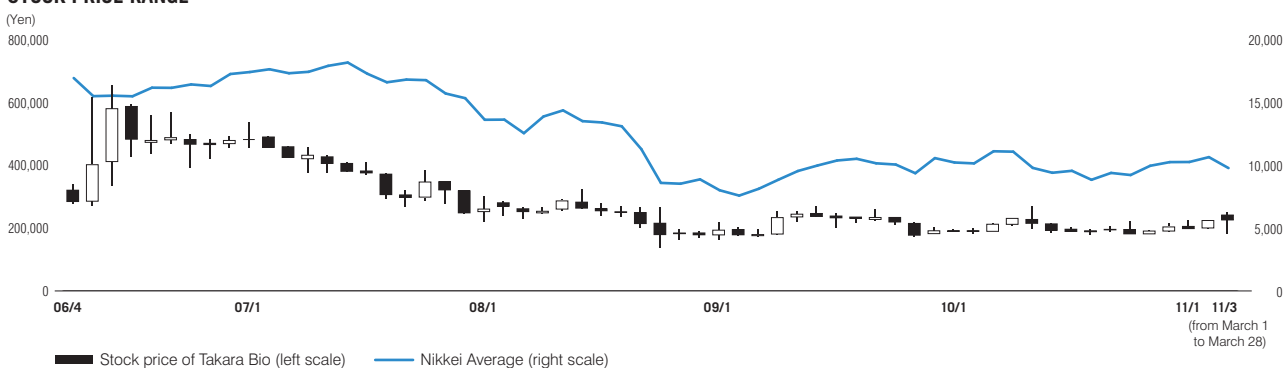
## Share Split and Change in Share-Trading Unit

In order to enhance the liquidity of its shares and broaden its investor base, the Company adopted a share-split and share-trading-unit system, summarized below.

- Share-split ratio: 400 shares for 1 share
- Share-trading unit: 100 shares
- Common stock issued and outstanding before split: 282,289 shares (March 31, 2011)
- Increase in number of shares due to split: 112,633,311 shares
- Common stock issued and outstanding after split: 112,915,600 shares (April 1, 2011)
- Common stock authorized shares after split: 400,000,000 shares
- Effective date: April 1, 2011

As a result of adopting this share-split and share-trading-unit system, the substantive investment unit became one quarter of the previous investment unit.

## STOCK PRICE RANGE



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## **TAKARA BIO INC.**

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Printed in Japan using vegetable oil ink.