

# Report on Survey of Domestic Bioindustry based on 2012

2014. 4.

MINISTRY OF TRADE, INDUSTRY & ENERGY  
Korea Biotechnology Industry Organization



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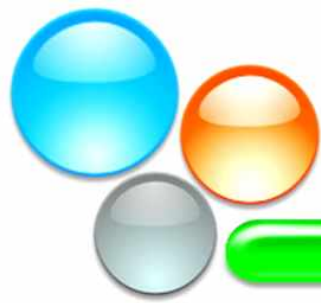
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# I. Survey Overview



# 1 Survey Overview

## A. Data Sources

- Division of Bio-nano, Ministry of Trade, Industry and Energy ([www.motie.go.kr](http://www.motie.go.kr))
- Statistical Sources : Korea Biotechnology Industry Organization ([www.koreabio.org](http://www.koreabio.org))

## B. Type of Statistics and Authorized Number

- Type of Statistics : General·Survey Statistics
- Authorized Number: No. 11515
- Authorized Date : October 30th, 2003

## C. Survey Period

- Survey Baseline Date: December 31, 2012
- Targeted Survey Period : January 1, 2012 ~ December 31, 2012
- Conducting Survey Period : September 10, 2013 ~ February 21, 2014

## D. Scope

- Based on 'classification scheme of bioindustry (KS J 1009, recognized by Korean Agency for Technology and Standards, Ministry of Trade, Industry and Energy on January 2008)' which established the scope and definition of the domestic biotechnology and bioindustry in the survey baseline year, the scope of the survey refers to domestic businesses engaged in the activities related to biotechnology. The activities related to biotechnology refers to the following.
  - Using biotechnology as the main technology in the research and development phases, although it uses non-biotechnology in the production phase
  - Using biotechnology in the manufacturing, production and service (including research and development) phases
  - Producing machine, equipment, or plant that are used in the biotechnological process of the research and development phase or

- the production phase
- Selling the above products after importing
- ※ The survey includes companies resulted in sales through the activities stated above as well as companies pushing forward the research development in the survey baseline year.

## E. Survey Targets

- The survey primarily selected bioindustry's fact-finding companies of 2011 among domestic companies falling into the range of the survey as survey targets. The survey then selected corresponding companies using the bio cluster-related companies per geography of December, 2012, other registered company data of Korea Biotechnology Industry Organization, and company yearbooks.

## F. Survey Units

- The survey units refers to companies that sell products or services which went through the production process of value-adding after the assembled capital equipment or raw materials were bought under the control of the entrepreneur.
- The survey units include public enterprises (state-owned enterprises, public enterprises), public - private companies, the private companies (private enterprises, collective enterprises, partnership, joint venture, anonymous company, Co., Ltd., Co., Ltd., co-operatives).
- In case the company has more than two businesses, the survey unit included the sum of the corresponding business' results and received the responses based on the bioindustry results among the overall industrial activities.

## G. Methodology and Approach

- Survey Methodology : Via mail, fax, e-mail, telephone, face-to-face interview
- Survey Approach : Researcher → Research Company → Korea

Biotechnology Industry Organization → Ministry of Trade, Industry and Energy

## H. Announcement of Results

- Announcement Period : Once a year
- Form of Announcement : Publication of the Report on Fact Finding Survey of Domestic Bioindustry

## 2 Background and Purpose

- Ministry of Trade, Industry and Energy and Korea Biotechnology Industry Organization have been conducting fact finding survey of domestic bioindustry since 2003 to build groundwork for economic analysis, international comparison and establishment of related nurturing policies through analyzing overall status of bioindustry and its actual condition.
- The 'Report on Fact Finding Survey of Domestic Bioindustry' that started its survey conduct from September, 2013 aims to increase the successful rate as complete enumeration survey and to grasp more accurate status of domestic bioindustry.
- This survey aims to analyze bioindustry's economic feasibility through grasping sales and financial status and to establish bio-related nurturing policies through studying accurate actual condition of domestic bioindustry.
- Ministry of Trade, Industry and Energy and Korea Biotechnology Industry Organization aims to contribute to the development of domestic bioindustry through the results of this survey.

## 3 Methodology

<b>Target</b>	Company representatives or managers in Bioindustry such as Biopharmaceutical · Biochemical · Biofood · Bioenvironmental · Bioelectronics
<b>Area</b>	Nation-wide(17 areas including Seoul and 6 Metropolitan cities)
<b>Methodology</b>	Research was conducted via mail, fax, e-mail, telephone, face-to-face interview by researcher
<b>Data-mining tool</b>	Structured Questionnaire
<b>Size of population</b>	1,029 Companies (Among primarily selected 1,112 companies, 83 closed-down)
<b>Size of valid sample</b>	958 Companies(93.1% of the population)

## 4

## Contents

Category	Main Contents of the Survey
<b>Company Information</b>	<ul style="list-style-type: none"> <li>- Name of Company, Name of Representative</li> <li>- Business Registration Number, Corporate-parent (Group) Name</li> <li>- Phone, Establishment Date</li> <li>- Address</li> <li>- Respondent Information</li> </ul>
<b>General Status</b>	<ul style="list-style-type: none"> <li>- Capital, Capital Ratio of Net Worth</li> <li>- Number of Workers</li> <li>- Existence of exclusive business, type of company, place of business</li> <li>- Items in the income statement (sales, cost of goods sold, selling expenses &amp; administrative expenses, tax, etc)</li> </ul>
<b>Status of Bio Industry</b>	<ul style="list-style-type: none"> <li>- Core business</li> <li>- Manpower status</li> <li>- R&amp;D cost and Facility Investment cost</li> <li>- Cooperation with Other Organizations</li> <li>- Phase of Growth</li> <li>- Period Resulted in Sales</li> <li>- Product, Service, Commerce Technology (Resulted in Sales, Export·Import)</li> </ul>

## 5 Terminology

### A. General Status

- Selected Companies
  - ① Venture Company : Refers to companies that are selected for meeting the requirements of the venture capital investment, investment in research and development, and companies developing new technologies and technology assessment companies according to 'Act on Special Measures for the Promotion of Venture Businesses'.
  - ② INNO-BIZ : Refers to companies that are selected for Small and Medium Business Administration's 'Fostering Business for technology-innovative (INNO-BIZ) Small and Medium Businesses'.
  - ③ Listed Company : Refers to companies that meet the listing requirements which are being able to sell the issued stocks in the Kosdaq market or the stock market.
- Capital : Refers to the current amount of capital that is paid by the corporation (headquarter) until December 31, 2012.
- Capital Ratio of Net Worth : Refers to the ratio of equity capital (total amount of capital-liabilities) on the total capital (=total amount of capital+liabilities=total assets).

### B. Manpower Status

- Received responses from three groups among bioindustry workers: research, production, and others including sales/administrative.
  - ① Research : Refers to research and development manpower in bioindustry.
  - ② Production : Refers to manpower engaged in production, facilities and quality management in bioindustry. (excluding manpower

in research center)

- ③ Others including sales/administrative : Refers to all manpower except research and production manpower in bioindustry.

## C. R&D and Sales

- R&D Cost : Refers to company's total cost spent in research activities to develop new products or new technology for the past year of 2012. It refers to sales cost in income statement and manufacturing statement, ordinary development expense and investment cost for management, land and equipment acquisition cost related to R&D in balance sheet.
  - ① R&D Cost : Includes self R&D cost (labor costs, material costs and other expenses), commissioned research and development costs, cost for technology implementation
  - ② Facility Investment Cost related to R&D : Includes machinery, land and building acquisition cost related to R&D
  
- Resulting in Sales
  - ① Selling complete product that was produced in the business
  - ② Selling complete product which was outsourced by other businesses using raw material or half-finished products
  - ③ Refers to providing services and sales resulting from transfer of technology. It includes all the results of domestic sales and export activities.

## D. Classification Scheme of Bioindustry and Biotechnology

### 1) Classification Scheme of Bioindustry

- In case of classification scheme of bioindustry, the Korean Agency for Technology and Standards established national standard KS J 1009(Bioindustry Classification Code) on January 31, 2008 by reflecting

the business results of Ministry of Trade, Industry and Energy's 'Building groundwork for standardization of biotechnology and industrial products' and the second detail topic 'Building standard classification scheme of bioindustry/biotechnology and analyzing structure of the bioindustry'.

### <Overview of Bioindustry's Classification Scheme>

#### ■ Purpose of Classification

- To clarify the scope of bioindustry
  - Defined companies that uses biotechnology in the research and development, manufacturing, production, and service phases
- To propose standardized evidences that can be used for bioindustry-related statistics and institutions without confusion
  - Creating industrial statistics such as company profits created from using biotechnology
- To build groundwork for analysis such as economic structure, industrial structure, and correlation with other industries
- To secure the connectivity with the classification scheme of international bioindustry
  - Creating groundwork for comparing and analyzing the statistical data of the international bioindustry

#### ■ Target and Standard of Classification

- Industrial activities conducted by companies using biotechnology
- Characteristics of products (produced goods or provided service) which use biotechnology in the research and development, production and service phases
  - The function and the market of the products

#### ■ Classification Scheme

- Consisted of 9 upper classifications and 51 middle classifications
  - The upper classifications are categorized by KS J 1009(Bioindustry Classification Code)
  - The middle classifications are categorized by goods sold using biotechnology or provided service using biotechnology. These are categorized according to their correlation with industrial activities of corresponding upper classification.



&gt;&gt; &lt;Table 1-1&gt; Classification Scheme of Bioindustry

Code	Name of Industrial Classification
<b>1</b>	<b>Biopharmaceutical Industry</b>
1010	Antibiotics
1020	Anticancer medications
1030	Vaccines
1040	Hormones
1050	Immunotherapeutics
1060	Hemotherapeutics
1070	Growth factors
1080	New therapeutics(ex. gene therapeutics, cell therapy, cloned organs, etc)
1090	Diagnostic kits
1100	Animal medications
1000	Other biopharmaceuticals
<b>2</b>	<b>Biochemical Industry</b>
2010	Biopolymers
2020	Industrial enzymes and reagents
2030	Enzymes and reagents for research
2040	Biocosmetics and home & personal care chemicals
2050	Biological agrochemicals and fertilizers
2000	Other biochemicals
<b>3</b>	<b>Biofood Industry</b>
3010	Functional health foods
3020	Amino acids
3030	Food additives
3040	Fermented foods
3050	Feed additives
3000	Other biofoods
<b>4</b>	<b>Bioenvironmental Industry</b>
4010	Microbial treatment agents
4020	Microbe-immobilized materials and equipments
4030	Bioenvironmental agents and systems
4040	Measuring apparatus for environmental pollution(service for pollution assessment)
4000	Other bioenvironmental productions and services

&gt;&gt; &lt;Table 1-1&gt; Classification Scheme of Bioindustry(Cont'd)

Code	Name of Industrial Classification
<b>5</b>	<b>Bioelectronics Industry</b>
5010	DNA chips
5020	Protein chips
5030	Cell chips
5040	Biosensors
5050	BioMEMS
5000	Other bioelectronics
<b>6</b>	<b>Biochemical Industry</b>
6010	Bioreactors
6020	Biomedical and diagnostic apparatuses
6030	Bioprocess and analysis equipments
6040	Plant and process design
6000	Other Bioprocesses and equipments
<b>7</b>	<b>Bioenergy and bioresource Industry</b>
7010	Biofuel
7020	Artificial seeds and seedlings
7030	Experimental animals
7040	Transgenic animals and plants
7000	Other bioenergy and bioresources
<b>8</b>	<b>Bioassay, bioinformatics and R&amp;D service Industry</b>
8010	Bioinformatics services
8020	Gene analysis services
8030	Protein analysis services
8040	R&D services (ex. drug development services, etc)
8050	Biosafety and efficacy evaluation services
8060	Diagnosis and preservation services
8000	Other bioassays, bioinformatics services

※ Refer to <Appendix 1> for the explanation on classification scheme

## 2) Classification Scheme of Biotechnology

- In case of the classification scheme of biotechnology, it provides 13 sectors biotechnology classification code according to KS J 1009(Bioindustry Classification Code) which is recognized as national standard by the Korean Agency for Technology and Standards in January 31, 2008. This reflected the business results of Ministry of Trade, Industry and Energy's 'Building groundwork for standardization of biotechnology and industrial products' and the second detail topic 'Building standard classification scheme of bioindustry/biotechnology and analyzing structure of the bioindustry'.

### <Overview of Biotechnology's Classification Scheme>

#### ■ Purpose of Classification

- To define the scope of the domestic bioindustry
- To analyze the usage condition of biotechnology in the domestic industry

#### ■ Target and Standard of Classification

- To establish the classification scheme of biotechnology used in industries
- To emphasize the technology used in the current bioindustry and the research development field
- To reflect the development vision of the future bioindustry and biotechnology

#### ■ Classification Scheme

- Consisted of 2 classifications (Upper · Middle). There are 13 upper classifications and 68 middle classifications.
- The upper classification includes the technological scope of the corresponding middle classifications. It is consisted of items that can easily implement and respond to specific details of technology.
- The middle classification limits the technological scope of the upper classification. It is consisted of items that can encompass related new technologies into the list-based definitions.
- Each of the 68 middle classification has corresponding list-based definition which explains the definition and the scope of the middle classification's technology. This list-based definition is consisted of items that allows duplication among middle classifications and focuses on technological names used in industry and the research and development field.

&gt;&gt; &lt;Table 1-2&gt; Classification Scheme of Biotechnology

Code	Name of Technological Classification
<b>A</b>	<b>Genetic engineering</b>
A1	Gene manipulation
A2	Gene expression and regulation
A3	Gene application
A4	Gene therapy
A0	Genetic engineering, n.e.s.
<b>B</b>	<b>Protein engineering</b>
B1	Protein structure analysis
B2	Protein function analysis
B3	Complex protein engineering
B4	Peptide engineering
B5	Protein application
B0	Protein engineering, n.e.s.
<b>C</b>	<b>Other macromolecule engineering</b>
C1	Lipid engineering
C2	Carbohydrate engineering
C0	Macromolecule engineering, n.e.s.
<b>D</b>	<b>Cell and tissue engineering</b>
D1	Stem cell therapy
D2	Bioenvironment regulation
D3	Functional biomaterial development
D4	Cell engineering
D5	Tissue engineering
D0	Cell and tissue engineering, n.e.s.
<b>E</b>	<b>Systems biology and bioinformatics</b>
E1	Gene sequence analysis
E2	Functional genomics
E3	Proteomics
E4	Bioinformatics
E0	Systems biology and bioinformatics, n.e.s.
<b>F</b>	<b>Metabolic engineering</b>
F1	Metabolite production
F2	Applications of metabolic engineering
F3	Understanding the metabolism and metabolic pathways
F0	Metabolic engineering, n.e.s.
<b>G</b>	<b>Bioprocess</b>
G1.	Fermentation engineering
G2.	Cell culture engineering
G3.	Biotransformation
G4.	Bioseparation engineering
G5.	Industrialization
G0.	Bioprocess, n.e.s.


&gt;&gt; &lt;Table 1-2&gt; Classification Scheme of Biotechnology(Cont'd)

Code	Name of Technological Classification
<b>H</b>	<b>Bioresource production and utilization</b>
H1	Plant resource utilization technology
H2	Animal resource utilization technology
H3	Microbial resource utilization technology
H4	Insect resource utilization technology
H5	Marine/fresh water organism technology
H6	Food engineering
H7	Biomaterializing technology
H8	Biodiversity conservation
H0	Bioresource production and utilization, n.e.s.
<b>I</b>	<b>Environmental biotechnology and bioenergy technology</b>
I1	Clean technology
I2	Environmental pollution control and management technology
I3	Bioenergy technology
I0	Environmental biotechnology and bioenergy technology, n.e.s.
<b>J</b>	<b>Nanobiotechnology</b>
J1	Nano-biodevice fabrication
J2	Nanobiomaterial technology
J3	Nano drug delivery system
J4	BioNEMS(Nanoelectromechanical systems, nano-LOC(lab-on-a-chip)
J0	Nanobiotechnology, n.e.s.
<b>K</b>	<b>Bioelectronics</b>
K1	Biosensor fabrication
K2	Bioelectronic device fabrication
K3	Biochip fabrication
K4	Microfluidics
K0	Bioelectronics, n.e.s.
<b>L</b>	<b>Biosafety and efficacy evaluation</b>
L1	Safety evaluation
L2	Safety management
L3	Environmental assessment
L4	Biohazard management
L5	Efficacy evaluation
L0	Biosafety and efficacy evaluation, n.e.s.
<b>M</b>	<b>Other biotechnology</b>
M1	Combinatorial biology
M2	Drug delivery
M3	Immunotherapy technology
M0	Biotechnology, n.e.s.

※ Refer to <Appendix 1> for the explanation on classification scheme

### **【Special Notes on Statistical Data】**

- 1) The missing values (no response, unsureness and none of the above) were excluded from the statistical calculation. (Statistical analysis was conducted based on 100% data with the missing value excluded.)
- 2) The sum of detail items and the total sum may not be identical as all the statistical values are rounded values.
- 3) This report calculates down to one place of decimals and related symbols are as the following:  
「—」 : none of the above  
「0.0」 : less than the unit
- 4) Any inquiries on this report should be contacted to the Industry Policy Office of the Korea Biotechnology Industry Organization. (Phone : (031)628-0026, 0040).



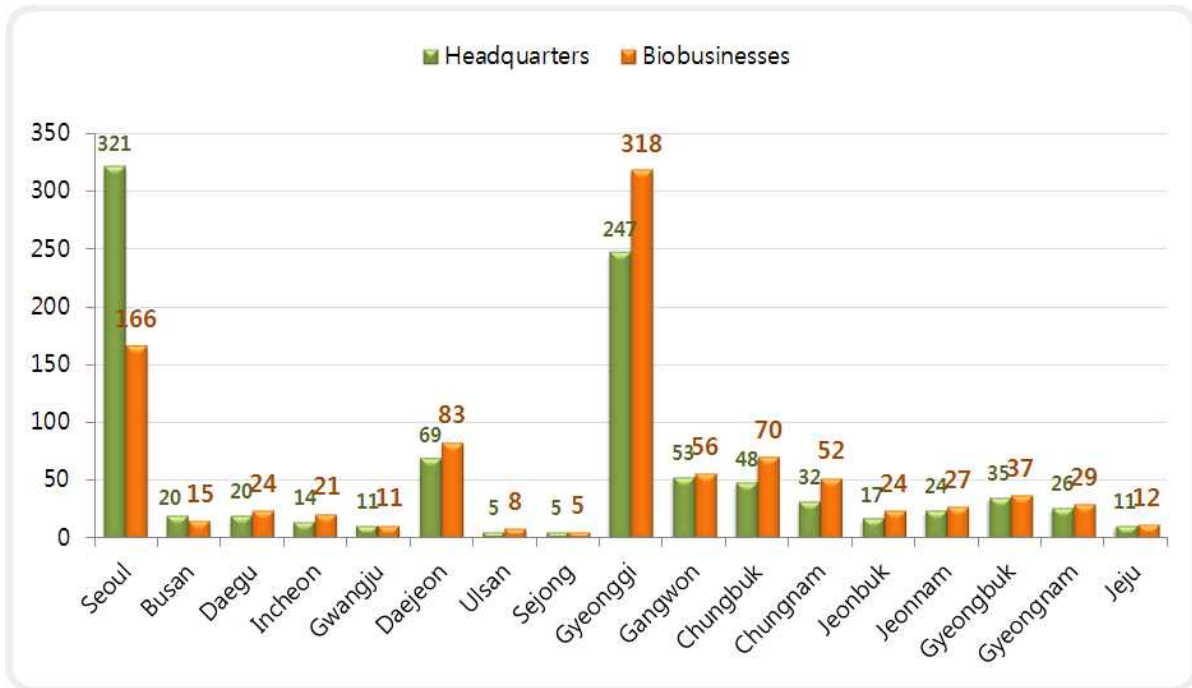
## II. Key Findings

# 1 General Status of Bioindustry

## A. Bioindustry's Distribution per Place

- Headquarters and biobusinesses of domestic bioindustry are mostly located in Seoul and Gyeonggi province. There are 321 headquarters in Seoul, and 318 biobusinesses in Gyeonggi.

<Figure 2-1> Bioindustry's Distribution per Place (Unit : number of companies)



\* Place of biobusinesses were analyzed according to the following order: factory > research center > headquarter.



&lt;Table 2-1&gt; Bioindustry's Distribution per Place

(Unit : number of companies)

Industrial Category	Total	Seoul	Busan	Daegu	Incheon	Gwangju	Daejeon	Ulsan	Sejong
Total	958	166	15	24	21	11	83	8	5
Biopharmaceutical industry	305	71	3	7	8	1	19	1	1
Biochemical industry	204	22	3	4	2	2	34	2	3
Biofood industry	199	16	7	4	5	3	5	-	1
Bioenvironmental industry	75	6	1	4	3	2	5	3	-
Bioelectronics industry	26	7	-	1	1	1	3	-	-
Bioprocess and equipment industry	70	20	-	4	1	1	7	-	-
Bioenergy and bioresource industry	24	-	1	-	1	-	3	2	-
Bioassay, bioinformatics and R&D service industry	55	24	-	-	-	1	7	-	-

Industrial Category	Gyeonggi	Gangwon	Chungbuk	Chungnam	Jeonbuk	Jeonnam	Gyeongbuk	Gyeongnam	Jeju
Total	318	56	70	52	24	27	37	29	12
Biopharmaceutical industry	136	8	24	14	5	1	3	3	-
Biochemical industry	47	13	14	14	5	13	16	5	5
Biofood industry	48	19	23	19	8	9	11	15	6
Bioenvironmental industry	26	8	4	1	4	1	2	5	-
Bioelectronics industry	5	6	-	1	-	-	1	-	-
Bioprocess and equipment industry	29	2	1	3	-	-	2	-	-
Bioenergy and bioresource industry	9	-	2	-	1	2	1	1	1
Bioassay, bioinformatics and R&D service industry	18	-	2	-	1	1	1	-	-

\* The result analyzed the results of 1 core business that was selected for each company.

○ TOP3 provinces for domestic bioindustry's businesses are as the following:

Biopharmaceutical Industry: Gyeonggi 44.6% > Seoul 23.3% > Chungbuk 7.9%

Biochemical Industry : Gyeonggi 23.0% > Daejeon 16.7% > Seoul 10.8%

Biofood Industry : Gyeonggi 24.1% > Chungbuk 11.6% > Kangwon,

Chungnam 9.5%

Bioenvironmental Industry : Gyeonggi 34.7% > Kangwon 10.7% > Seoul 8.0%

Bioelectronics Industry : Seoul 26.9% > Kangwon 23.1% > Gyeonggi 19.2%

Biochemical Industry : Gyeonggi 41.4% > Seoul 28.6% > Daejeon 10.0%

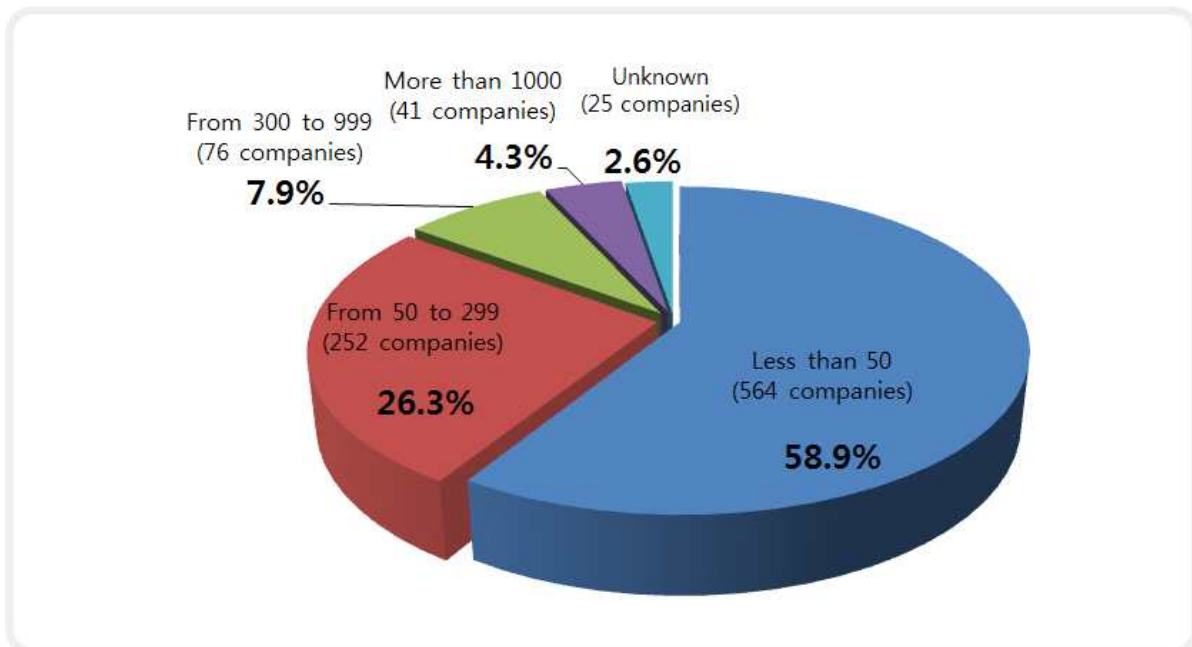
Bioenergy and bioresource Industry : Gyeonggi 37.5% > Daejeon 12.5% > Ulsan, Chungbuk, Jeonnam 8.3%

Bioassay, bioinformatics and R&D service Industry : Seoul 43.6% > Gyeonggi 32.7% > Daejeon 12.7%

## B. Bioindustry's Distribution per Size of Workers

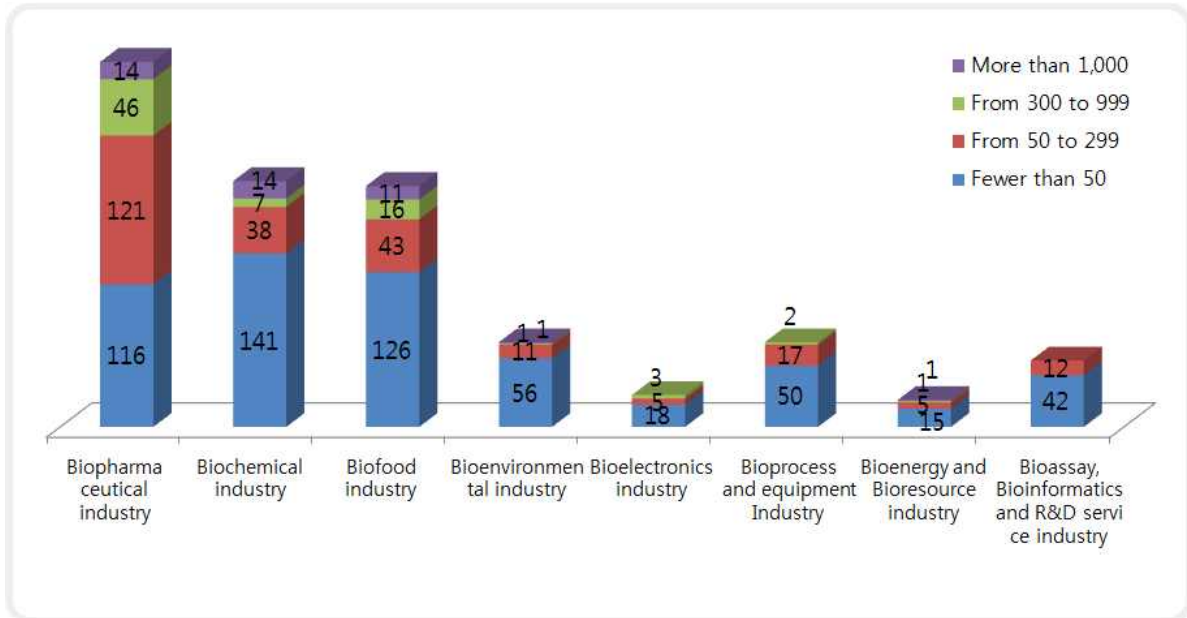
- There are 564 companies (58.9%) that belongs to 'less than 1~50 workers' among total size of workers.
- There are 41 companies (4.3%) that have more than 1,000 workers.

<Figure 2-2> Bioindustry's Distribution per Size of Workers



<Figure 2-3> Bioindustry's Size of Workers

(Unit : number of companies)



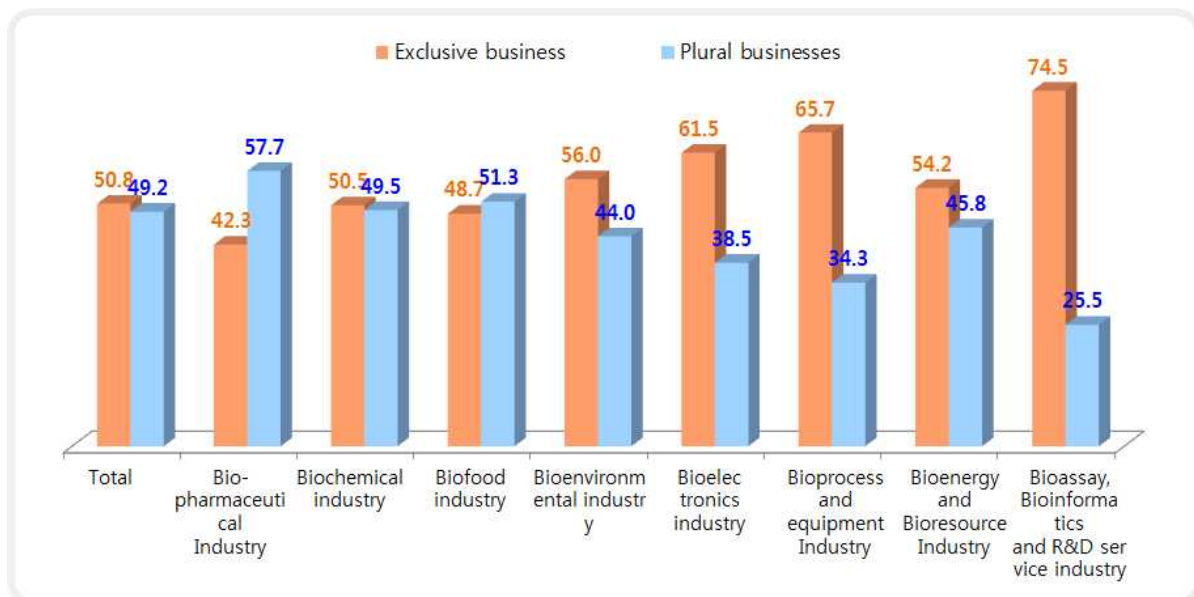
\* Companies that did not have information on the size of workers were excluded from the statistical data.

### C. Bioindustry's Distribution on the Existence of Other Businesses

- Bioindustry's existence of other businesses refers to the existence of factories, research centers or stores in other location.
- Companies that do not have factories, research center or stores in other location are categorized as 'exclusive business'. Companies that have factories, research centers or stores in other location are categorized as 'plural businesses'.
- Among 958 bioindustry companies, 487 companies (50.8%) are 'exclusive business' and 471 companies (49.2%) are 'plural businesses' according to the survey.

<Figure 2-4> Bioindustry's Existence of Other Businesses

(Unit : %)



## D. Bioindustry's Financial Analysis

- The total capital of bioindustry is surveyed as 14.1 billion won and the ratio of net worth is 51%.
- Companies in biochemical industry had higher average amount of capital reaching 30.5 billion won. Companies in Bioenvironmental, Biopharmaceutical, Biochemical and Biofood had higher value compared to other bioindustries with ratio of net worth reaching 50%.

<Table 2-2> Biotechnology Industry's Financial Standing Analysis by Category

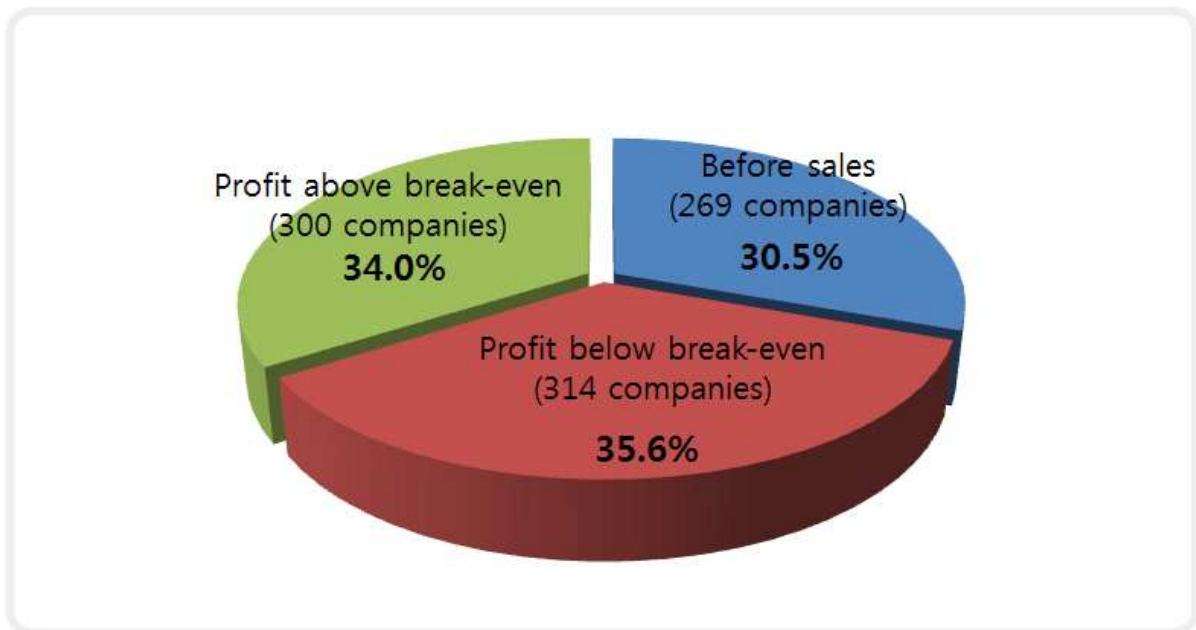
(Unit : %, million Won)

Industrial Category	No. of companies	Capital			Ratio of Net worth		
		Minimum	Maximum	Average	Minimum	Maximum	Average
<b>Total</b>	<b>958</b>	<b>1</b>	<b>1,488,993</b>	<b>14,073</b>	<b>-168</b>	<b>271</b>	<b>51</b>
Bio pharmaceutical industry	305	1	707,036	12,285	-52	100	53
Biochemical industry	204	1	1,488,993	30,503	-141	271	52
Biofood industry	199	5	625,562	14,421	-6	100	51
Bioenvironmental industry	75	30	10,846	1,289	0	100	55
Bioelectronics industry	26	50	6,953	2,146	-168	98	42
Bioprocess and equipment industry	70	40	32,694	2,122	0	100	48
Bioenergy and bioresource industry	24	3	167,456	12,046	-58	100	43
Bioassay, bioinformatics and R&D service industry	55	5	13,628	1,350	-156	100	35

## E. Type of Biobusiness Being Promoted in Bioindustry

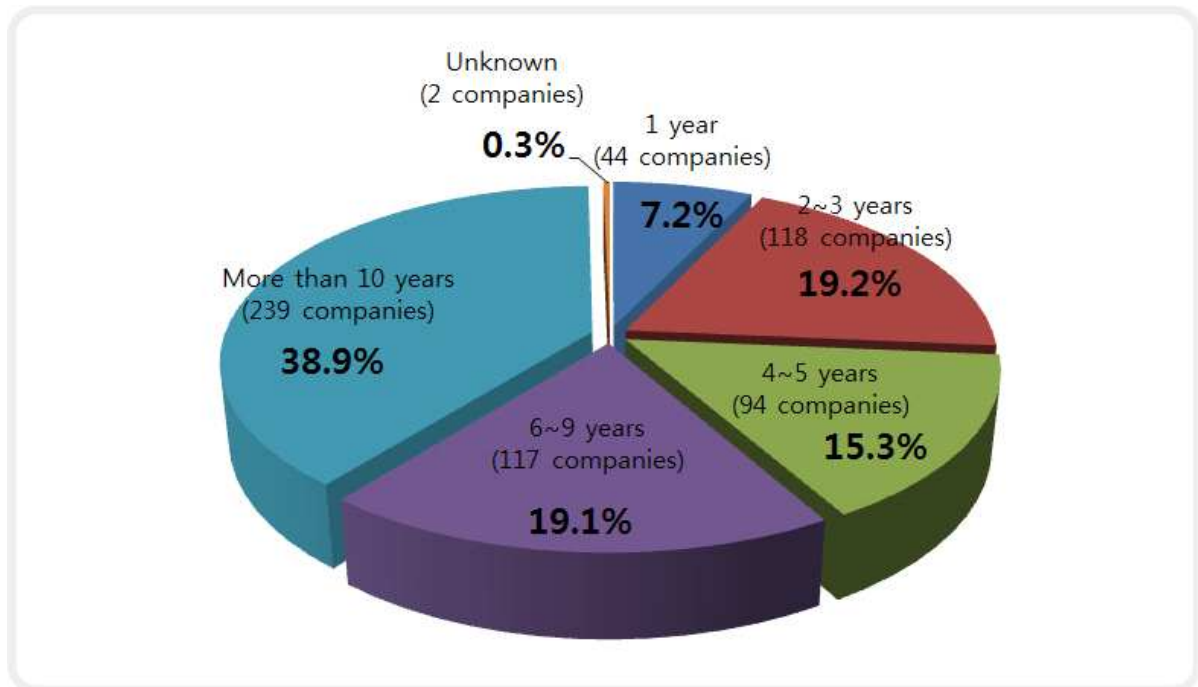
- The result for type of forwarded biobusiness includes responses from 883 companies out of 958 total participants, of which 75 were non-responses.
- Among 883 companies, 269 companies (30.5%) belonged to the phase of 'before sales' in 2012, and among 614 companies that resulted in sales, 314 companies which are almost half the number belonged to 'below BEP'.

<Figure 2-5> Type of Biobusiness Being Promoted in Bioindustry



- Among 614 companies that resulted in sales in 2012, 44 companies (7.2%) had their first sales in 2012.
- There are 239 companies (38.9%) that resulted in sales for more than 10 years.

<Figure 2-6> Bioindustry's Sales Period



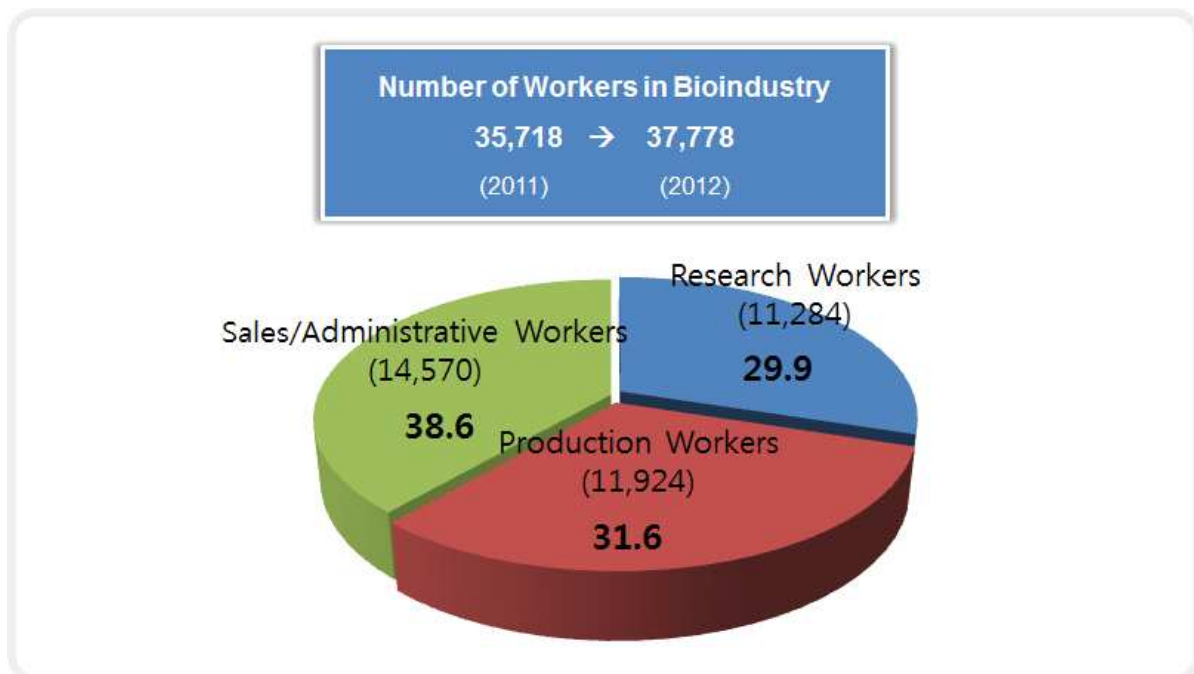
## 2 Manpower Status of Bioindustry

### A. Manpower Status of 2012

#### 1) Manpower Status per Category

- Among 958 domestic bioindustry companies in 2012, there was an increase of 2,060 workers compared to 2011, reaching 37,778 and there are average of 39.4 workers per company.
- Manpower of bioindustry is consisted of 11,284 research workers (29.9%), 11,924 production workers (29.8%), 14,570 sales/administrative workers (38.6%).

<Figure 2-7> 2012 Bioindustry's Distribution of Manpower





&lt;Table 2-3&gt; 2012 Bioindustry's Manpower Distribution

(Unit : number of companies, workers, %)

Industrial Category		No. of Companies	Research workers	Production workers	Sales/Administrative workers	Total	Distribution Ratio
Total	No. of Employees	958	11,284	11,924	14,570	37,778	100.0
	Distribution Ratio	100.0	29.9	31.6	38.6	100.0	
Biopharmaceutical industry		305	4,537	5,315	8,136	17,988	47.6
Biochemical industry		204	2,215	1,533	1,316	5,064	13.4
Biofood industry		199	1,838	3,315	2,950	8,103	21.4
Bioenvironmental industry		75	418	404	548	1,370	3.6
Bioelectronics industry		26	316	521	262	1,099	2.9
Bioprocess and equipment industry		70	406	445	450	1,301	3.4
Bioenergy and bioresource industry		24	412	269	336	1,017	2.7
Bioassay, bioinformatics and R&D service industry		55	1,142	122	572	1,836	4.9

&lt;Figure 2-8&gt; Bioindustry's Manpower Proportion of 2012

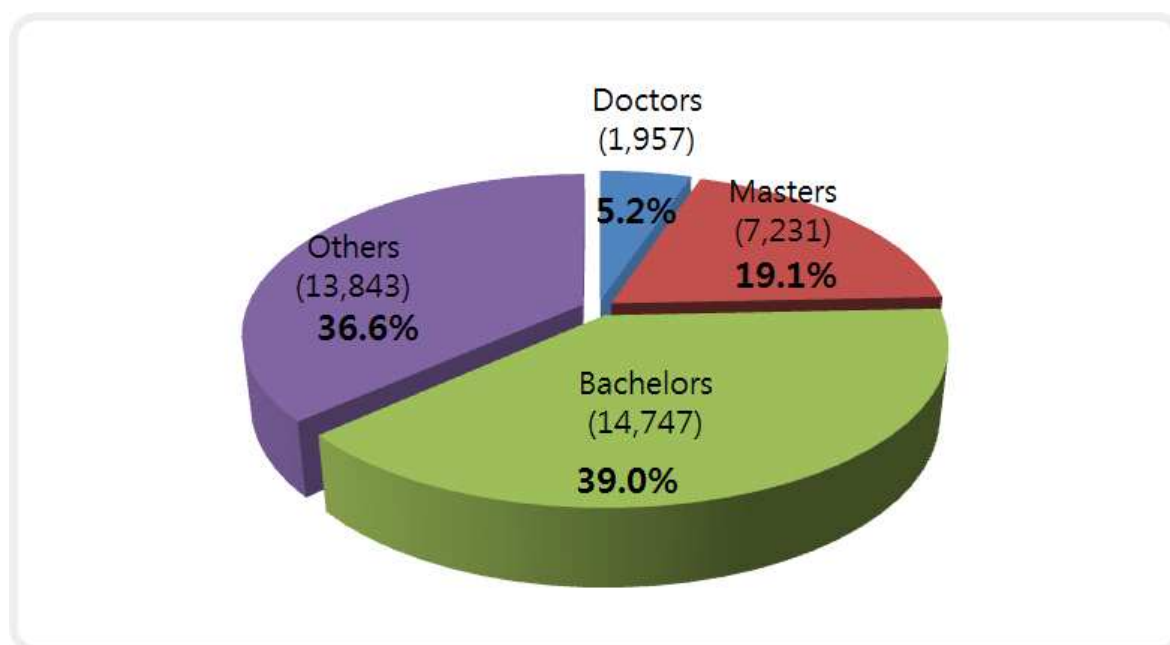
(Unit : %)



## 2) Manpower Status per Academic Degree

- Among bioindustry manpower in 2012, workers with bachelor's degree were the largest in number, reaching 14,747 people (39.0%). Workers with master's degree ranked second with 7,231 workers (19.1%), and workers with doctor's degree the last with 1,957 workers (5.2%).

<Figure 2-9> Bioindustry's Academic Degree Proportion of Workers of 2012

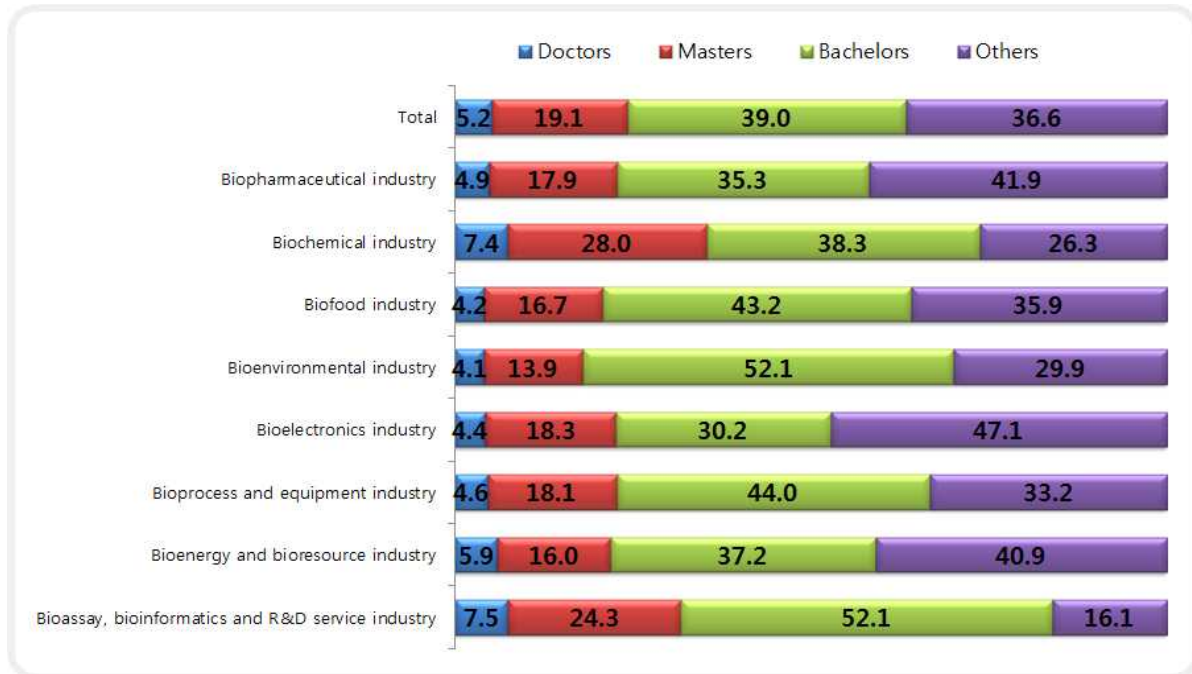


<Table 2-4> 2012 Bioindustry's Distribution of Academic Degree

(Unit : number of people, %)

Industrial Category		Doctor	Master	Bachelor	Others	Total	Distribution Ratio
Total	No. of Employees	1,957	7,231	14,747	13,843	37,778	100.0
	Distribution Ratio	5.2	19.1	39.0	36.6	100.0	
Bio pharmaceutical industry	N.O.E.	878	3,223	6,357	7,530	17,988	47.6
Biochemical industry	N.O.E.	377	1,419	1,938	1,330	5,064	13.4
Biofood industry	N.O.E.	341	1,351	3,498	2,913	8,103	21.4
Bioenvironmental industry	N.O.E.	56	191	714	409	1,370	3.6
Bioelectronics industry	N.O.E.	48	201	332	518	1,099	2.9
Bioprocess and equipment industry	N.O.E.	60	236	573	432	1,301	3.4
Bioenergy and bioresource industry	N.O.E.	60	163	378	416	1,017	2.7
Bioassay, bioinformatics and R&D service industry	N.O.E.	137	447	957	295	1,836	4.9

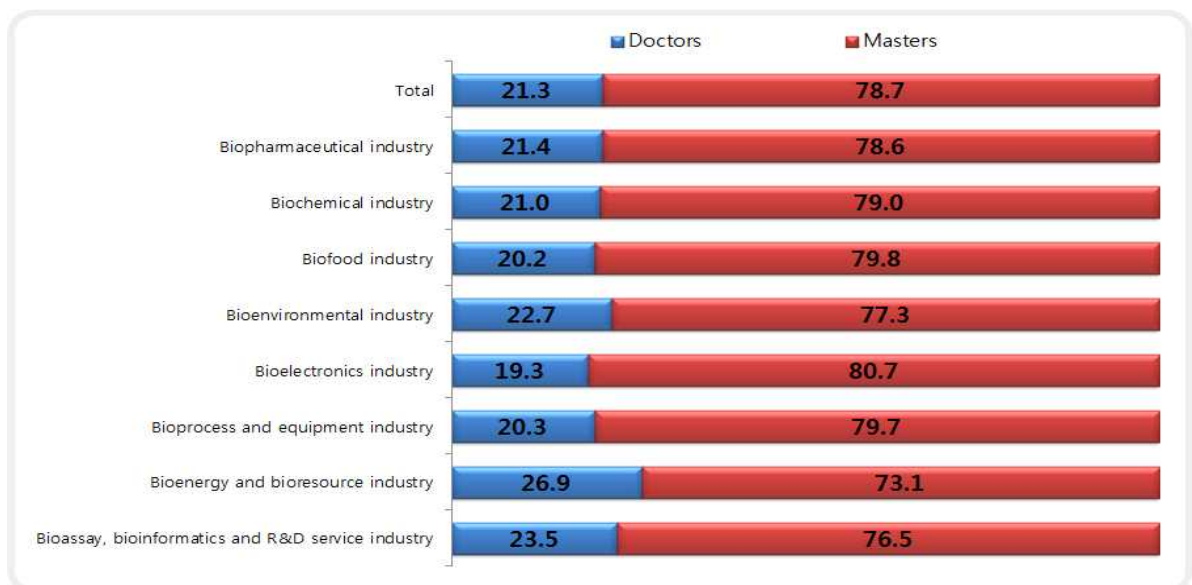
&lt;Figure 2-10&gt; Bioindustry's Academic Degree Proportion of 2012 (Unit : %)



- As a result of comparing the proportion of high-quality manpower such as master's degree and doctor's degree, it turned out that there are higher number of workers with doctor's degree in bioenergy and bioresource industry (26.9%) and bioassay, bioinformatics and R&D service industry(23.5%) than other bioindustries.

&lt;Figure 2-11&gt; Bioindustry's High-quality Manpower Proportion of 2012

(Unit : %)



## B. Recent Trend of Bioindustry Manpower Status

### 1) 2010~2012 Bioindustry's trend of academic degree of research·production manpower

#### ① Bioindustry's Trend of research·production manpower

- The manpower survey of domestic bioindustry based on 2010 additionally researched a new group of workers which is others including sales/administrative unlike 2009 survey, but this survey results were analyzed by only using the former data of research and production manpower before 2009 for time-series analysis.
- The research and production manpower of bioindustry in 2012 had an increase of 1,103 workers (5.0%) compared to 2011, reaching 23,208 workers.

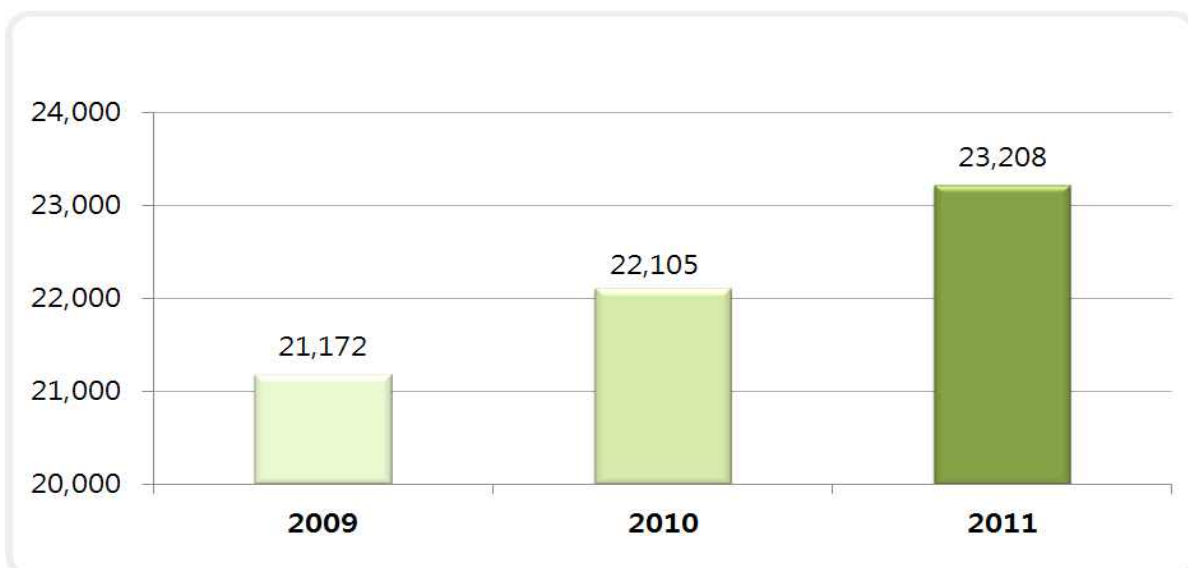
<Table 2-5> 2010~2012 Bioindustry's Change in Research·Production Manpower

(Unit : number of people, %)

Classification	2010	2011	2012	Annual Average Rate of change
No. of Employees	21,172	22,105	23,208	4.7
Rate of Change	-7.2	4.4	5.0	

<Figure 2-12> 2010~2012 Bioindustry's Trend of Research·Production Manpower

(Unit : number of people)



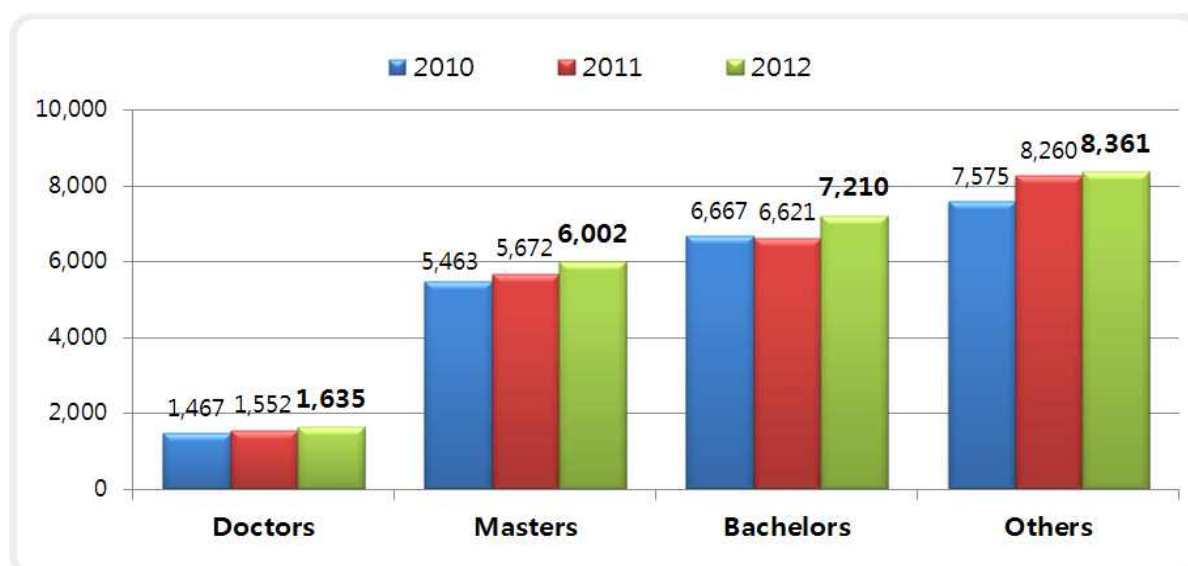
## ② Bioindustry's Trend in Academic Degree of Research·Production Manpower

- Compared to 2011, the proportion of bioindustry workers with bachelor's degree in 2012 increased slightly from 30.0% to 31.1% (1.1%p) and other workers' proportion decreased by -1.3%p.
- There is no significant difference between the proportion of workers with master's and doctor's degree in 2011 and 2012.

<Table 2-6> 2010~2012 Bioindustry's Trend in Academic Degree of Research·Production Manpower (Unit : number of people, %)

Degree	2010		2011		2012		Variation from the year before	
	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Rate of Change
Total	21,172	100	22,105	100	23,208	100	1,103	5.0
Doctor	1,467	6.9	1,552	7.0	1,635	7.0	83	5.3
Master	5,463	25.8	5,672	25.7	6,002	25.9	330	5.8
Bachelor	6,667	31.5	6,621	30.0	7,210	31.1	589	8.9
Others	7,575	35.8	8,260	37.4	8,361	36.0	101	1.2

<Figure 2-13> 2010~2012 Bioindustry's Trend in Academic Degree of Research·Production Manpower (Unit : number of people)



## 2) 2008~2012 Bioindustry's Trend in Academic Degree of Research·Production Manpower

### ① Bioindustry's Trend of Research·Production Manpower

- The degree of research and production manpower increase was large between 2008 and 2009. It then slowed down in 2010 and again picked up an upward trend in 2011.

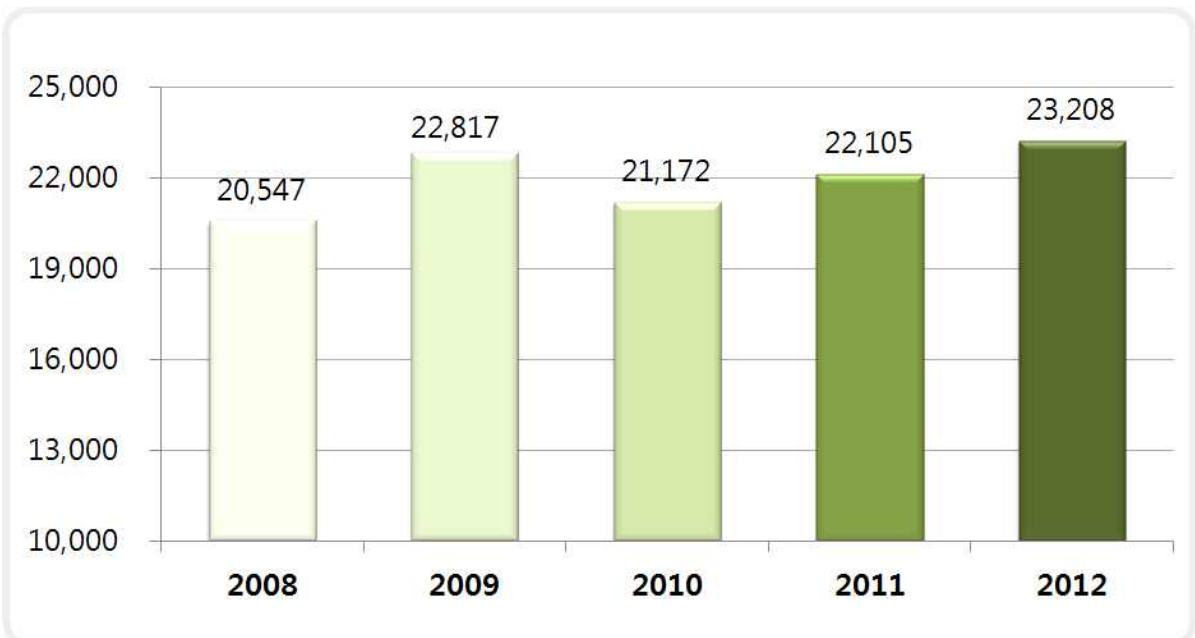
<Table 2-7> 2008~2012 Bioindustry's Change in Research·Production Manpower (%)

(Unit : number of people, %)

Classification	2008	2009	2010	2011	2012	Annual Average Rate of Change
No. of Employees	20,547	22,817	21,172	22,105	23,208	3.1
Rate of Change	1.5	11.0	-7.2	4.4	5.0	

<Figure 2-14> 2008~2012 Bioindustry's Trend of Research·Production Manpower

(Unit : number of people)



## ② Bioindustry's Trend in Academic Degree of Research·Production Manpower

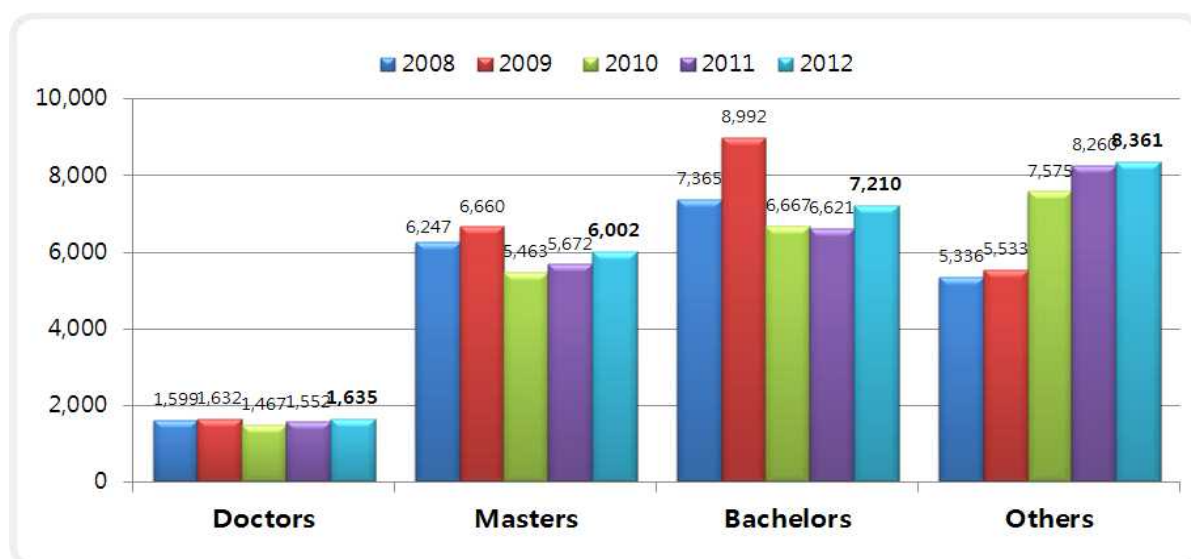
○ As for changes in academic degrees of research and production manpower between 2008 and 2012, those with doctorate and master's degrees increased slightly from 2010. Manpower with bachelor's degrees increased continuously until 2009, displayed a trend of decrease from 2010 and then picked up an upward trend in 2012.

○ Proportion of other workers' manpower increased since 2010.

<Table 2-8> 2008~2012 Bioindustry's Trend in Academic Degree of Research·Production Manpower (Unit : number of people, %)

Degree	2008		2009		2010		2011		2012		Variation from the year before	
	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Distribution Ratio	No. of Employees	Rate of Change
<b>Total</b>	<b>20,547</b>	<b>100</b>	<b>22,817</b>	<b>100</b>	<b>21,172</b>	<b>100</b>	<b>22,105</b>	<b>100</b>	<b>23,208</b>	<b>100</b>	<b>1103</b>	<b>5.0</b>
Doctor	1,599	7.8	1,632	7.2	1,467	6.9	1,552	7.0	1,635	7.0	83	5.3
Master	6,247	30.4	6,660	29.2	5,463	25.8	5,672	25.7	6,002	25.9	330	5.8
Bachelor	7,365	35.8	8,992	39.4	6,667	31.5	6,621	30.0	7,210	31.1	589	8.9
Others	5,336	26.0	5,533	24.2	7,575	35.8	8,260	37.4	8,361	36.0	101	1.2

<Figure 2-15> 2008~2012 Bioindustry's Trend in Academic Degree of Research·Production Manpower (Unit : number of people)





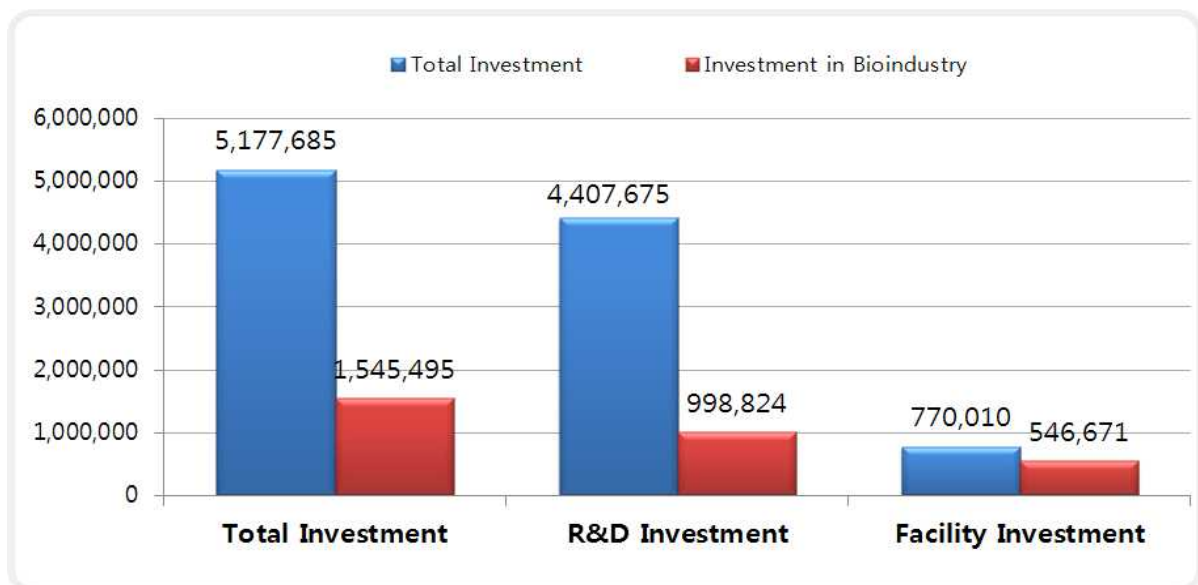
### 3 Investment Status of Bioindustry

#### A. Bioindustry's Investment Status of 2012

- The total amount of investment bioindustry companies made for the past year of 2012 reached 5 trillion and 117.7 billion won, and the investment cost on bioindustry turned out to be 29.8% of the total investment fee reaching 1 trillion and 545.5 billion won.
- The R&D cost in bioindustry turned out to be 22.7% of the total R&D cost reaching 998.8 billion won, and the facility investment cost in bioindustry took 71% of the total facility investment cost reaching 546.7 billion won.

<Figure 2-16> 2012 Total Investment cost and Investment in Bioindustry

(Unit: million Won)



- Among bioindustries, the total investment was highest in biopharmaceutical industry reaching 1 trillion and 144.8 billion won(74.1%) and then the following highest industries were biofood industry reaching 139.9 billion won(9.1%) and biochemical industry reaching 132.8 billion won(8.6%). These three core bioindustries took 91.7% of bioindustry's the total investment cost.



- Among bioindustries, the total R&D cost was highest in biopharmaceutical industry reaching 664.1 billion won(66.5%) and then the following highest industries were biofood industry reaching 123.0 billion won(12.3%) and biochemical industry reaching 111.7 billion won(11.2%). These three core bioindustries took 90.0% of bioindustry's the total R&D cost.
- Among bioindustry companies, the average amount of R&D cost was highest in biopharmaceutical industry reaching 2.2 billion won and then the following highest industries were bioenergy and bioresource industry with 0.8 billion won, bioelectronics industry with 0.7 billion won, biofood industry with 0.6 billion won.
- Among bioindustries, the total facility investment cost was highest in biopharmaceutical industry reaching 480.8 billion won(87.9%) and then the following highest industries were biochemical industry reaching 21.1 billion won(3.9%) and Bioassay, bioinformatics and R&D service industry reaching 19.6 billion won(3.6%). These three bioindustries took 90.0% of bioindustry's the total facility investment cost.
- Among bioindustry companies, the average amount of facility investment cost was highest in biopharmaceutical industry reaching 1.6 billion won and then the following highest industries were Bioassay, bioinformatics and R&D service industry with 0.4 billion won, biochemical industry with 0.1 billion won.

<Table 2-9> 2012 Bioindustry's Size of Investment (Unit : number of companies, million Won)

Industrial Category	No. of companies	R&D Investment		Facility Investment		Total Investment	
		Total	Average	Total	Average	Total	Average
<b>Total</b>	<b>958</b>	<b>998,824</b>	<b>1,042.6</b>	<b>546,671</b>	<b>570.6</b>	<b>1,545,495</b>	<b>1,613.3</b>
Biopharmaceutical industry	305	664,052	2,177.2	480,766	1,576.3	1,144,818	3,753.5
Biochemical industry	204	111,739	547.7	21,064	103.3	132,803	651.0
Biofood industry	199	123,032	618.3	16,836	84.6	139,868	702.9
Bioenvironmental industry	75	11,348	151.3	3,173	42.3	14,521	193.6
Bioelectronics industry	26	17,646	678.7	1,618	62.2	19,264	740.9
Bioprocess and equipment industry	70	21,164	302.3	1,996	28.5	23,160	330.9
Bioenergy and bioresource industry	24	18,435	768.1	1,602	66.8	20,037	834.9
Bioassay, bioinformatics and R&D service industry	55	31,408	571.1	19,616	356.7	51,024	927.7

## B. Recent Trend of Investment Status

### 1) 2010~2012 Bioindustry's Trend of Investment

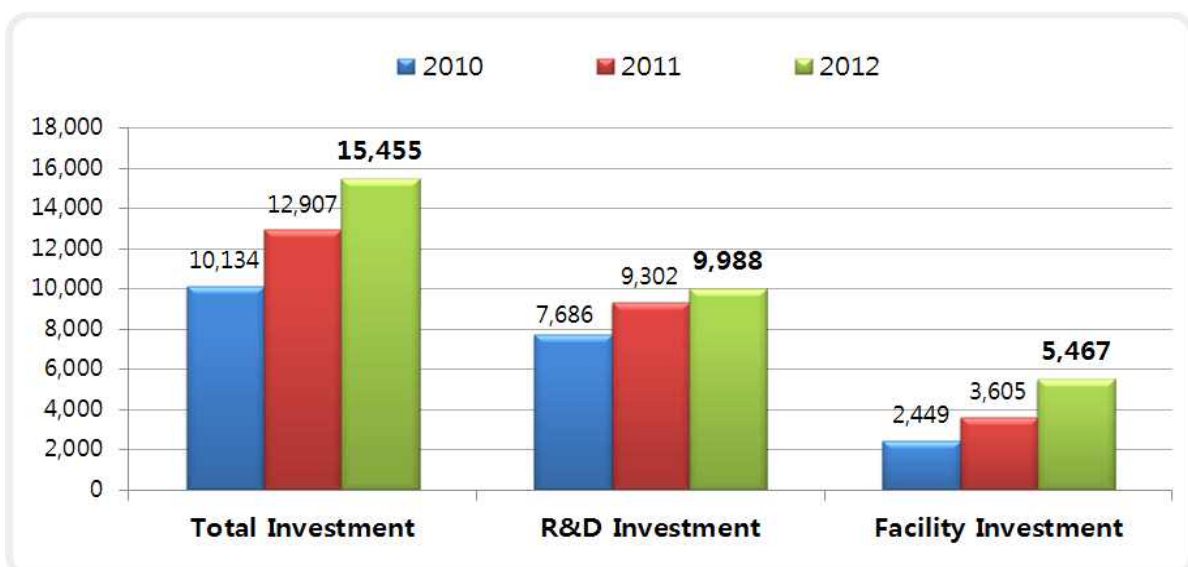
- The total investment cost in bioindustry decreased from 1 trillion and 180.9 billion won in 2009 to 1 trillion and 134 billion won in 2010, but started to increase to 1 trillion and 290.7 billion won in 2011.
- The total investment cost in bioindustry increased by 254.7 billion won in 2012 compared to 2011, reaching 1 trillion and 290.7 billion won.

<Table 2-10> 2010~2012 Bioindustry's Trend of Investment

(Unit : one hundred million Won, %)

Classification		2010	2011	2012	Annual Average Rate of Change
Total Investment	Amount	10,134	12,907	15,455	23.5
	Rate of Change	-14.2	27.4	19.7	
R&D Investment	Amount	7,686	9,302	9,988	14.0
	Rate of Change	-12.3	21.0	7.4	
Facility Investment	Amount	2,449	3,605	5,467	49.4
	Rate of Change	-19.7	47.2	51.6	

<Figure 2-17> 2010~2012 Bioindustry Investment Trend (Unit : one hundred million Won)



- Biopharmaceutical industry showed the highest increase with 32.8% in the 2012 according to bioindustry's total size of the investment variation compared to 2011.
- Bioprocess and equipment industry also showed high growth rate with more than 10%.

<Table 2-11> 2010~2012 Bioindustry's Trend in Overall Size of Investment

(Unit : million Won, %)

Industrial Category	2010		2011		2012		Variation from the year before	Annual Average Rate of Change
	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio		
<b>Total</b>	<b>1,013,429</b>	<b>100.0</b>	<b>1,290,750</b>	<b>100.0</b>	<b>1,545,495</b>	<b>100.0</b>	<b>19.7</b>	<b>23.5</b>
Biopharmaceutical industry	648,689	64.0	903,350	70.0	1,144,818	74.1	26.7	32.8
Biochemical industry	115,764	11.4	120,875	9.4	132,803	8.6	9.9	7.1
Biofood industry	122,913	12.1	144,887	11.2	139,868	9.1	-3.5	6.7
Bioenvironmental industry	15,966	1.6	14,358	1.1	14,521	0.9	1.1	-4.6
Bioelectronics industry	18,249	1.8	20,298	1.6	19,264	1.2	-5.1	2.7
Bioprocess and equipment industry	17,675	1.7	22,634	1.8	23,160	1.5	2.3	14.5
Bioenergy and bioresource industry	25,799	2.5	26,666	2.1	20,037	1.3	-24.9	-11.9
Bioassay, bioinformatics and R&D service industry	48,374	4.8	37,682	2.9	51,024	3.3	35.4	2.7

- In comparison to 2011, R&D cost for 2012 increased by 34.7% in bioassay, bioinformatics and R&D service industry, 15.7% in biochemical industry and 8.3% in biopharmaceutical industry.
- Biopharmaceutical industry showed the highest increase in the facility investment cost of 2012 compared to 2011, reaching 75.4%. Bioassay, bioinformatics and R&D service industry also showed a high rate with more than 30% increase. However, 5 industries among the total 8 bioindustries had a decreased in the investment cost compared to last year.

<Table 2-12> 2010~2012 Bioindustry's Trend of R&D and Facility Investment Cost

(Unit : million Won, %)

Industrial Category	2010		2011		2012		Variation from the year before		Annual Average Rate of Change	
	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility
<b>Total</b>	<b>768,564</b>	<b>244,864</b>	<b>930,245</b>	<b>360,505</b>	<b>998,824</b>	<b>546,671</b>	<b>7.4</b>	<b>51.6</b>	<b>14.0</b>	<b>49.4</b>
Biopharmaceutical industry	493,071	155,618	629,244	274,106	664,052	480,766	5.5	75.4	16.1	75.8
Biochemical industry	86,363	29,401	96,615	24,260	111,739	21,064	15.7	-13.2	13.7	-15.4
Biofood industry	95,154	27,759	113,589	31,299	123,032	16,836	8.3	-46.2	13.7	-22.1
Bioenvironmental industry	12,527	3,439	11,396	2,962	11,348	3,173	-0.4	7.1	-4.8	-3.9
Bioelectronics industry	14,543	3,706	18,163	2,135	17,646	1,618	-2.8	-24.2	10.2	-33.9
Bioprocess and equipment industry	15,772	1,903	19,961	2,673	21,164	1,996	6.0	-25.3	15.8	2.4
Bioenergy and bioresource industry	17,339	8,460	17,964	8,702	18,435	1,602	2.6	-81.6	3.1	-56.5
Bioassay, bioinformatics and R&D service industry	33,796	14,578	23,314	14,368	31,408	19,616	34.7	36.5	-3.6	16.0

## 2) 2008~2012 Bioindustry's Trend of Investment

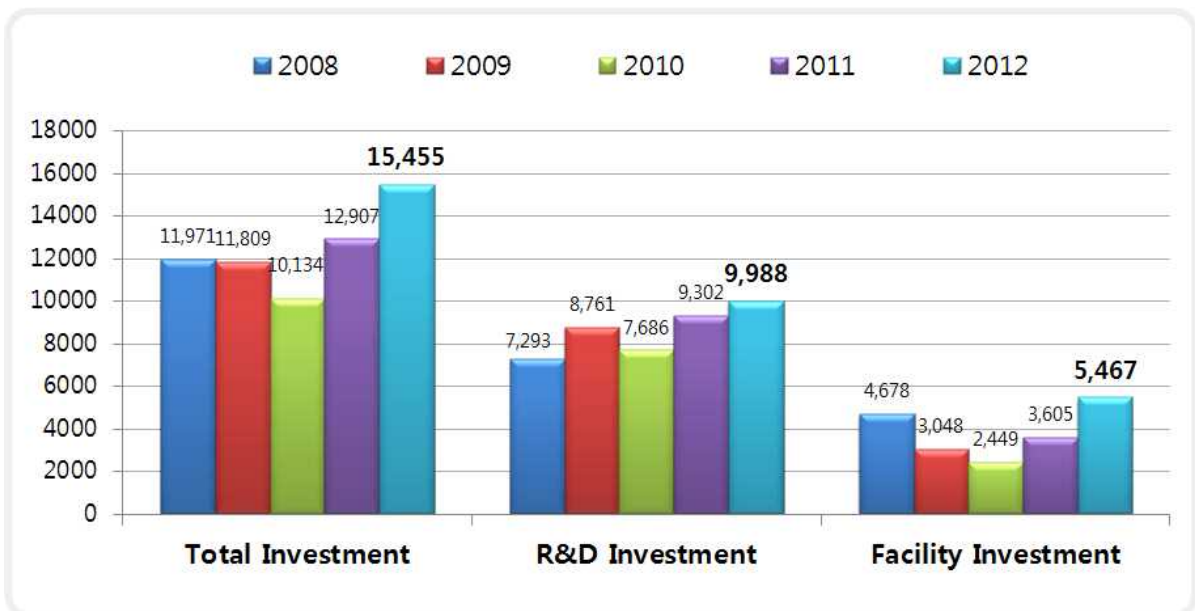
- The total investment cost of bioindustry showed an increase since 2011, and showed its steady increasing trend by marking an increase with 1 trillion and 545.5 billion won in 2012.

<Table 2-13> 2008~2012 Bioindustry's Trend of Investment

(Unit : one hundred million Won, %)

Classification		2008	2009	2010	2011	2012	Annual Average Rate of Change
Total Investment	Amount	11,971	11,809	10,134	12,907	15,455	6.6
	Rate of Change	8.1	-1.4	-14.2	27.4	19.7	
R&D Investment	Amount	7,293	8,761	7,686	9,302	9,988	8.2
	Rate of Change	9.4	20.1	-12.3	21.0	7.4	
Facility Investment	Amount	4,678	3,048	2,449	3,605	5,467	4.0
	Rate of Change	6.2	-34.8	-19.7	47.2	51.6	

<Figure 2-18> 2008~2012 Bioindustry Investment Trend (Unit : one hundred million Won)



- For investment in bioindustry since 2008, the investment in biopharmaceutical industry accounts for approx. 50% or more of total investment and the proportion has been increasing gradually to 74.1% as of 2012.

<Table 2-14> 2008~2012 Bioindustry's Trend in Overall Size of Investment

(Unit : million Won, %)

Industrial Category	2008		2009		2010		2011		2012		Variation from the year before	Annual Average Rate of Change
	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio	Investment Amount	Distribution Ratio		
<b>Total</b>	<b>1,197,171</b>	<b>100.0</b>	<b>1,180,945</b>	<b>100.0</b>	<b>1,013,429</b>	<b>100.0</b>	<b>1,290,750</b>	<b>100.0</b>	<b>1,545,495</b>	<b>100.0</b>	<b>19.7</b>	<b>6.6</b>
Biopharmaceutical industry	593,716	49.6	692,914	58.7	648,689	64.0	903,350	70.0	1,144,818	74.1	26.7	17.8
Biochemical industry	178,559	14.9	137,092	11.6	115,764	11.4	120,875	9.4	132,803	8.6	9.9	-7.1
Biofood industry	227,664	19	156,840	13.3	122,913	12.1	144,887	11.2	139,868	9.1	-3.5	-11.5
Bioenvironmental industry	54,460	4.5	57,094	4.8	15,966	1.6	14,358	1.1	14,521	0.9	1.1	-28.1
Bioelectronics industry	16,707	1.4	15,074	1.3	18,249	1.8	20,298	1.6	19,264	1.2	-5.1	3.6
Bioprocess and equipment industry	35,380	3	32,045	2.7	17,675	1.7	22,634	1.8	23,160	1.5	2.3	-10.1
Bioenergy and bioresource industry	32,271	2.7	33,568	2.8	25,799	2.5	26,666	2.1	20,037	1.3	-24.9	-11.2
Bioassay, bioinformatics and R&D service industry	58,414	4.9	56,318	4.8	48,374	4.8	37,682	2.9	51,024	3.3	35.4	-3.3

- Bioassay, bioinformatics and R&D service industry showed the highest increase in the R&D cost of 2012 compared to 2011, reaching 34.7%. On the other hand, Bioelectronics industry decreased with 2.8%.
- Biopharmaceutical industry showed the highest increase in the facility investment cost of 2012 compared to 2011, reaching 75.4%, but Bioenergy and bioresource, Biofood, Bioprocess and equipment, Bioelectronics, and Biochemical industry had a decrease in the investment cost compared to the previous year.

<Table 2-15> 2008~2012 Bioindustry's Trend of R&D and Facility Investment Cost

(Unit : one hundred million Won, %)

Industrial Category	2008		2009		2010		2011		2012		Variation from the year before		Annual Average Rate of Change	
	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility	R&D	Facility
<b>Total</b>	<b>7,293</b>	<b>4,678</b>	<b>8,761</b>	<b>3,049</b>	<b>7,686</b>	<b>2,449</b>	<b>9,302</b>	<b>3,605</b>	<b>9,988</b>	<b>5,467</b>	<b>7.4</b>	<b>51.6</b>	<b>8.2</b>	<b>4.0</b>
Bio pharmaceutical industry	3,717	2,220	5,435	1,494	4,931	1,556	6,292	2,741	6,641	4,808	5.5	75.4	15.6	21.3
Biochemical industry	1,036	750	1,010	361	864	294	966	243	1,117	211	15.7	-13.2	1.9	-27.2
Biofood industry	1,359	918	1,095	473	952	278	1,136	313	1,230	168	8.3	-46.2	-2.5	-34.6
Bioenvironmental industry	370	174	397	174	125	34	114	30	113	32	-0.4	7.1	-25.6	-34.7
Bioelectronics industry	105	62	103	47	145	37	182	21	176	16	-2.8	-24.2	13.9	-28.5
Bioprocess and equipment industry	199	155	203	118	158	19	200	27	212	20	6.0	-25.3	1.6	-40.1
Bioenergy and bioresource industry	175	147	218	118	173	85	180	87	184	16	2.6	-81.6	1.3	-42.5
Bioassay, bioinformatics and R&D service industry	332	252	300	263	338	146	233	144	314	196	34.7	36.5	-1.4	-6.1

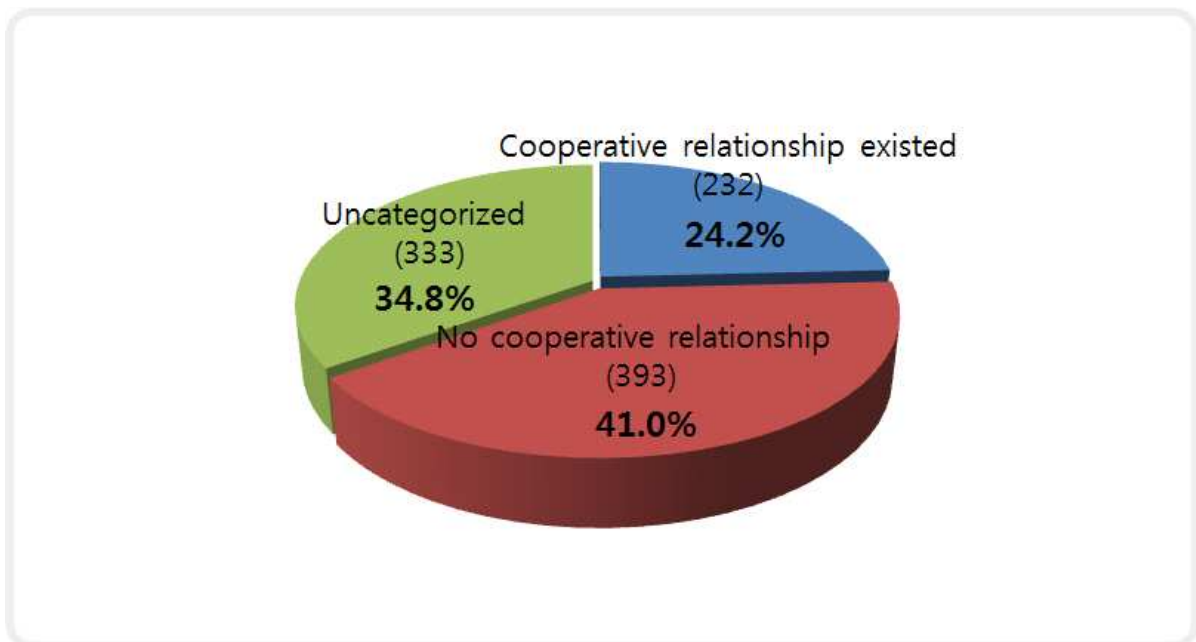
## 4 Cooperation with Other Organizations

### A. Cooperation Types

#### 1) Cooperative Relationship with Other Organizations

- Of 958 companies in total, 23 companies, 24.2%, have cooperative relationships with other organizations as of 2012.

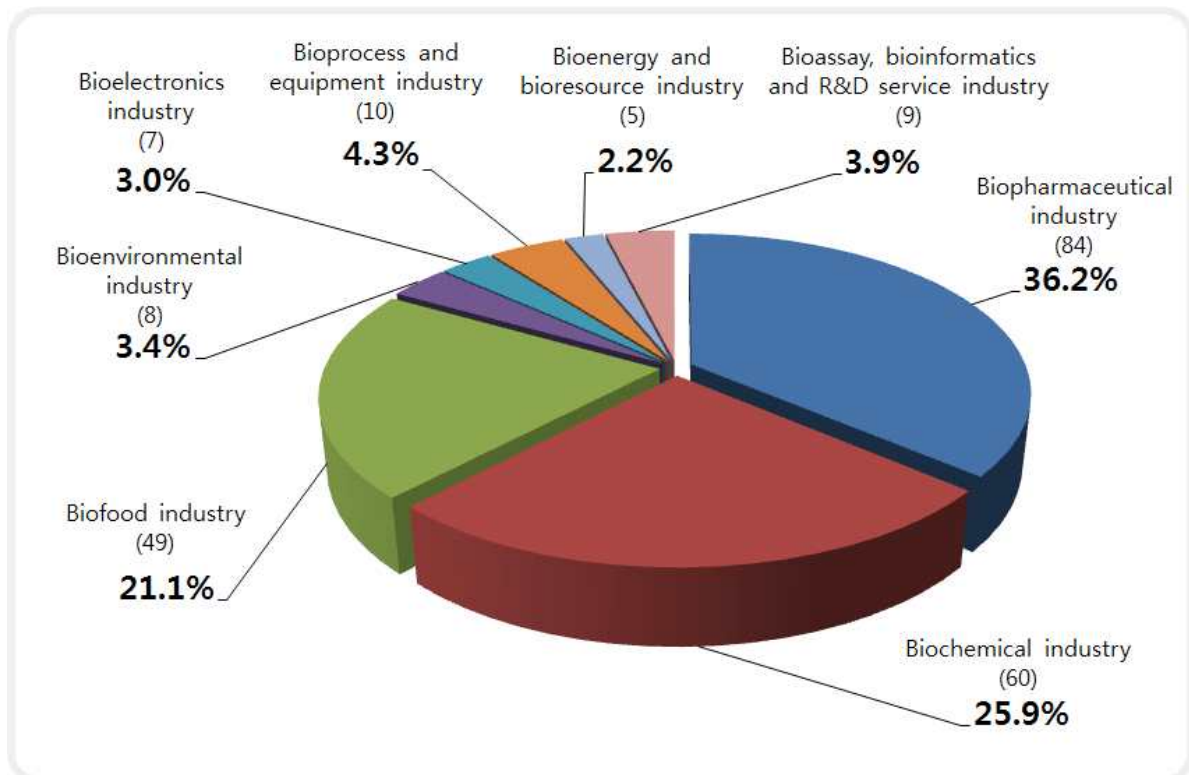
< Figure 2-19 > Cooperative Relationship with Other Organizations





- By bioindustrial categories, cooperative relationship was established in larger numbers in the order of biopharmaceutical, biochemical and biofood industries. The total number of cooperative relationships in the three industrial categories put together is 193, which is 83.2% of 232 companies holding cooperative relationships.

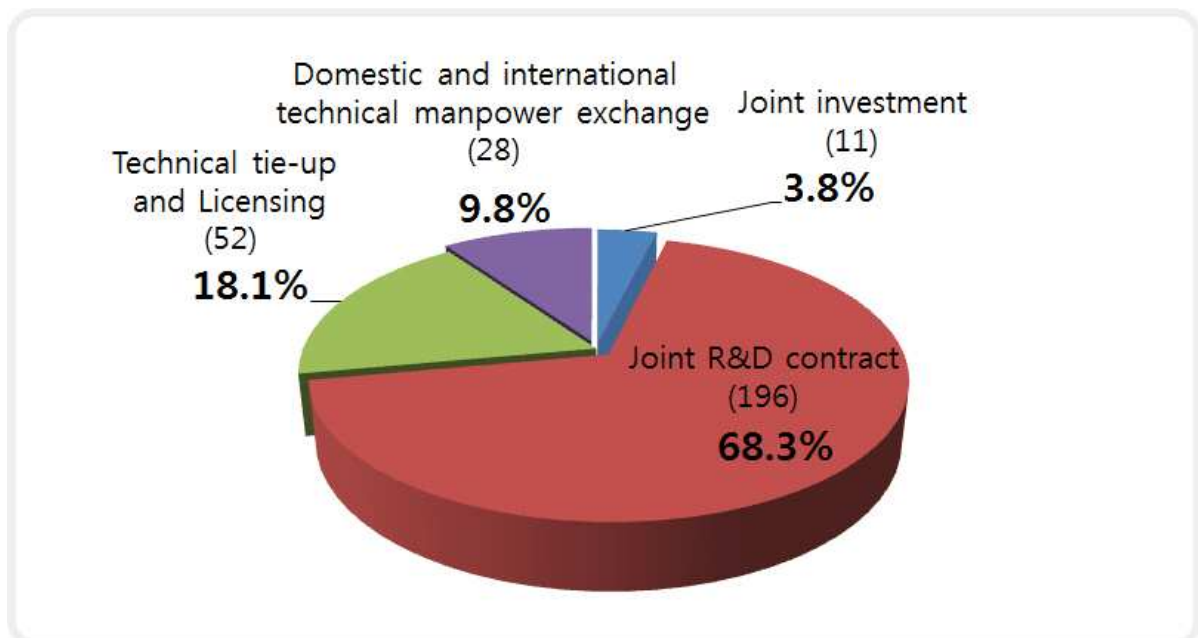
< Figure 2-20 > No. of Companies Holding Cooperative Relationships by Bioindustrial Category



## 2) Types of Cooperative Relationship with Other Organizations

- Based on 287 responses from 232 companies, the most frequently found type of cooperative relationship was joint R&D contract at 68.3%. It was followed by technical tie-up and licensing (18.1%), domestic and international technical manpower exchange (9.8%) and joint investment (3.8%).

< Figure 2-21 > Types of Cooperative Relationship with Other Organizations

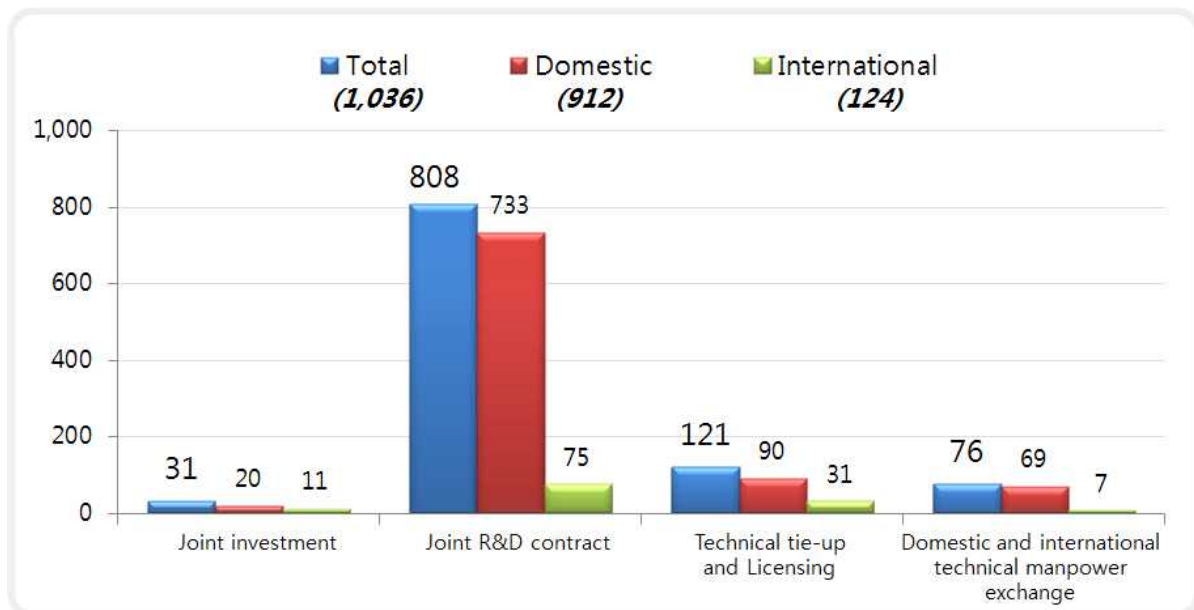


\* Based on 287 responses from 232 companies with cooperative relationships. Multiple responses accepted.

### 3) Number of Cooperation Cases by Cooperative Relationship Type

- The total number of cooperative relationships of 232 companies is 1,036, which is broken down into 912 cooperative relationships in Korea (88.0%) and 124 abroad (12.0%).
- The number of joint R&D contracts is 733 in Korea and 75 in abroad (808 in total). This is the most frequently found cooperative relationship type.

< Figure 2-22 > No. of Cooperation Cases by Cooperative Relationship Type  
(Unit : Cases)



\* Based on 287 responses from 232 companies with cooperative relationships.  
Multiple responses accepted.

- The number of cooperation cases by bioindustrial category and cooperation type is 441 in biopharmaceutical industry. This accounts for 42.6% of 1,036 cases in total.
- The number of cooperation cases in biofood and biochemical industries are 226 (21.8%) and 196 (18.9%) respectively.

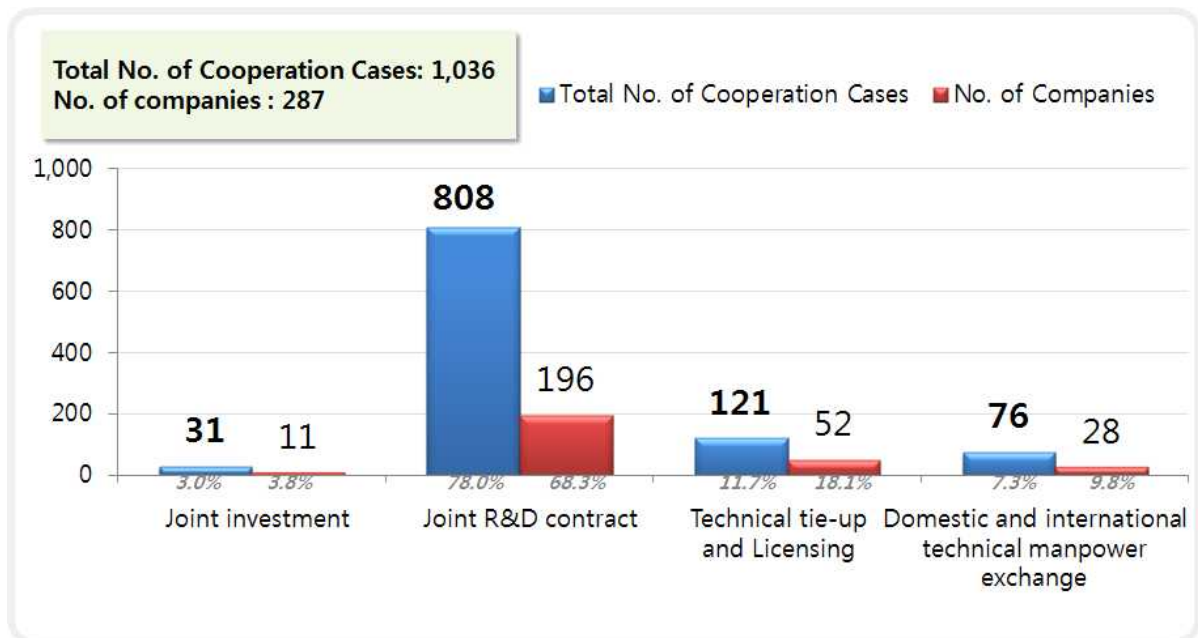
< Table 2-16 > No. of Cooperation Cases by Bioindustrial Category and Cooperation Type  
(Unit : Cases)

Industrial Category	Companies in Total	Companies with Cooperative Relationships	Cooperation Type				Total
			Joint Investment	Joint R&D Contract	Technical Tie-up and Licensing	Technical Manpower Exchange	
<b>Total</b>	<b>958</b>	<b>232</b>	<b>31</b>	<b>808</b>	<b>121</b>	<b>76</b>	<b>1,036 (100.0%)</b>
Biopharmaceutical industry	305	84	30	308	81	22	441 (42.6%)
Biochemical industry	204	60	1	170	14	11	196 (18.9%)
Biofood industry	199	49	-	202	19	5	226 (21.8%)
Bioenvironmental industry	75	8	-	12	4	1	17 (1.6%)
Bioelectronics industry	26	7	-	45	-	28	73 (7.0%)
Bioprocess and equipment industry	70	10	-	19	-	7	26 (2.5%)
Bioenergy and bioresource industry	24	5	-	18	-	1	19 (1.8%)
Bioassay, bioinformatics and R&D service industry	55	9	-	34	3	1	38 (3.7%)

#### 4) Number of Partners by Cooperative Relationship Type

- As for cooperation types, 196 companies have established joint R&D contract relationships and the count of cooperation was found to be 808. It is identified that a company holding a joint R&D contract relationship has conducted an average of 4.1 cooperation cases arithmetically.

< Figure 2-23 > No. of Partners by Cooperative Relationship Type (Unit : Cases, Count)



\* Based on 287 responses from 232 companies with cooperative relationships. Multiple responses accepted.

- The number of companies holding cooperative relationships was the largest at 116 in biopharmaceutical industry. It was followed by biochemical and biofood industries.

< Table 2-17 > No. of Partners by Bioindustrial Category and Cooperation

Type

(Unit: Count)

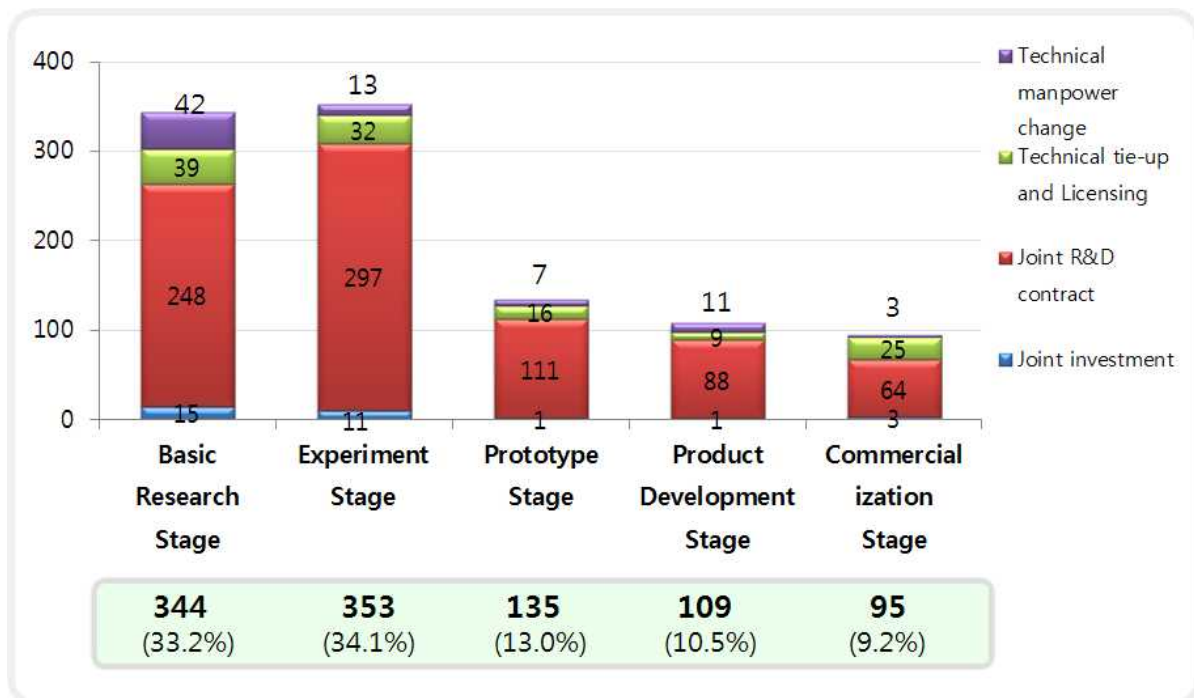
Industrial Category	Comp anies in Total	Comp anies with Coope rative Relati onship s	Cooperation Type				Total
			Joint Investme nt	Joint R&D Contract	Technical Tie-up and Licensing	Technical Manpower Exchange	
<b>Total</b>	<b>958</b>	<b>232</b>	<b>11</b>	<b>196</b>	<b>52</b>	<b>28</b>	<b>287 (100.0%)</b>
Biopharmaceutical industry	305	84	10	69	30	7	116 (40.4%)
Biochemical industry	204	60	1	53	11	8	73 (25.4%)
Biofood industry	199	49	-	42	7	4	53 (18.5%)
Bioenvironmental industry	75	8	-	6	3	1	10 (3.5%)
Bioelectronics industry	26	7	-	7	-	1	8 (2.8%)
Bioprocess and equipment industry	70	10	-	6	-	4	10 (3.5%)
Bioenergy and bioresource industry	24	5	-	4	-	1	5 (1.7%)
Bioassay, bioinformatics and R&D service industry	55	9	-	9	1	2	12 (4.2%)

## B. Cooperation Stages

### 1) Number of Cooperation Cases by Cooperation Stage

- As per cooperation stage, 353 cooperation cases, the largest, were completed in the stage of experiment, which is 34.1% of 1,036 cases in total. It was followed by 344 cases in basic research stage (33.2%).
- In commercialization stage, the final stage, 95 cases (9.2%) were completed, which is a relatively smaller number. This indicates that the companies cooperate frequently with other organizations in basic research and experiment stages, the initial stages.

< Figure 2-24 > No. of Cooperation Cases by Cooperation Stage (Unit : Cases)



\* Based on 232 companies with cooperative relationships.  
Multiple responses accepted.

&lt; Table 2-18 &gt; No. of Cooperation Cases by Cooperation Stage (Unit : Cases)

Classification	Cooperative Relationships in Total	Domestic					Overseas				
		Total	Joint Investment	Joint R&D	Technical Tie-up	Technical Manpower Exchange	Total	Joint Investment	Joint R&D	Technical Tie-up	Technical Manpower Exchange
Total	1,036	912	20	733	90	69	124	11	75	31	7
Basic Research Stage	344	320	11	234	33	42	24	4	14	6	-
Experiment Stage	353	306	7	265	24	10	47	4	32	8	3
Prototype Stage	135	121	1	104	10	6	14	-	7	6	1
Product Development Stage	109	94	-	80	5	9	15	1	8	4	2
Commercialization Stage	95	71	1	50	18	2	24	2	14	7	1

○ The percentages of cooperation cases by bioindustrial category and cooperation stage were higher in biopharmaceutical, biofood and bioassay, bioinformatics and R&D service industries at the experiment stage. On the other hand, percentages in biochemical, bioelectronics, bioenergy and bioresource industries were higher at the basic research stage.

&lt; Table 2-19 &gt; No. of Cooperation Cases by Bioindustrial Category and Cooperation Stage (Unit : Cases)

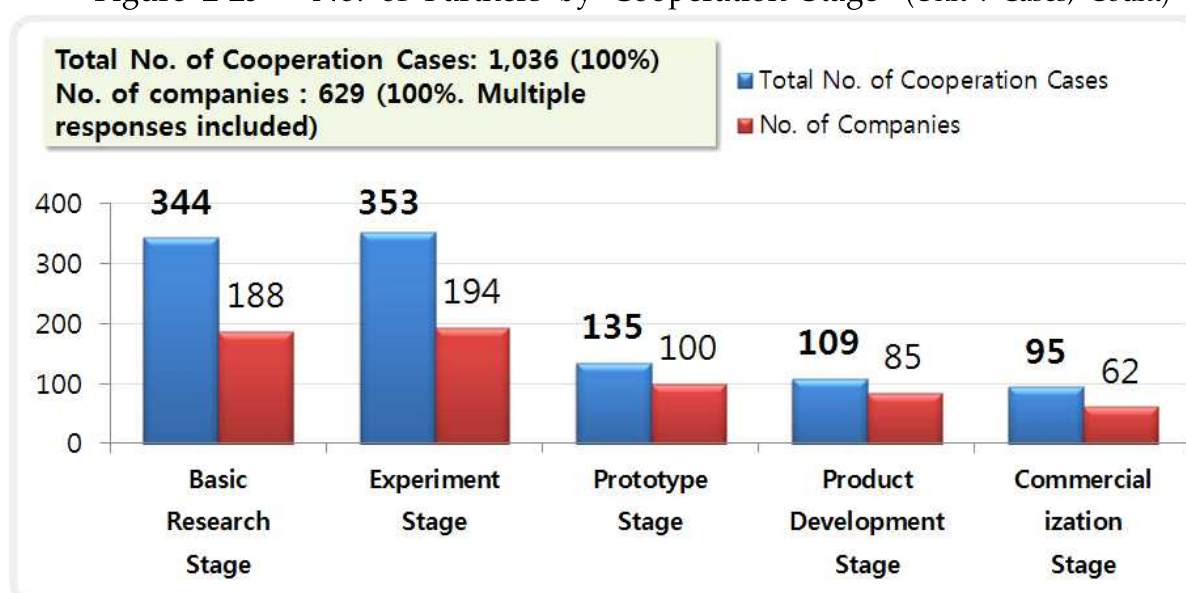
Industrial Category	Companies in Total	Companies with Cooperative Relationships	Cooperation Stage					Total
			Basic Research Stage	Experiment Stage	Prototype Stage	Product Development Stage	Commercialization Stage	
<b>Total</b>	<b>958</b>	<b>232</b>	<b>344</b>	<b>353</b>	<b>135</b>	<b>109</b>	<b>95</b>	<b>1,036 (100.0%)</b>
Biopharmaceutical industry	305	84	139	171	65	38	28	441 (42.6%)
Biochemical industry	204	60	55	38	21	34	48	196 (18.9%)
Biofood industry	199	49	48	107	36	24	11	226 (21.8%)
Bioenvironmental industry	75	8	4	4	2	2	5	17 (1.6%)
Bioelectronics industry	26	7	65	2	4	1	1	73 (7.0%)
Bioprocess and equipment industry	70	10	7	8	3	6	2	26 (2.5%)
Bioenergy and bioresource industry	24	5	14	2	2	1	-	19 (1.8%)
Bioassay, bioinformatics and R&D service industry	55	9	12	21	2	3	-	38 (3.7%)



## 2) Number of Partners by Cooperation Stage

- The number of companies with cooperative relationships by stage including those that made multiple responses is 629. By stage, 194 companies (30.8%) are in the stage of experiment.
- When cooperation case and company number percentages are compared, the rate of cooperation cases is lower than the percentage of company count in basic research and experiment stages. This indicates that the average cooperation cases per company are larger in the initial stages of cooperation than the later stages.

< Figure 2-25 > No. of Partners by Cooperation Stage (Unit : Cases, Count)



\* Based on 232 companies with cooperative relationships.  
 Multiple responses accepted.

< Table 2-20 > No. of Partners by Cooperation Stage (Unit : Cases, Count)

Classification		Total	Basic Research	Experimental	Prototype	Product Development	Commercialization
No. of cases	Domestic	912	320	306	121	94	71
	Overseas	124	24	47	14	15	24
Total		1,036	344	353	135	109	95
Percentage		100.0	33.2	34.1	13.0	10.5	9.2
No. of companies	Domestic	541	168	166	89	71	47
	Overseas	88	20	28	11	14	15
Total		629	188	194	100	85	62
Percentage		100.0	29.9	30.8	15.9	13.5	9.9

- As for the number of partners by bioindustrial category and cooperation stage, there was a total of 529 partners in biopharmaceutical, biochemical and biofood industries, which accounts for 84.1% of all partners.
- In biopharmaceutical, biofood and bioassay, bioinformatics and R&D service industry industries, the percentage of experiment stage was found to be high.

< Table 2-21 > No. of Partners by Bioindustrial Category and Cooperation

Stage

(Unit : Count)

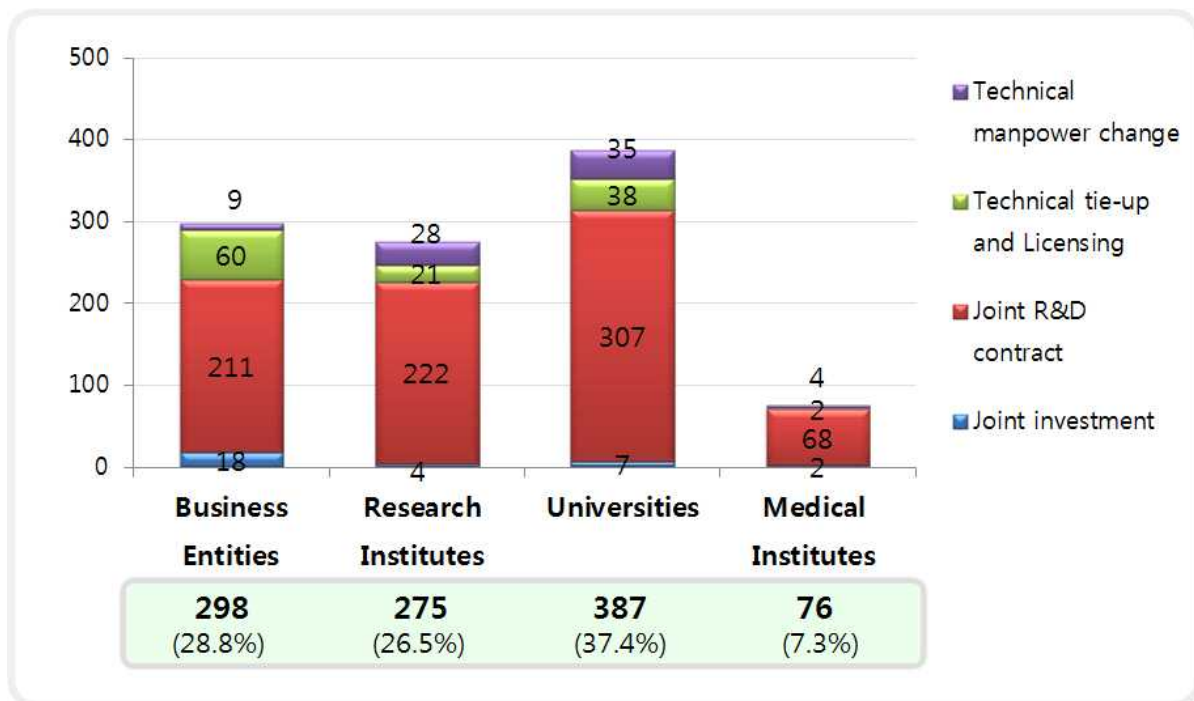
Industrial Category	Companies in Total	Companies with Cooperative Relationships	Cooperation Stage					Total
			Basic Research	Experimental	Prototype	Product Development	Commercialization	
<b>Total</b>	<b>958</b>	<b>232</b>	<b>188</b>	<b>194</b>	<b>100</b>	<b>85</b>	<b>62</b>	<b>629 (100.0%)</b>
Biopharmaceutical industry	305	84	76	107	40	30	24	277 (44.0%)
Biochemical industry	204	60	40	30	21	24	19	134 (21.3%)
Biofood industry	199	49	27	35	27	18	11	118 (18.8%)
Bioenvironmental industry	75	8	3	4	2	2	5	16 (2.5%)
Bioelectronics industry	26	7	17	2	3	1	1	24 (3.8%)
Bioprocess and equipment industry	70	10	5	5	3	6	2	21 (3.3%)
Bioenergy and bioresource industry	24	5	12	2	2	1	-	17 (2.7%)
Bioassay, bioinformatics and R&D service industry	55	9	8	9	2	3	-	22 (3.5%)

## C. Cooperating Organizations

### 1) Number of Cooperation Cases by Cooperating Organization

- By cooperating organization, the number of cooperation cases with universities was the largest at 387, which is 37.4% of 1,036 cases in total. It was followed by cooperation cases with business entities (298), research institutes (275) and medical institutes (76).

< Figure 2-26 > No. of Cooperation Cases by Cooperating Organization (Unit : Cases)



\* Based on 232 companies with cooperative relationships.  
Multiple responses accepted.

&lt; Table 2-22 &gt; No. of Cooperation Cases by Cooperating Organization (Unit : Cases)

Classification	Cooperative Relationships in Total	Domestic					Overseas				
		Total	Joint Investment	Joint R&D	Technical Tie-up	Technical Manpower Exchange	Total	Joint Investment	Joint R&D	Technical Tie-up	Technical Manpower Exchange
<b>Total</b>	<b>1,036</b>	<b>912</b>	<b>20</b>	<b>733</b>	<b>90</b>	<b>69</b>	<b>124</b>	<b>11</b>	<b>75</b>	<b>31</b>	<b>7</b>
<b>Business Entities</b>	<b>298</b>	<b>225</b>	<b>11</b>	<b>175</b>	<b>33</b>	<b>6</b>	<b>73</b>	<b>7</b>	<b>36</b>	<b>27</b>	<b>3</b>
Small and Medium-scale Venture Companies	<b>213</b>	<b>176</b>	<b>11</b>	<b>134</b>	<b>26</b>	<b>5</b>	<b>37</b>	<b>3</b>	<b>18</b>	<b>13</b>	<b>3</b>
Middle-standing Companies	<b>46</b>	<b>26</b>	<b>-</b>	<b>23</b>	<b>3</b>	<b>-</b>	<b>20</b>	<b>-</b>	<b>15</b>	<b>5</b>	<b>-</b>
Large Enterprises	<b>39</b>	<b>23</b>	<b>-</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>16</b>	<b>4</b>	<b>3</b>	<b>9</b>	<b>-</b>
<b>Research Institutes</b>	<b>275</b>	<b>257</b>	<b>2</b>	<b>207</b>	<b>20</b>	<b>28</b>	<b>18</b>	<b>2</b>	<b>15</b>	<b>1</b>	<b>-</b>
Government-invested Research Institutes	<b>223</b>	<b>210</b>	<b>1</b>	<b>174</b>	<b>16</b>	<b>19</b>	<b>13</b>	<b>1</b>	<b>12</b>	<b>-</b>	<b>-</b>
Private Research Institutes	<b>52</b>	<b>47</b>	<b>1</b>	<b>33</b>	<b>4</b>	<b>9</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>-</b>
<b>Universities</b>	<b>387</b>	<b>358</b>	<b>6</b>	<b>285</b>	<b>36</b>	<b>31</b>	<b>29</b>	<b>1</b>	<b>22</b>	<b>2</b>	<b>4</b>
<b>Medical Institutes</b>	<b>76</b>	<b>72</b>	<b>1</b>	<b>66</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>-</b>

○ By bioindustrial category, the number of cooperation cases in biopharmaceutical industry was the largest with business entities. However, the cases of cooperation with universities were relatively smaller in biochemical and biofood industries.

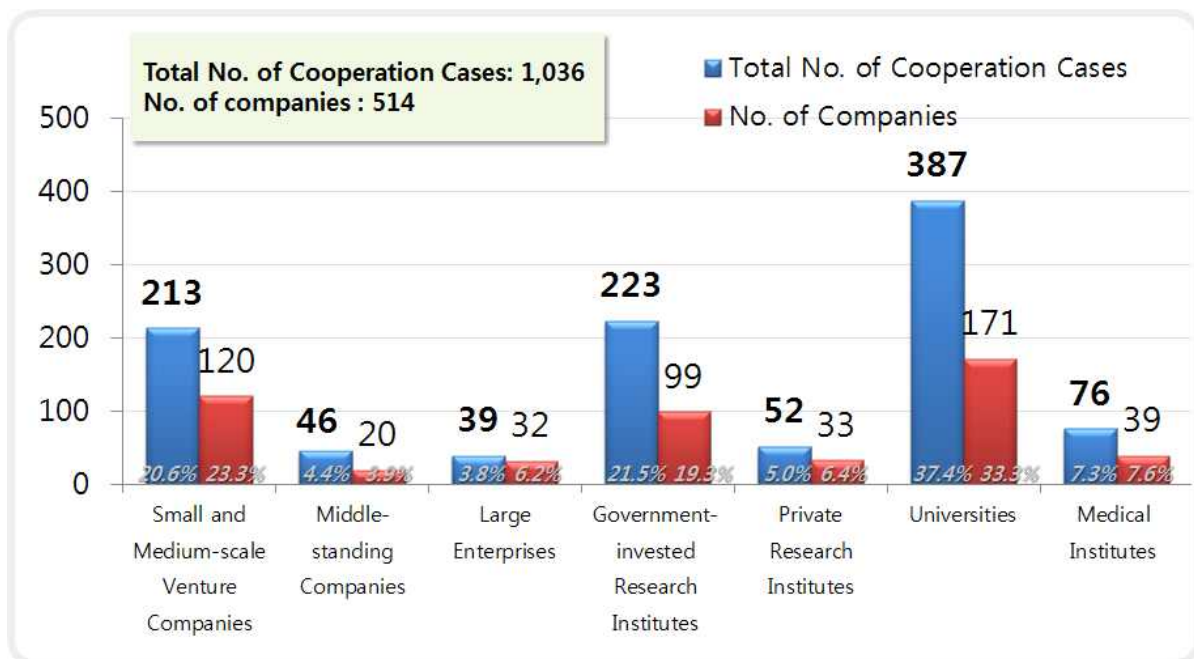
&lt; Table 2-23 &gt; No. of Cooperation Cases by Bioindustrial Category and Cooperating Organization (Unit : Cases)

Industrial Category	Companies in Total	Companies with Cooperative Relationships	Cooperating Organization				Total	
			Business Entities	Research Institutes	Universities	Medical Institutes		
<b>Total</b>	<b>958</b>	<b>232</b>	<b>298</b>	<b>275</b>	<b>387</b>	<b>76</b>	<b>1,036</b>	<b>(100.0%)</b>
Biopharmaceutical industry	305	84	165	100	126	50	441	(42.6%)
Biochemical industry	204	60	34	66	91	5	196	(18.9%)
Biofood industry	199	49	67	44	107	8	226	(21.8%)
Bioenvironmental industry	75	8	5	6	6	-	17	(1.6%)
Bioelectronics industry	26	7	10	32	24	7	73	(7.0%)
Bioprocess and equipment industry	70	10	2	10	11	3	26	(2.5%)
Bioenergy and bioresource industry	24	5	5	4	7	3	19	(1.8%)
Bioassay, bioinformatics and R&D service industry	55	9	10	13	15	-	38	(3.7%)

## 2) Number of Partners by Cooperating Organization

- The number of bio-companies holding cooperative relationships with universities is 171. It was found that an average of 2.3 cooperation cases was completed per each of these companies.

< Figure 2-27 > No. of Partners by Cooperating Organization (Unit : Cases, Count)



\* Based on 232 companies with cooperative relationships.  
Multiple responses accepted.

- By bioindustrial category, the number of cooperation cases in biopharmaceutical industry was the largest with business entities. However, the cases of cooperation with universities were relatively smaller in biochemical and biofood industries.

< Table 2-24 > No. of Cooperation Cases by Bioindustrial Category and Cooperating Organization (Unit : Cases)

Industrial Category	Comp anies in Total	Comp anies with Coop erative Relati onshi ps	Cooperating Organization				Total
			Business Entities	Research Institutes	Universit ies	Medical Institutes	
<b>Total</b>	<b>958</b>	<b>232</b>	<b>172</b>	<b>132</b>	<b>171</b>	<b>39</b>	<b>514 (100.0%)</b>
Biopharmaceutical industry	305	84	97	48	59	20	224 (43.6%)
Biochemical industry	204	60	21	35	47	3	106 (20.6%)
Biofood industry	199	49	30	27	37	5	99 (19.3%)
Bioenvironmental industry	75	8	4	6	6	0	16 (3.1%)
Bioelectronics industry	26	7	7	5	5	5	22 (4.3%)
Bioprocess and equipment industry	70	10	2	4	6	3	15 (2.9%)
Bioenergy and bioresource industry	24	5	5	3	5	3	16 (3.1%)
Bioassay, bioinformatics and R&D service industry	55	9	6	4	6	0	16 (3.1%)

< Table 2-25 > Domestic and Overseas Cooperative Relationships and Cooperating Organizations  
(Unit : Cases, Count, %)

Classification		Total	Venture Companies	Middle-standing Companies	Large Enterprises	Government-invested Research Institutes	Private Research Institutes	Universities	Medical Institutes	
Joint investment	Total Investments	Domestic	20	11	-	-	1	1	6	1
		Overseas	11	3	-	4	1	1	1	1
		Subtotal	31	14	-	4	2	2	7	2
	No. of Companies	Domestic	12	6	-	-	1	1	3	1
		Overseas	8	3	-	1	1	1	1	1
		Subtotal	20	9	-	1	2	2	4	2
Joint R&D contract	Total Investments	Domestic	733	134	23	18	174	33	285	66
		Overseas	75	18	15	3	12	3	22	2
		Subtotal	808	152	38	21	186	36	307	68
	No. of Companies	Domestic	329	64	9	16	71	20	119	30
		Overseas	44	14	6	3	8	2	9	2
		Subtotal	373	78	15	19	79	22	128	32
Technical tie-up and Licensing	Total Investments	Domestic	90	26	3	4	16	4	36	1
		Overseas	31	13	5	9	-	1	2	1
		Subtotal	121	39	8	13	16	5	38	2
	No. of Companies	Domestic	60	18	2	4	11	4	20	1
		Overseas	22	9	3	7	-	1	1	1
		Subtotal	82	27	5	11	11	5	21	2
Technical manpower change	Total Investments	Domestic	69	5	-	1	19	9	31	4
		Overseas	7	3	-	-	-	-	4	-
		Subtotal	76	8	-	1	19	9	35	4
	No. of Companies	Domestic	34	4	-	1	7	4	15	3
		Overseas	5	2	-	-	-	-	3	-
		Subtotal	39	6	-	1	7	4	18	3
Cooperation Cases in Total		1,036	213	46	39	223	52	387	76	
Percentage		100.0	20.6	4.4	3.8	21.5	5.0	37.4	7.3	
Companies in Total		514	120	20	32	99	33	171	39	
Percentage		100.0	23.3	3.9	6.2	19.3	6.4	33.3	7.6	

### 3) Cooperating Organizations by Scale of Workers

- The number of cooperation cases between a small and medium-scale venture company with 50 - 299 workers and a same small and medium-scale venture company (with 1 - 299 workers) is large at 86.
- The numbers of cooperation cases between a bioindustrial company with 1 - less than 50 workers and a government-invested research institute and a university are also large at 131 and 189 respectively (125 and 184 in Korea respectively).

< Table 2-26 > Cooperating Organizations by Scale of Workers (Unit : Count)

Classification	Cooperative Relationships in Total	Business Entities				Research Institutes			Universities	Medical Institutes	
		Total	Venture Companies	Middle-standing Companies	Large Enterprises	Total	Government-invested Research Institutes	Private Research Institutes			
Total	Total	<b>1,036</b>	<b>298</b>	<b>213</b>	<b>46</b>	<b>39</b>	<b>275</b>	<b>223</b>	<b>52</b>	<b>387</b>	<b>76</b>
	1 - less than 50 workers	<b>480</b>	103	68	15	20	159	131	28	189	29
	50 - 299	<b>283</b>	100	<b>86</b>	6	8	52	35	17	105	26
	300 - 999	<b>92</b>	31	18	11	2	20	19	1	23	18
	1,000 or more	<b>181</b>	64	41	14	9	44	38	6	70	3
Domestic	Total	<b>912</b>	<b>225</b>	<b>176</b>	<b>26</b>	<b>23</b>	<b>257</b>	<b>210</b>	<b>47</b>	<b>358</b>	<b>72</b>
	1 - less than 50 workers	<b>442</b>	77	53	8	16	152	125	27	184	29
	50 - 299	<b>242</b>	75	69	2	4	47	33	14	98	22
	300 - 999	<b>77</b>	21	17	3	1	15	14	1	23	18
	1,000 or more	<b>151</b>	52	37	13	2	43	38	5	53	3
Overseas	Total	<b>124</b>	<b>73</b>	<b>37</b>	<b>20</b>	<b>16</b>	<b>18</b>	<b>13</b>	<b>5</b>	<b>29</b>	<b>4</b>
	1 - less than 50 workers	<b>38</b>	26	15	7	4	7	6	1	5	-
	50 - 299	<b>41</b>	25	17	4	4	5	2	3	7	4
	300 - 999	<b>15</b>	10	1	8	1	5	5	-	-	-
	1,000 or more	<b>30</b>	12	4	1	7	1	-	1	17	-



## 5 Supply and Demand Status of Bioindustry

### A. Bioindustry's Supply and Demand Status of 2012

- Bioindustry's supply and demand status in 2012 reached total of 8 trillion and 704.0 billion won and the proportion of production took 81.9% in the supply market with 7 trillion and 129.2 billion won and the proportion of import took 18.1% with 1 trillion and 574.8 billion won.
- On the other hand, the size of domestic demand reached 64.8% with 5 trillion and 643.4 billion won in the demand market and the size of export reached 35.2% of the total size of supply and demand with 3 trillion and 60.6 billion won.

<Table 2-27> 2010~2012 Bioindustry's Trend of Supply and Demand

(Unit : one hundred million Won)

Year	Supply				Total	Demand			
	Production		Import			Domestic Demand		Export	
	Amount	Distribution Ratio	Amount	Distribution Ratio		Amount	Distribution Ratio	Amount	Distribution Ratio
2010	57,878	80.5	14,057	19.5	71,935	47,519	66.1	24,415	33.9
2011	63,963	80.4	15,612	19.6	79,575	52,081	65.4	27,494	34.6
2012	71,292	81.9	15,748	18.1	87,040	56,434	64.8	30,606	35.2
Annual Average Rate of Change	11.0		5.8		10.0	9.0		12.0	

- The production size of domestic bioindustry in 2012 reached 7 trillion and 129.2 billion won. Among them, the domestic sales took 57.1% with 4 trillion and 68.6 billion won and the export took, 42.9% with 3 trillion and 60.6 billion won.
- The size of domestic demand due to domestic sales and import reached 5 trillion and 643.4 billion won. Among them, the domestic sales took 72.1% with 4 trillion and 68.6 billion won and the import took 27.9% with 1 trillion and 574.8 billion won.

&lt;Figure 2-28&gt; 2012 Bioindustry's Size of Production and Domestic Demand

- The production size of bioindustry reached 2 trillion and 872.0 billion won which is 40.3% of the total industry, and biopharmaceutical industry took 38.1% with 2 trillion and 717.6 billion won.
- The industry that has the largest proportion in the bioindustry's domestic demand market is biopharmaceutical industry reaching 2 trillion and 819.5 billion won which is 50.0% of the total market.

&lt;Table 2-28&gt; 2012 Bioindustry's Status of Production and Domestic Demand

(Unit : million Won, %)

Industrial Category	Production				Domestic Demand			
	Domestic Sales	Export	Total	Distribution Ratio	Domestic Sales	Import	Total	Distribution Ratio
<b>Total</b>	<b>4,068,644</b>	<b>3,060,585</b>	<b>7,129,229</b>	<b>100.0</b>	<b>4,068,644</b>	<b>1,574,793</b>	<b>5,643,436</b>	<b>100.0</b>
Biopharmaceutical industry	1,577,572	1,139,980	2,717,552	38.1	1,577,572	1,241,922	2,819,493	50.0
Biochemical industry	408,226	97,173	505,399	7.1	408,226	68,726	476,952	8.5
Biofood industry	1,261,325	1,610,631	2,871,956	40.3	1,261,325	59,648	1,320,973	23.4
Bioenvironmental industry	27,496	18	27,514	0.4	27,496	230	27,726	0.5
Bioelectronics industry	23,987	99,841	123,828	1.7	23,987	248	24,235	0.4
Bioprocess and equipment industry	76,691	45,256	121,947	1.7	76,691	189,812	266,503	4.7
Bioenergy and bioresource industry	541,395	30,153	571,548	8.0	541,395	12,897	554,292	9.8
Bioassay, bioinformatics and R&D service industry	151,952	37,534	189,486	2.7	151,952	1,310	153,262	2.7

## B. Recent Trend of Supply and Demand Status

### 1) 2010~2012 Trend of Supply and Demand Status

- Both production and domestic demand showed continuous growth from 2010 to 2012 in the supply and demand trend of bioindustry. For the average variation rate per year since 2010, the supply and demand marked 10.0%, production 11.0%, and domestic demand 9.0%.

<Table 2-29> 2010~2012 Bioindustry's Trend of Production and Domestic Demand

(Unit : one hundred million Won, %)

Classification		2010	2011	2012	Annual Average Rate of Change
Supply and Demand (Production+Import)	Investment Amount	71,935	79,574	87,040	10.0
	Distribution Ratio	7.6	10.6	9.4	
Production (Domestic Sales+Export)	Investment Amount	57,878	63,963	71,292	11.0
	Distribution Ratio	8.1	10.5	11.5	
Domestic Demand (Domestic Sales+Import)	Investment Amount	47,519	52,081	56,434	9.0
	Distribution Ratio	12.2	9.6	8.4	

<Figure 2-29> 2010~2012 Bioindustry's Trend of Production and Domestic Demand

(Unit : one hundred million Won)



- The production sector increased by 11.5% in 2012 compared to 2011, and Bioprocess and equipment industry reached the highest growth rate with 50.4%.
- The domestic demand sector increased by 8.4% in 2012 compared to 2011, and Bioenergy and bioresource industry reached 30.8% growth.
- The size of biopharmaceutical industry that takes 50.0% of the total domestic demand market increased 3.0% compared to the previous year.

<Table 2-30> 2010~2012 Bioindustry's Trend of Supply and Demand by Category

(Unit : one hundred million Won, %)

Industrial Category	Production					Domestic Demand				
	2010	2011	2012	Variation from the year before	Annual Average Rate of Change	2010	2011	2012	Variation from the year before	Annual Average Rate of Change
<b>Total</b>	<b>57,878</b>	<b>63,963</b>	<b>71,292</b>	<b>11.5</b>	<b>11.0</b>	<b>47,519</b>	<b>52,081</b>	<b>56,434</b>	<b>8.4</b>	<b>9.0</b>
Biopharmaceutical industry	23,732	24,607	27,176	10.4	7.0	26,210	27,367	28,195	3.0	3.7
Biochemical industry	2,904	4,305	5,054	17.4	31.9	3,245	4,354	4,770	9.5	21.2
Biofood industry	23,461	25,978	28,720	10.6	10.6	9,992	10,989	13,210	20.2	15.0
Bioenvironmental industry	1,060	1,092	275	-74.8	-49.0	1,037	1,066	277	-74.0	-48.3
Bioelectronics industry	1,212	1,164	1,238	6.4	1.1	489	239	242	1.5	-29.6
Bioprocess and equipment industry	963	811	1,219	50.4	12.5	2405	2496	2665	6.8	5.3
Bioenergy and bioresource industry	2,913	4,387	5,715	30.3	40.1	2,769	4,237	5,543	30.8	41.5
Bioassay, bioinformatics and R&D service industry	1,633	1,620	1,895	17.0	7.7	1,373	1,333	1,533	15.0	5.6

## 2) 2008~2012 Trend of Supply and Demand

- Both production and domestic demand showed continuous growth according to the 2008~2012 supply and demand trend. The average variation rate per year for supply and demand rated 11.4%, production 12.1%, and domestic demand 10.7% since 2008, resulting in continuous growth with more than average of 10%.

<Table 2-31> 2008~2012 Bioindustry's Trend of Supply and Demand

(Unit : one hundred million Won, %)

Classification		2008	2009	2010	2011	2012	Annual Average Rate of Change
Supply and Demand (Production+Import)	Investment Amount	56,589	66,841	71,935	79,574	87,040	11.4
	Distribution Ratio	19.5	18.1	7.6	10.6	9.4	
Production (Domestic Sales+Export)	Investment Amount	45,120	53,549	57,878	63,963	71,292	12.1
	Distribution Ratio	21.5	18.7	8.1	10.5	11.5	
Domestic Demand (Domestic Sales+Import)	Investment Amount	37,551	42,367	47,519	52,081	56,434	10.7
	Distribution Ratio	15.1	12.8	12.2	9.6	8.4	

<Figure 2-30> 2008~2012 Bioindustry's Trend of Supply and Demand

(Unit : one hundred million Won)



&lt;Table 2-32&gt; 2008~2012 Bioindustry's Trend of Supply and Demand by Category

(Unit : one hundred million Won, %)

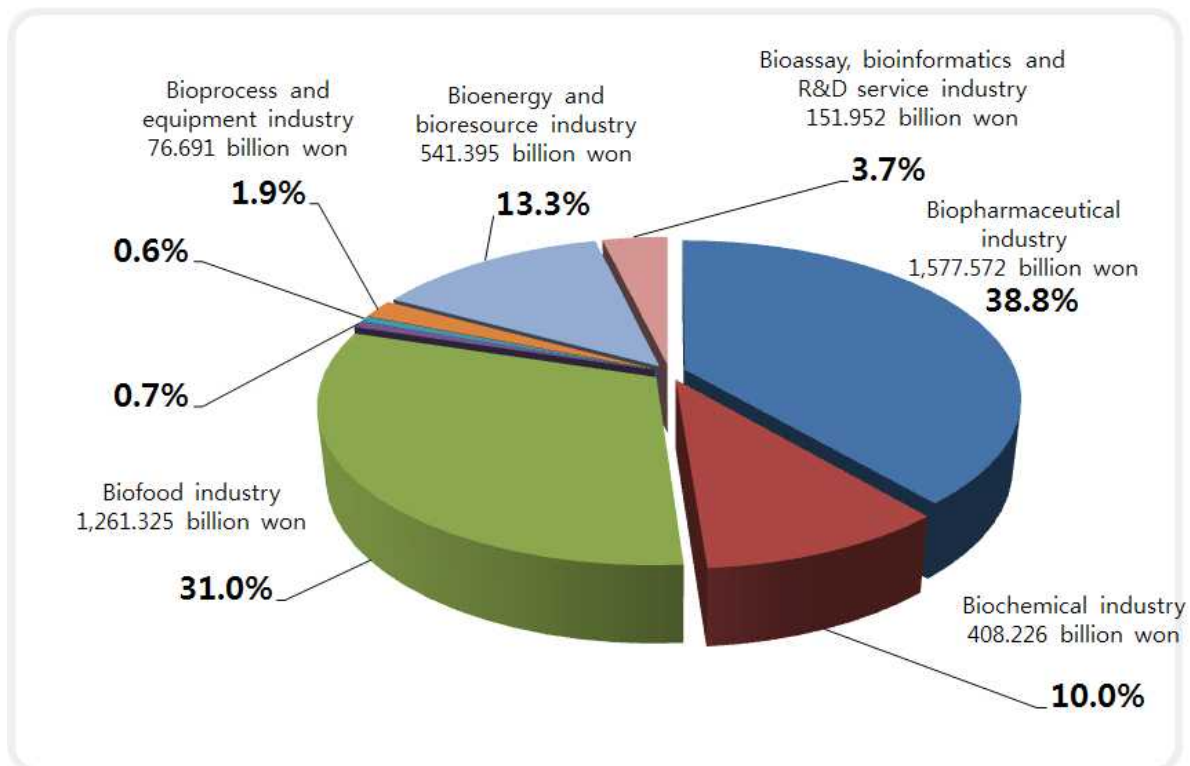
Industrial Category	Production							Domestic Demands						
	2008	2009	2010	2011	2012	Variation from the year before	Annual Average Rate of Change	2008	2009	2010	2011	2012	Variation from the year before	Annual Average Rate of Change
<b>Total</b>	<b>45,120</b>	<b>53,549</b>	<b>57,878</b>	<b>63,963</b>	<b>71,292</b>	<b>10.5</b>	<b>12.1</b>	<b>37,551</b>	<b>42,367</b>	<b>47,519</b>	<b>52,081</b>	<b>56,434</b>	<b>9.6</b>	<b>10.7</b>
Biopharmaceutical industry	20,245	24,922	23,732	24,607	27,176	3.8	7.6	23,104	25,363	26,210	27,367	28,195	6.6	5.1
Biochemical industry	2,767	3,303	2,904	4,305	5,054	41.6	16.3	3,176	3,721	3,245	4,354	4,770	29.9	10.7
Biofood industry	13,564	15,593	23,461	25,978	28,720	10.9	20.6	4,349	5,148	9,992	10,989	13,210	9.1	32.0
Bioenvironmental industry	2,141	2,281	1,060	1,092	275	-15.3	-40.1	2,066	2,192	1,037	1,066	277	-15.5	-39.5
Bioelectronics industry	622	699	1,212	1,164	1,238	-5.9	18.8	272	369	489	239	242	-53.1	-2.8
Bioprocess and equipment industry	2,640	2,127	963	811	1,219	-15.2	-17.6	2,495	2,952	2,405	2,496	2,665	-13.8	1.7
Bioenergy and bioresource industry	632	1,207	2,913	4,387	5,715	156.0	73.4	791	1,216	2,769	4,237	5,543	199.9	62.7
Bioassay, bioinformatics and R&D service industry	2,509	3,417	1,633	1,620	1,895	0.0	-6.8	1,298	1,406	1,373	1,333	1,533	-3.8	4.2

## 6 Domestic Sales of Bioindustry

### A. Domestic Sales Status of 2012

- The size of bioindustry's domestic sales in 2012 reached 4 trillion and 68.6 billion won and biopharmaceutical industry took the largest proportion among them with 1 trillion and 577.6 billion won(38.8%).
- The following largest industries were biofood industry with 1 trillion and 261.3 billion won(31.0%) and biochemical industry with 541.4 billion won(13.3%).
- Biopharmaceutical industry, biofood industry, bioenergy and bioresource industry took 83.1%(81.9% in 2011) of the total market for the bioindustry's domestic sales in 2012.

<Figure 2-22> 2011 Bioindustry's Size of Domestic Sales by Category



- [Table 2-33] shows the domestic bioproducts or bioservices that have more than 1.0% domestic sales, according to the size. Feed additive's size of domestic sales took 17.0% of the total bioindustry with 690.5 billion won.
- The following largest bioproducts or bioservices were hemotherapeutics (10.7%), other biopharmaceuticals(12.8%), biocosmetics and home & personal care chemicals(7.3%), fermented foods(5.2%). Among the TOP5 products, 2 items belonged to biopharmaceutical and biofood industry.

<Table 2-33> 2012 Main Bioproduct's Size of Domestic Sales (Unit : million Won, %)

Ranking	Code	Product Name	Domestic Sales	Distribution Ratio
1	3050	Feed additives	690,514	17.0
2	1000	Other biopharmaceuticals	436,126	10.7
3	1060	Hemotherapeutics	432,068	10.6
4	7010	Biofuel	424,261	10.4
5	1030	Vaccines	303,304	7.5
6	2040	Biocosmetics and home & personal care chemicals	301,948	7.4
7	3010	Functional health foods	239,145	5.9
8	3030	Food additives	191,472	4.7
9	7020	Artificial seeds and seedlings	110,783	2.7
10	1050	Immunotherapeutics	87,969	2.2
11	3040	Fermented foods	81,863	2.0
12	1100	Animal medications	81,454	2.0
13	1040	Hormones	78,427	1.9
14	8050	Biosafety and efficacy evaluation services	73,813	1.8
15	1080	New therapeutics	59,071	1.5



## B. Recent Trend of Domestic Sales Status

### 1) 2010~2012 Trend of Domestic Sales Status

- The size of bioindustry's domestic sales in 2012 increased by 421.7 billion won(11.6%) with 4 trillion and 68.6 billion won compared to 3 trillion and 646.9 billion won in 2011.

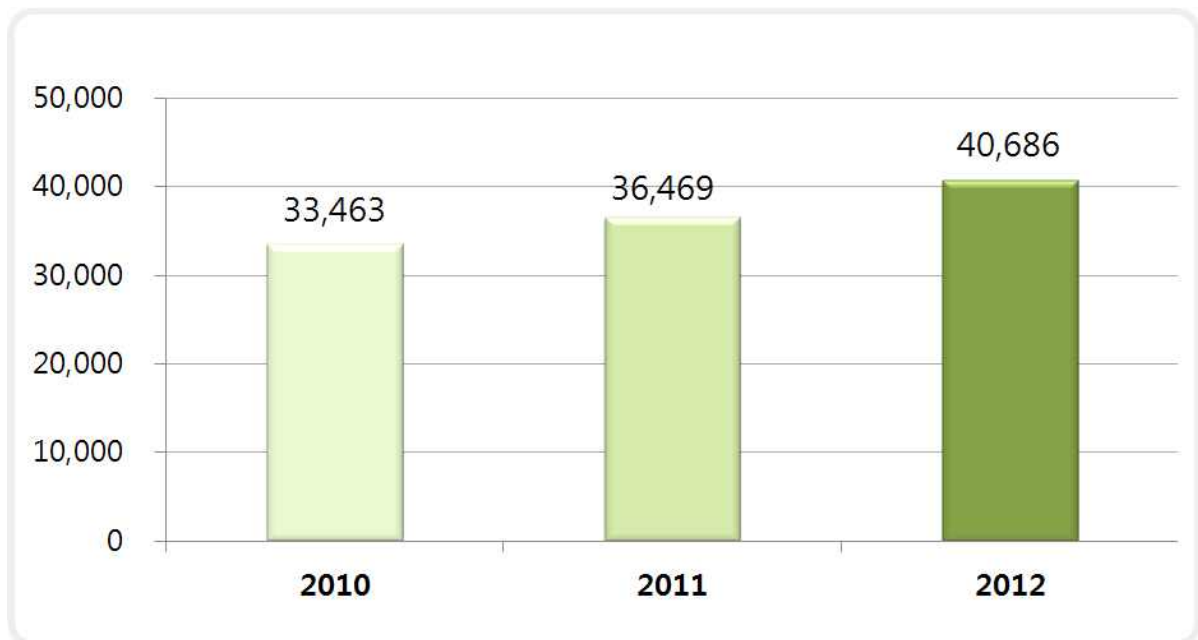
<Table 2-34> 20010~2012 Bioindustry's Trend of Domestic Sales

(Unit : one hundred million Won, %)

Classification		2010	2011	2012	Annual Average Rate of Change
Domestic Sales	Amount of money	33,463	36,469	40,686	10.3
	Rate of Change	15.1	9.0	11.6	

<Figure 2-32> 2010~2012 Bioindustry's Trend of Domestic Sales

(Unit : one hundred million Won)



- The growth size of biofood industry increased by 18.3% with 195.5 billion won compared to 2011, and its proportion within the industry increased from 29.2% to 31.0%.
- Bioenergy and bioresource industry also increased by 31.0% compared to 2011, and its proportion within the industry increased from 11.3% to 13.3%.
- On the other hand, in bioenvironmental industry, the sales decreased by KRW 78.9 billion (74.2%) from 2011. The ratio within the industry also decreased by 2.2%p to a low 0.7%.

<Table 2-35> 2010~2012 Bioindustry's Trend of Domestic Sales by Category

(Unit : million Won, %)

Industrial Category	2010		2011		2012		Variation from the year before		Annual Average Rate of Change
	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Rate of Change	
<b>Total</b>	<b>3,346,287</b>	<b>100.0</b>	<b>3,646,896</b>	<b>100.0</b>	<b>4,068,644</b>	<b>100.0</b>	<b>421,748</b>	<b>11.6</b>	<b>10.3</b>
Biopharmaceutical industry	1,521,210	45.5	1,506,329	41.3	1,577,572	38.8	71,243	4.7	1.8
Biochemical industry	230,073	6.9	355,684	9.8	408,226	10.0	52,542	14.8	33.2
Biofood industry	989,797	29.6	1,065,834	29.2	1,261,325	31.0	195,491	18.3	12.9
Bioenvironmental industry	103,052	3.1	106,381	2.9	27,496	0.7	-78,885	-74.2	-48.3
Bioelectronics industry	48,039	1.4	23,738	0.7	23,987	0.6	249	1.0	-29.3
Bioprocess and equipment industry	48,803	1.5	43,895	1.2	76,691	1.9	32,796	74.7	25.4
Bioenergy and bioresource industry	269,342	8.0	413,275	11.3	541,395	13.3	128,120	31.0	41.8
Bioassay, bioinformatics and R&D service industry	135,971	4.1	131,760	3.6	151,952	3.7	20,192	15.3	5.7

## 2) 2008~2012 Trend of Domestic Sales

- Since 2008, the average variation rate per year for the past 5 years showed 11.8%.
- The size of domestic sales in 2010 went over 3 trillion won, and in 2012, it reached 4 trillion and 68.6 billion won.

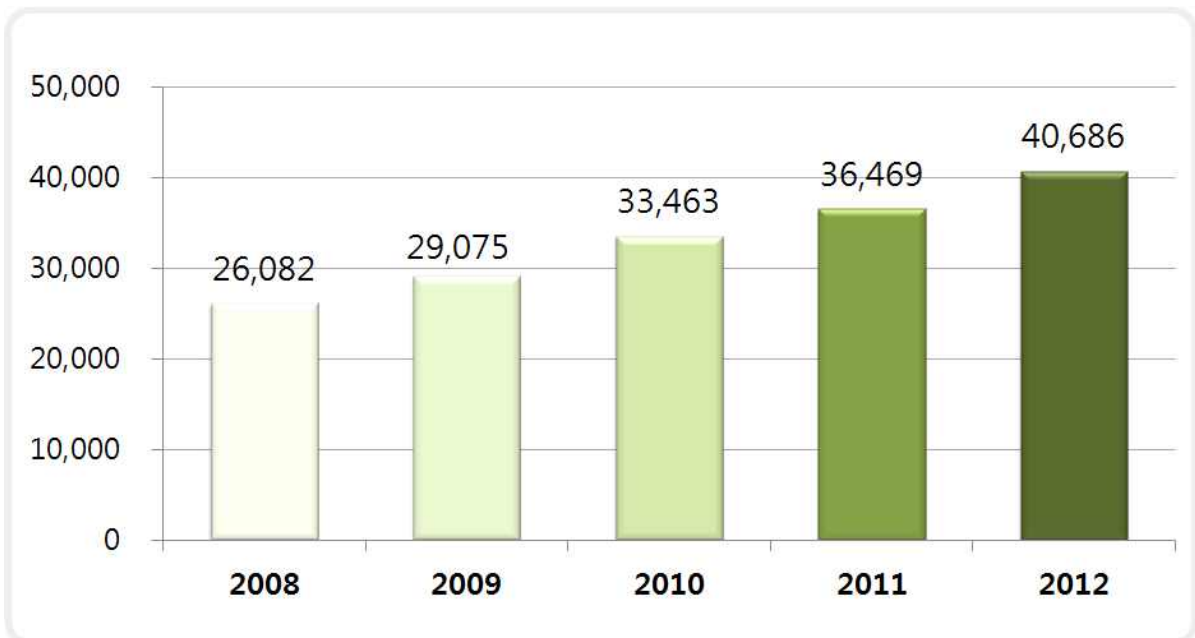
<Table 2-36> 2008~2012 Bioindustry's Trend of Domestic Sales Status

(Unit : one hundred million Won, %)

Classification		2008	2009	2010	2011	2012	Annual Average Rate of Change
Domestic Sales	Amount of money	26,082	29,075	33,463	36,469	40,686	11.8
	Rate of Change	16.3	11.5	15.1	9.0	11.6	

<Figure 2-33> 2008~2012 Bioindustry's Trend of Domestic Sales Status

(Unit : one hundred million Won)



&lt;Table 2-37&gt; 2008~2012 Bioindustry's Trend of Domestic Sales by Category

(Unit : million Won, %)

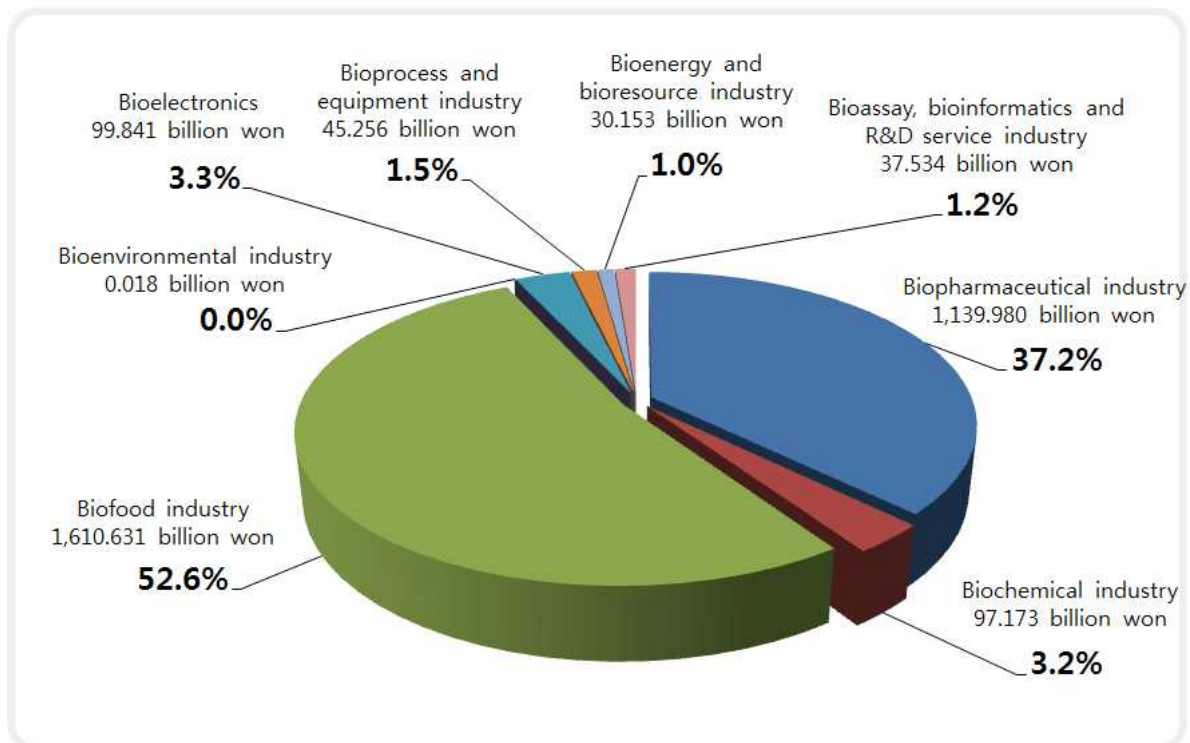
Industrial Category	2008		2009		2010		2011		2012		Variation from the year before		Annual Average Rate of Change
	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Distribution Ratio	Domestic Sales	Rate of Change	
<b>Total</b>	<b>2,608,186</b>	<b>100</b>	<b>2,907,448</b>	<b>100</b>	<b>3,346,287</b>	<b>100</b>	<b>3,646,896</b>	<b>100</b>	<b>4,068,644</b>	<b>100</b>	<b>421,748</b>	<b>11.6</b>	<b>11.8</b>
Biopharmaceutical industry	1,464,453	56.1	1,564,251	53.8	1,521,210	45.5	1,506,329	41.3	1,577,572	38.8	71,243	4.7	1.9
Biochemical industry	226,794	8.7	260,356	9.0	230,073	6.9	355,684	9.8	408,226	10.0	52,542	14.8	15.8
Biofood industry	413,860	15.9	481,123	16.5	989,797	29.6	1,065,834	29.2	1,261,325	31.0	195,491	18.3	32.1
Bioenvironmental industry	203,414	7.8	215,152	7.4	103,052	3.1	106,381	2.9	27,496	0.7	-78,885	-74.2	-39.4
Bioelectronics industry	26,071	1.0	32,826	1.1	48,039	1.4	23,738	0.7	23,987	0.6	249	1.0	-2.1
Bioprocess and equipment industry	80,914	3.1	102,853	3.5	48,803	1.5	43,895	1.2	76,691	1.9	32,796	74.7	-1.3
Bioenergy and bioresource industry	63,077	2.4	110,653	3.8	269,342	8.0	413,275	11.3	541,395	13.3	128,120	31.0	71.2
Bioassay, bioinformatics and R&D service industry	129,603	5.0	140,234	4.8	135,971	4.1	131,760	3.6	151,952	3.7	20,192	15.3	4.1

## 7 Export Status of Bioindustry

### A. Export Status of 2012

- The size of bioindustry's export in 2012 reached 3 trillion and 60.6 billion won.
- Biofood industry took the largest proportion with 1 trillion and 610.6 billion won(52.6%) and the following largest industry was biopharmaceutical industry with 1 trillion and 140.0 billion won(37.2%) according to the bioindustry's size of export by category.

<Figure 2-34> 2012 Bioindustry's Size of Export by Category



- [Table 2-38] shows bioproducts or bioservices that have more than 1.0% export amount among 51 domestic bioproducts and bioservices, according to the size. 16 products showed more than 1.0% of exports.
- Feed additives ranked the highest amount of export with 1 trillion and 281.9 billion won(41.9%) and the following largest bioproducts or bioservices were Immunotherapeutics(10.6%), food additives(7.6%), vaccines(6.6%) and Diagnostic kits(4.1%).
- 9 product among 16 belonged to biopharmaceutical industry and 4 belonged to biofood industry according to the size of export.

&lt;Table 2-38&gt; 2012 Main Bioproduct's Export

(Unit : million Won, %)

Ranking	Code	Product Name	Amount of Export	Distribution Ratio
1	3050	Feed additives	1,281,878	41.9
2	1050	immunotherapeutics	324,728	10.6
3	3030	Food additives	232,123	7.6
4	1030	Vaccines	202,313	6.6
5	1090	Diagnostic kits	125,803	4.1
6	1000	Other biopharmaceuticals	98,937	3.2
7	5040	Biosensors	97,574	3.2
8	1060	Hemotherapeutics	89,655	2.9
9	1020	Anticancer medications	81,859	2.7
10	1040	Hormones	78,532	2.6
11	1010	Antibiotics	78,410	2.6
12	3020	Amino acids	61,536	2.0
13	1100	Animal medications	43,919	1.4
14	2030	Enzymes and reagents for research	33,260	1.1
15	3010	Functional health foods	29,748	1.0
16	7020	Artificial seeds and seedlings	29,250	1.0

## B. Recent Trend of Export Status

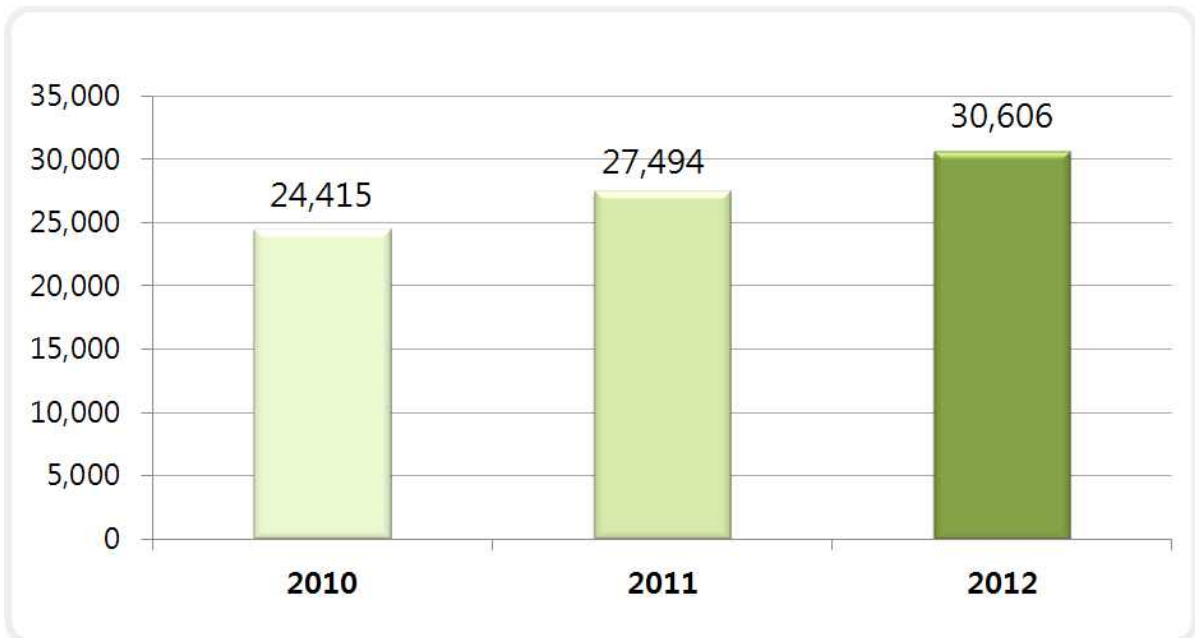
### 1) 2010~2012 Trend of Export

- The amount of bioindustry's export in 2012 increased by 311.2 billion won(11.3%) with 3 trillion and 60.6 billion won compared to 2 trillion and 749.4 billion won in 2011.

<Table 2-39> 2010~2012 Bioindustry's Trend of Export (Unit : one hundred million Won, %)

Classification		2010	2011	2012	Annual Average Rate of Change
Export	Amount	24,415	27,494	30,606	12.0
	Rate of Change	-0.2	12.6	11.3	

<Figure 2-35> 2010~2012 Bioindustry's Trend of Export (Unit : one hundred million Won)



- Biochemical industry export recorded the highest increase to KRW 97.2 billion by KRW 22.4 billion (29.9%) from 2011.

<Table 2-40> 2010~2012 Bioindustry's Trend of Export by Category

(Unit : million Won, %)

Industrial Category	2010		2011		2012		Variation from the year before		Annual Average Rate of Change
	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Amount of Export	Rate of Change	
<b>Total</b>	<b>2,441,539</b>	<b>100.0</b>	<b>2,749,356</b>	<b>100.0</b>	<b>3,060,585</b>	<b>100.0</b>	<b>311,229</b>	<b>11.3</b>	<b>12.0</b>
Biopharmaceutical industry	852,028	34.9	954,412	34.7	1,139,980	37.2	185,568	19.4	15.7
Biochemical industry	60,352	2.5	74,783	2.7	97,173	3.2	22,390	29.9	26.9
Biofood industry	1,356,334	55.6	1,531,965	55.7	1,610,631	52.6	78,666	5.1	9.0
Bioenvironmental industry	2,902	0.1	2,782	0.1	18	0.0	-2,765	-99.4	-92.1
Bioelectronics industry	73,181	3.0	92,623	3.4	99,841	3.3	7,217	7.8	16.8
Bioprocess and equipment industry	47,483	1.9	37,199	1.4	45,256	1.5	8,057	21.7	-2.4
Bioenergy and bioresource industry	21,950	0.9	25,393	0.9	30,153	1.0	4,760	18.7	17.2
Bioassay, bioinformatics and R&D service industry	27,309	1.1	30,198	1.1	37,534	1.2	7,335	24.3	17.2



## 2) 2008~2012 Trend of Export

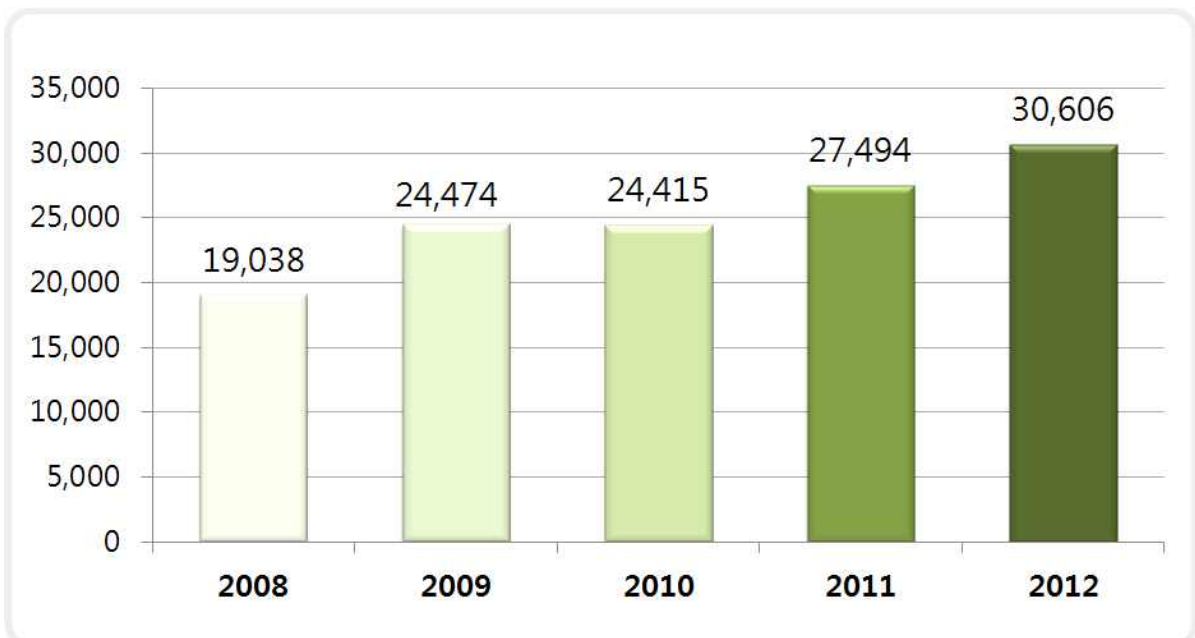
- Bioindustry's amount of export decreased by 0.2% in 2010 after it went over 2 trillion won, but it increased in 2012 by 11.3% compared to 2011.
- Since 2008, bioindustry's export showed continuous growth with 12.6% increase of average variation rate per year.

<Table 2-41> 2008~2012 Bioindustry's Trend of Export

(Unit : one hundred million Won, %)

Classification		2008	2009	2010	2011	2012	Annual Average Rate of Change
Export	Amount	19,038	24,474	24,415	27,494	30,606	12.6
	Rate of Change	29.4	28.6	-0.2	12.6	11.3	

<Figure 2-36> 2008~2012 Bioindustry's Trend of Export (Unit : one hundred million Won)



&lt;Table 2-42&gt; 2008~2012 Bioindustry's Trend of Export by Category

(Unit : million Won, %)

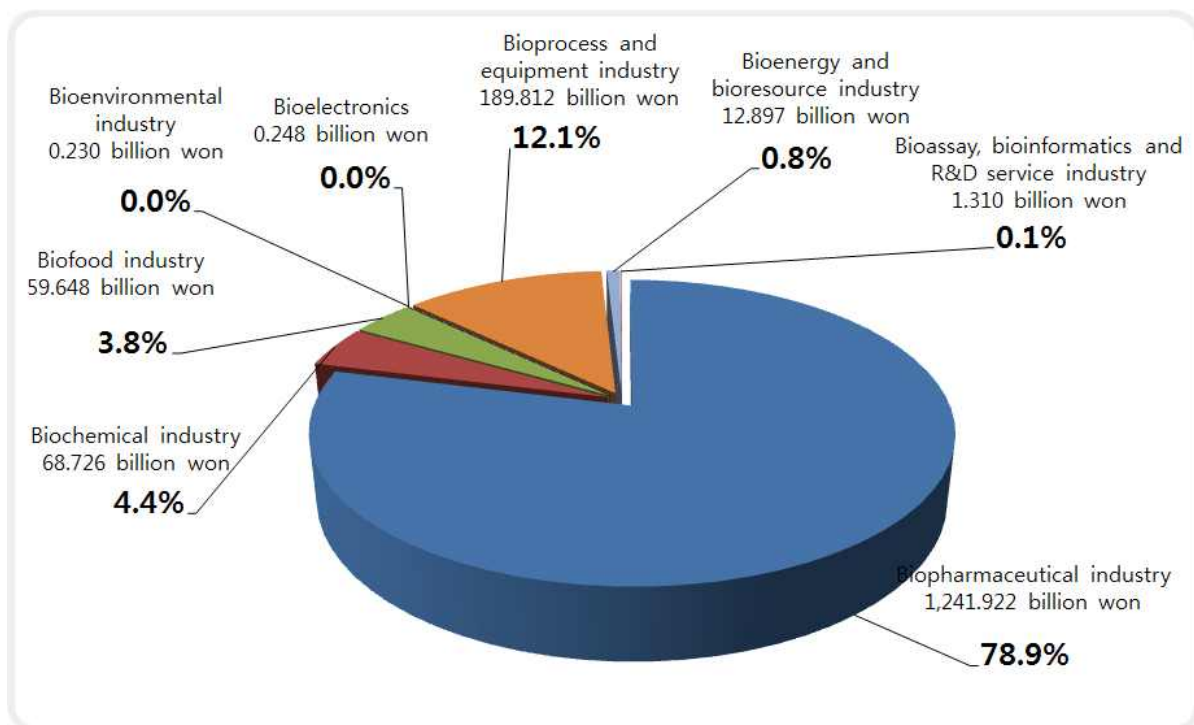
Industrial Category	2008		2009		2010		2011		2012		Variation from the year before		Annual Average Rate of Change
	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Amount of Export	Distribution Ratio	Domestic Sales	Rate of Change	
<b>Total</b>	<b>1,903,838</b>	<b>100.0</b>	<b>2,447,455</b>	<b>100.0</b>	<b>2,441,539</b>	<b>100.0</b>	<b>2,749,356</b>	<b>100.0</b>	<b>3,060,585</b>	<b>100.0</b>	<b>311,229</b>	<b>11.3</b>	<b>12.6</b>
Biopharmaceutical industry	560,075	29.4	927,929	37.9	852,028	34.9	954,412	34.7	1,139,980	37.2	185,568	19.4	19.4
Biochemical industry	49,913	2.6	69,907	2.9	60,352	2.5	74,783	2.7	97,173	3.2	22,390	29.9	18.1
Biofood industry	942,493	49.5	1,078,216	44.1	1,356,334	55.6	1,531,965	55.7	1,610,631	52.6	78,666	5.1	14.3
Bioenvironmental industry	10,746	0.6	12,933	0.5	2,902	0.1	2,782	0.1	18	0.0	-2,765	-99.4	-79.8
Bioelectronics industry	36,104	1.9	37,055	1.5	73,181	3.0	92,623	3.4	99,841	3.3	7,217	7.8	29.0
Bioprocess and equipment industry	183,134	9.6	109,876	4.5	47,483	1.9	37,199	1.4	45,256	1.5	8,057	21.7	-29.5
Bioenergy and bioresource industry	84	0.0	10,059	0.4	21,950	0.9	25,393	0.9	30,153	1.0	4,760	18.7	335.3
Bioassay, bioinformatics and R&D service industry	121,289	6.4	201,480	8.2	27,309	1.1	30,198	1.1	37,534	1.2	7,335	24.3	-25.4

## 8 Import Status of Bioindustry

### A. Import Status of 2012

- The size of bioindustry's import in 2012 reached 1 trillion and 574.8 billion won.
- Biopharmaceutical industry showed the highest proportion among the total import amount with 1 trillion and 241.9 billion won(78.9%) according to the bioindustry's size of import by category.

<Figure 2-37> 2012 Bioindustry's Size of Import by Category



- Among 51 domestic bioproducts and bioservices, there is 12 products that have more than 1.0% import amount.
- Among bioproducts, vaccines ranked the highest import amount among the total imports with 342.6 billion won(21.8%) and then the following highest products were Anticancer medications with 282.9 billion won(18.0%), bioprocess and analysis equipments with 186.4 billion won(11.8%), Other biopharmaceuticals with 157.3 billion won(10.0%), hemotherapeutics with 146.9 billion won(9.3%).
- 8 products among 12 belonged to biopharmaceutical industry according to the size of imports, and it took 77.7% among the total import amount.

<Table 2-43> 2012 Main Bioproduct's Import (Unit : million Won, %)

Ranking	Code	Product Name	Amount of Import	Distribution Ratio
1	1030	Anticancer medications	342,628	21.8
2	1020	Vaccines	282,914	18.0
3	6030	Bioprocess and analysis equipments	186,401	11.8
4	1000	Hemotherapeutics	157,319	10.0
5	1060	Other biopharmaceuticals	146,928	9.3
6	1040	Hormones	119,752	7.6
7	1050	Immunotherapeutics	80,526	5.1
8	1090	Animal medications	58,208	3.7
9	1080	Enzymes and reagents for research	34,871	2.2
10	2000	Diagnostic kits	32,221	2.0
11	3000	New therapeutics	19,942	1.3
12	2020	Other biochemicals	18,139	1.2

## B. Recent Trend of Import Status

### 1) 2010~2012 Bioindustry's Trend of Import

○ The amount of bioindustry's import in 2012 increased by 13.6 billion won(0.9%) with 1 trillion and 574.8 billion won compared to 1 trillion and 561.2 billion won in 2011.

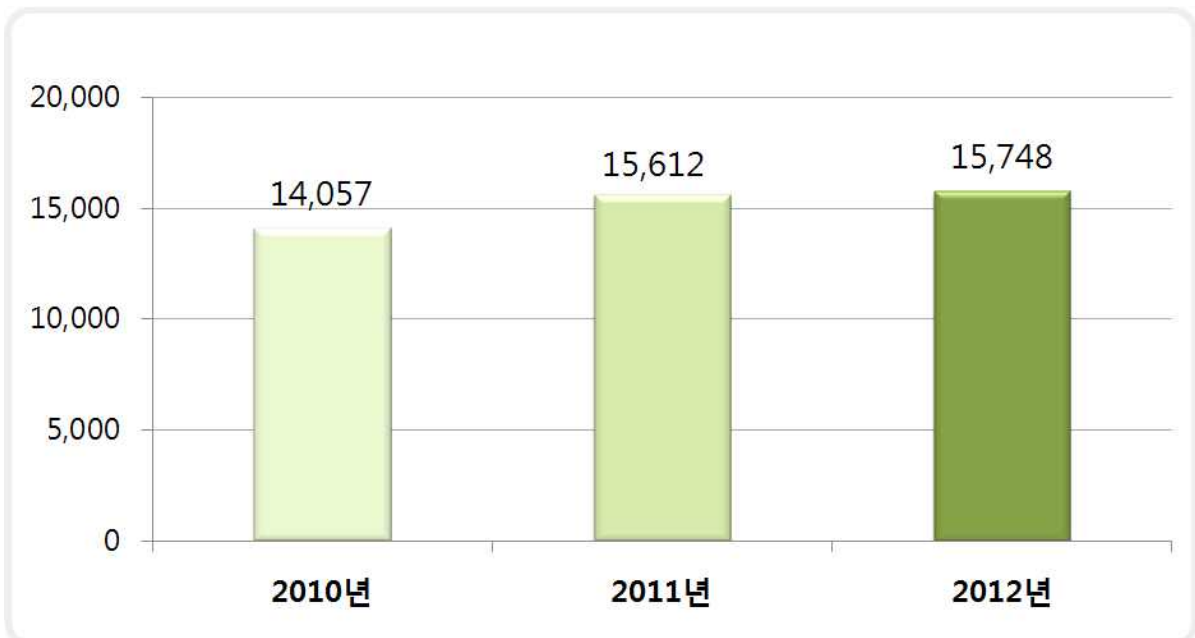
○ The average variation rate per year for 2010~2012 is 5.8%.

<Table 2-44> 2010~2012 Bioindustry's Trend of Import

(Unit : one hundred million Won, %)

Classification		2010	2011	2012	Annual Average Rate of Change
Import	Amount	14,057	15,612	15,748	5.8
	Rate of Change	5.8	11.1	0.9	

<Figure 2-38> 2010~2012 Bioindustry's Trend of Import (Unit : one hundred million Won)



&lt;Table 2-45&gt; 2010~2012 Bioindustry's Trend of Import by Category

(Unit : million Won, %)

Industrial Category	2010년		2011년		2012년		Variation from the year before		Annual Average Rate of Change
	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Amount of Import	Rate of Change	
<b>Total</b>	<b>1,405,659</b>	<b>100.0</b>	<b>1,561,182</b>	<b>100.0</b>	<b>1,574,793</b>	<b>100.0</b>	<b>13,610</b>	<b>0.9</b>	<b>5.8</b>
Biopharmaceutical industry	1,099,776	78.2	1,230,328	78.8	1,241,922	78.9	11,594	0.9	6.3
Biochemical industry	94,432	6.7	79,718	5.1	68,726	4.4	-10,992	-13.8	-14.7
Biofood industry	9,383	0.7	33,073	2.1	59,648	3.8	26,575	80.4	152.1
Bioenvironmental industry	676	0.0	239	0.0	230	0.0	-10	-4.1	-41.7
Bioelectronics industry	822	0.1	150	0.0	248	0.0	98	65.7	-45.1
Bioprocess and equipment industry	191,672	13.6	205,724	13.2	189,812	12.1	-15,912	-7.7	-0.5
Bioenergy and bioresource industry	7,550	0.5	10,436	0.7	12,897	0.8	2,461	23.6	30.7
Bioassay, bioinformatics and R&D service industry	1,346	0.1	1,514	0.1	1,310	0.1	-204	-13.5	-1.4

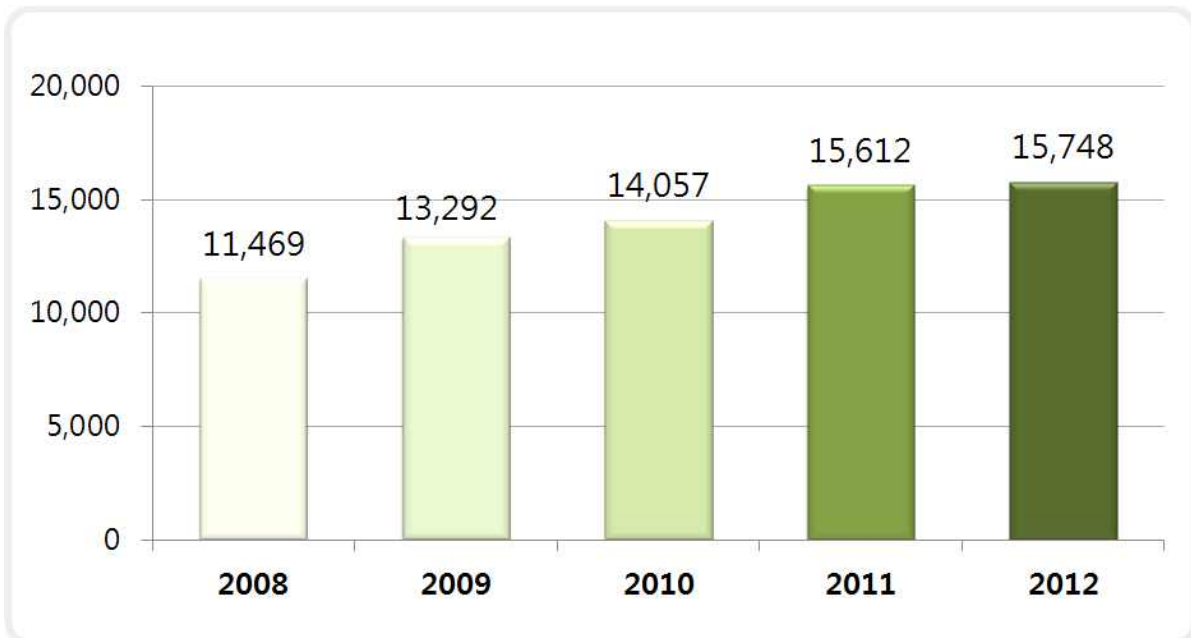
## 2) 2008~2012 Bioindustry's Trend of Import

- Domestic bioindustry's import continuously increased since 2008, and its average increase rate of import per year marked 8.2% for the last five years.

<Table 2-46> 2008~2012 Bioindustry's Trend of Import (Unit : one hundred million Won, %)

Classification		2008	2009	2010	2011	2012	Annual Average Rate of Change
Import	Amount	11,469	13,292	14,057	15,612	15,748	8.2
	Rate of Change	12.3	15.9	5.755342	11.1	0.9	

<Figure 2-39> 2008~2012 Bioindustry's Trend of Import (Unit : one hundred million Won)



&lt;Table 2-47&gt; 2008~2012 Bioindustry's Trend of Import by Category

(Unit : one hundred million Won, %)

Industrial Category	2008		2009		2010		2011		2012		Variation from the year before		Annual Average Rate of Change
	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Amount of Import	Distribution Ratio	Domestic Sales	Rate of Change	
<b>Total</b>	<b>1,146,958</b>	<b>100.0</b>	<b>1,329,247</b>	<b>100.0</b>	<b>1,405,659</b>	<b>100.0</b>	<b>1,561,182</b>	<b>100.0</b>	<b>1,574,793</b>	<b>100.0</b>	<b>13,610</b>	<b>0.9</b>	<b>8.2</b>
Biopharmaceutical industry	846,038	73.8	972,097	73.1	1,099,776	78.2	1,230,328	78.8	1,241,922	78.9	11,594	0.9	10.1
Biochemical industry	90,794	7.9	111,678	8.4	94,432	6.7	79,718	5.1	68,726	4.4	-10,992	-13.8	-6.7
Biofood industry	21,007	1.8	33,738	2.5	9,383	0.7	33,073	2.1	59,648	3.8	26,575	80.4	29.8
Bioenvironmental industry	3,252	0.3	3,988	0.3	676	0.0	239	0.0	230	0.0	-10	-	-48.5
Bioelectronics industry	1,088	0.1	4,106	0.3	822	0.1	150	0.0	248	0.0	98	65.7	-30.9
Bioprocess and equipment industry	168,568	14.7	192,308	14.5	191,672	13.6	205,724	13.2	189,812	12.1	-15,912	-7.7	3.0
Bioenergy and bioresource industry	16,049	1.4	10,896	0.8	7,550	0.5	10,436	0.7	12,897	0.8	2,461	23.6	-5.3
Bioassay, bioinformatics and R&D service industry	162	0.0	436	0.0	1,346	0.1	1,514	0.1	1,310	0.1	-204	-13.5	68.6





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< Table 1 > General Status of Company  
 < Table 1-1 > Distribution by Geography( I -7)

	Total	Seoul	Busan	Daegu	Incheon	Gwangju	Daejeon	Ulsan	Sejong	Gyeonggi	Gangwon	Chungbuk	Chungnam	Jeonbuk	Jeonam	Gyeongbuk	Gyeongnam	Jeju
Number of companies	958	166	15	21	24	11	83	8	5	318	56	70	52	24	27	37	29	12
<b>■ Sales Situation</b>																		
No sales	269	46	3	8	10	4	20	2	1	102	14	11	18	5	7	7	8	3
Sales below break-even - 1 year	39	5	1	1	3	1	4	-	-	11	5	1	1	-	2	2	2	-
Sales below break-even - 2~3 years	94	18	2	2	3	2	12	-	1	18	5	5	7	5	5	6	3	-
Sales below break-even - 4~5 years	65	10	-	1	3	1	7	-	2	11	5	9	2	3	1	5	4	1
Sales below break-even - 6~9 years	55	12	1	-	2	-	6	1	-	15	6	3	2	-	3	1	1	2
Sales below break-even - 10 or more years	60	6	3	-	-	1	5	-	1	19	5	6	7	2	3	1	-	1
Sales below break-even - Unknown	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Sales above break-even - 1 year	5	-	-	-	-	1	-	1	-	3	-	-	-	-	-	-	-	-
Sales above break-even - 2~3 years	24	3	-	2	1	-	4	-	-	6	2	2	1	-	2	2	1	-
Sales above break-even - 4~5 years	29	5	1	2	1	-	1	1	-	7	-	1	-	2	2	2	2	2
Sales above break-even - 6~9 years	62	4	1	2	-	-	5	1	-	21	3	11	1	1	2	4	4	2
Sales above break-even - 10 or more years	179	38	2	1	-	1	9	2	-	78	6	19	9	5	1	4	3	1
Sales above break-even - Unknown	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales - Unknown	75	18	1	2	1	-	10	-	-	27	5	2	3	1	1	3	1	-
<b>■ Main type of industry</b>																		
Biopharmaceutical industry	305	71	3	8	7	1	19	1	1	136	8	24	14	5	1	3	3	-
Biochemical industry	204	22	3	2	4	2	34	2	3	47	13	14	14	5	13	16	5	5
Biofood industry	199	16	7	5	4	3	5	-	1	48	19	23	19	8	9	11	15	6
Bioenvironmental industry	75	6	1	3	4	2	5	3	-	26	8	4	1	4	1	2	5	-
Bioelectronics industry	26	7	-	1	1	1	3	-	-	5	6	-	1	-	-	1	-	-
Bioprocess and equipment industry	70	20	-	1	4	1	7	-	-	29	2	1	3	-	-	2	-	-
Bioenergy and bioresource industry	24	-	1	1	-	-	3	2	-	9	-	2	-	1	2	1	1	1
Bioassay, bioinformatics and R&D service industry	55	24	-	-	-	1	7	-	-	18	-	2	-	1	1	1	-	-
<b>□ No sales</b>																		
Biopharmaceutical industry	102	23	-	4	2	-	2	-	-	54	1	6	5	3	1	-	1	-
Biochemical industry	43	4	-	-	1	-	12	1	1	9	2	1	4	2	3	1	1	1
Biofood industry	58	6	2	2	3	-	-	-	-	17	6	3	8	-	2	2	5	2
Bioenvironmental industry	19	2	-	2	3	1	1	-	-	3	3	1	-	-	-	2	1	-
Bioelectronics industry	9	4	-	-	-	1	1	-	-	1	1	-	-	-	-	1	-	-
Bioprocess and equipment industry	18	3	-	-	1	1	1	-	-	9	1	-	1	-	-	1	-	-
Bioenergy and bioresource industry	8	-	1	-	-	-	1	1	-	4	-	-	-	-	1	-	-	-
Bioassay, bioinformatics and R&D service industry	12	4	-	-	-	1	2	-	-	5	-	-	-	-	-	-	-	-
<b>□ Sales below break-even - 1 year</b>																		
Biopharmaceutical industry	12	3	-	-	1	-	1	-	-	4	2	-	1	-	-	-	-	-
Biochemical industry	15	1	1	-	1	1	2	-	-	4	1	-	-	-	2	2	-	-
Biofood industry	6	-	-	-	-	-	1	-	-	2	2	-	-	-	-	-	1	-
Bioenvironmental industry	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Bioelectronics industry	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Bioprocess and equipment industry	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Bioenergy and bioresource industry	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>□ Sales below break-even - 2~3 years</b>																		
Biopharmaceutical industry	19	6	-	-	1	1	1	-	-	9	-	1	-	-	-	-	-	-
Biochemical industry	23	3	-	-	-	1	6	-	1	2	2	1	3	-	1	3	-	-
Biofood industry	21	2	2	1	1	-	-	-	-	4	2	1	3	2	1	2	-	-
Bioenvironmental industry	10	-	-	-	-	-	1	-	-	2	-	2	-	1	1	-	3	-
Bioelectronics industry	3	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-	-
Bioprocess and equipment industry	9	4	-	1	1	-	2	-	-	1	-	-	-	-	-	-	-	-
Bioenergy and bioresource industry	4	-	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-
Bioassay, bioinformatics and R&D service industry	5	3	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
<b>□ Sales below break-even - 4~5 years</b>																		
Biopharmaceutical industry	15	3	-	-	1	-	5	-	-	2	1	2	1	-	-	-	-	-
Biochemical industry	15	3	-	-	-	-	1	-	1	2	-	3	-	-	1	4	-	-
Biofood industry	19	-	-	1	-	1	-	-	1	1	3	3	1	2	-	1	4	1
Bioenvironmental industry	7	1	-	-	1	-	1	-	-	3	-	-	-	1	-	-	-	-
Bioelectronics industry	2	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Bioprocess and equipment industry	2	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Bioenergy and bioresource industry	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	4	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-

	Total	Seoul	Busan	Daegu	Incheon	Gwangju	Daejeon	Ulsan	Sejong	Gyeonggi	Gangwon	Chungbuk	Chungnam	Jeonbuk	Jeonnam	Gyeongbuk	Gyeongnam	Jeju
Number of companies	958	166	15	21	24	11	83	8	5	318	56	70	52	24	27	37	29	12
<input type="checkbox"/> Sales below break-even - 6~9 years																		
Biopharmaceutical industry	14	5	-	-	1	-	2	-	-	4	1	1	-	-	-	-	-	-
Biochemical industry	19	2	1	-	1	-	2	-	-	4	3	1	1	-	2	-	1	1
Biofood industry	10	2	-	-	-	-	1	-	-	3	-	1	-	-	1	1	-	1
Bioenvironmental industry	5	-	-	-	-	-	-	1	-	3	1	-	-	-	-	-	-	-
Bioelectronics industry	2	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-
Bioprocess and equipment industry	3	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales below break-even -10 or more years																		
Biopharmaceutical industry	21	4	1	-	-	-	1	-	1	8	-	3	2	1	-	-	-	-
Biochemical industry	9	1	1	-	-	-	1	-	-	1	-	1	2	-	1	-	-	1
Biofood industry	17	-	1	-	-	1	1	-	-	4	2	1	3	1	2	1	-	-
Bioenvironmental industry	4	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-
Bioelectronics industry	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Bioprocess and equipment industry	4	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	3	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
<input type="checkbox"/> Sales below break-even - Unknown																		
Biofood industry	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 1 year																		
Biopharmaceutical industry	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Biofood industry	2	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
Bioenvironmental industry	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Bioprocess and equipment industry	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 2~3 years																		
Biopharmaceutical industry	9	1	-	1	-	-	1	-	-	5	-	1	-	-	-	-	-	-
Biochemical industry	7	1	-	-	-	-	2	-	-	-	2	-	1	-	-	1	-	-
Biofood industry	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-
Bioelectronics industry	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Bioprocess and equipment industry	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	2	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 4~5 years																		
Biopharmaceutical industry	8	1	-	1	1	-	-	1	-	3	-	-	-	-	-	-	1	-
Biochemical industry	7	-	-	1	-	-	1	-	-	1	-	1	-	-	2	1	-	-
Biofood industry	6	1	1	-	-	-	-	-	-	-	-	-	-	1	2	-	-	1
Bioenvironmental industry	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Bioprocess and equipment industry	4	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Bioenergy and bioresource industry	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Bioassay, bioinformatics and R&D service industry	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 6~9 years																		
Biopharmaceutical industry	17	1	-	2	-	-	1	-	-	8	2	2	-	-	-	1	-	-
Biochemical industry	15	-	-	-	-	-	-	-	-	5	-	3	1	-	1	2	1	2
Biofood industry	16	-	1	-	-	-	2	-	-	2	1	6	-	-	1	-	3	-
Bioenvironmental industry	3	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-
Bioelectronics industry	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bioprocess and equipment industry	3	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-
Bioenergy and bioresource industry	2	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	4	1	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
<input type="checkbox"/> Sales above break-even - 10 or more years																		
Biopharmaceutical industry	66	13	2	-	-	-	3	-	-	34	-	7	4	1	-	1	1	-
Biochemical industry	33	7	-	-	-	-	2	1	-	12	2	3	2	2	1	-	1	-
Biofood industry	32	3	-	1	-	-	-	-	-	12	2	6	2	2	-	2	1	1
Bioenvironmental industry	12	-	-	-	-	1	-	1	-	7	1	1	1	-	-	-	-	-
Bioelectronics industry	3	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-
Bioprocess and equipment industry	16	8	-	-	-	-	1	-	-	5	-	1	-	-	-	1	-	-
Bioenergy and bioresource industry	2	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	15	7	-	-	-	-	3	-	-	4	-	1	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - Unknown																		
Bioenvironmental industry	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales - Unknown																		
Biopharmaceutical industry	21	11	-	-	-	-	2	-	-	4	1	1	1	-	-	1	-	-
Biochemical industry	18	-	-	1	1	-	5	-	-	7	1	-	-	1	1	1	-	-
Biofood industry	8	2	-	-	-	-	-	-	-	2	1	1	1	-	-	1	-	-
Bioenvironmental industry	10	2	1	-	-	-	1	-	-	4	2	-	-	-	-	-	-	-
Bioprocess and equipment industry	8	2	-	-	-	-	-	-	-	5	-	-	1	-	-	-	-	-
Bioenergy and bioresource industry	4	-	-	1	-	-	1	-	-	1	-	-	-	-	-	-	1	-
Bioassay, bioinformatics and R&D service industry	6	1	-	-	-	-	1	-	-	4	-	-	-	-	-	-	-	-

&lt; Table 1-2 &gt; Existence of other business within the company(Ⅱ-4-1)

(Unit : number of firms)

	Total	Exclusive business	Plural businesses
Number of companies	958	487	471
<input checked="" type="checkbox"/> Sales Situation			
No sales	269	127	142
Sales below break-even - 1 year	39	21	18
Sales below break-even - 2~3 years	94	51	43
Sales below break-even - 4~5 years	65	39	26
Sales below break-even - 6~9 years	55	36	19
Sales below break-even - 10 or more years	60	37	23
Sales below break-even - Unknown	1	-	1
Sales above break-even - 1 year	5	2	3
Sales above break-even - 2~3 years	24	15	9
Sales above break-even - 4~5 years	29	15	14
Sales above break-even - 6~9 years	62	35	27
Sales above break-even - 10 or more years	179	61	118
Sales above break-even - Unknown	1	1	-
Sales - Unknown	75	47	28
<input checked="" type="checkbox"/> Main type of industry			
Biopharmaceutical industry	305	129	176
Biochemical industry	204	103	101
Biofood industry	199	97	102
Bioenvironmental industry	75	42	33
Bioelectronics industry	26	16	10
Bioprocess and equipment industry	70	46	24
Bioenergy and bioresource industry	24	13	11
Bioassay, bioinformatics and R&D service industry	55	41	14
<input type="checkbox"/> No sales			
Biopharmaceutical industry	102	45	57
Biochemical industry	43	18	25
Biofood industry	58	19	39
Bioenvironmental industry	19	12	7
Bioelectronics industry	9	7	2
Bioprocess and equipment industry	18	12	6
Bioenergy and bioresource industry	8	4	4
Bioassay, bioinformatics and R&D service industry	12	10	2
<input type="checkbox"/> Sales below break-even - 1 year			
Biopharmaceutical industry	12	5	7
Biochemical industry	15	10	5
Biofood industry	6	3	3
Bioenvironmental industry	2	-	2
Bioelectronics industry	1	1	-
Bioprocess and equipment industry	1	-	1
Bioenergy and bioresource industry	1	1	-
Bioassay, bioinformatics and R&D service industry	1	1	-
<input type="checkbox"/> Sales below break-even - 2~3 years			
Biopharmaceutical industry	19	11	8
Biochemical industry	23	12	11
Biofood industry	21	12	9
Bioenvironmental industry	10	5	5
Bioelectronics industry	3	1	2
Bioprocess and equipment industry	9	6	3
Bioenergy and bioresource industry	4	2	2
Bioassay, bioinformatics and R&D service industry	5	2	3
<input type="checkbox"/> Sales below break-even - 4~5 years			
Biopharmaceutical industry	15	8	7
Biochemical industry	15	7	8
Biofood industry	19	14	5
Bioenvironmental industry	7	4	3
Bioelectronics industry	2	1	1
Bioprocess and equipment industry	2	2	-
Bioenergy and bioresource industry	1	1	-
Bioassay, bioinformatics and R&D service industry	4	2	2

	Total	Exclusive business	Plural businesses
Number of companies	958	487	471
<input type="checkbox"/> Sales below break-even - 6~9 years			
Biopharmaceutical industry	14	9	5
Biochemical industry	19	12	7
Biofood industry	10	7	3
Bioenvironmental industry	5	4	1
Bioelectronics industry	2	1	1
Bioprocess and equipment industry	3	1	2
Bioassay, bioinformatics and R&D service industry	2	2	-
<input type="checkbox"/> Sales below break-even - 10 or more years			
Biopharmaceutical industry	21	6	15
Biochemical industry	9	6	3
Biofood industry	17	13	4
Bioenvironmental industry	4	4	-
Bioelectronics industry	2	1	1
Bioprocess and equipment industry	4	4	-
Bioassay, bioinformatics and R&D service industry	3	3	-
<input type="checkbox"/> Sales below break-even - Unknown			
Biofood industry	1	-	1
<input type="checkbox"/> Sales above break-even - 1 year			
Biopharmaceutical industry	1	-	1
Biofood industry	2	1	1
Bioenvironmental industry	1	-	1
Bioprocess and equipment industry	1	1	-
<input type="checkbox"/> Sales above break-even - 2~3 years			
Biopharmaceutical industry	9	4	5
Biochemical industry	7	5	2
Biofood industry	3	2	1
Bioelectronics industry	2	1	1
Bioprocess and equipment industry	1	1	-
Bioassay, bioinformatics and R&D service industry	2	2	-
<input type="checkbox"/> Sales above break-even - 4~5 years			
Biopharmaceutical industry	8	3	5
Biochemical industry	7	2	5
Biofood industry	6	3	3
Bioenvironmental industry	1	1	-
Bioprocess and equipment industry	4	4	-
Bioenergy and bioresource industry	2	1	1
Bioassay, bioinformatics and R&D service industry	1	1	-
<input type="checkbox"/> Sales above break-even - 6~9 years			
Biopharmaceutical industry	17	10	7
Biochemical industry	15	7	8
Biofood industry	16	9	7
Bioenvironmental industry	3	-	3
Bioelectronics industry	2	2	-
Bioprocess and equipment industry	3	2	1
Bioenergy and bioresource industry	2	1	1
Bioassay, bioinformatics and R&D service industry	4	4	-
<input type="checkbox"/> Sales above break-even - 10 or more years			
Biopharmaceutical industry	66	17	49
Biochemical industry	33	13	20
Biofood industry	32	8	24
Bioenvironmental industry	12	3	9
Bioelectronics industry	3	1	2
Bioprocess and equipment industry	16	10	6
Bioenergy and bioresource industry	2	-	2
Bioassay, bioinformatics and R&D service industry	15	9	6
<input type="checkbox"/> Sales above break-even - Unknown			
Bioenvironmental industry	1	1	-
<input type="checkbox"/> Sales - Unknown			
Biopharmaceutical industry	21	11	10
Biochemical industry	18	11	7
Biofood industry	8	6	2
Bioenvironmental industry	10	8	2
Bioprocess and equipment industry	8	3	5
Bioenergy and bioresource industry	4	3	1
Bioassay, bioinformatics and R&D service industry	6	5	1

&lt;Table 1-3 &gt; Distribution by Type of Company[Duplication](II-4-2)

(Unit : number of firms)

	Total	Venture companies	INNO-BIZ	Kosdaq-listed companies	Listed companies	Not applicable/Unknown
<b>Number of companies</b>	<b>958</b>	<b>322</b>	<b>329</b>	<b>84</b>	<b>81</b>	<b>404</b>
<input checked="" type="checkbox"/> <b>Sales Situation</b>						
No sales	269	71	69	21	30	130
Sales below break-even - 1 year	39	15	11	3	2	19
Sales below break-even - 2~3 years	94	39	31	4	4	42
Sales below break-even - 4~5 years	65	30	31	3	2	24
Sales below break-even - 6~9 years	55	30	24	5	1	17
Sales below break-even - 10 or more years	60	23	26	9	4	18
Sales below break-even - Unknown	1	1	1	-	-	-
Sales above break-even - 1 year	5	3	1	-	1	1
Sales above break-even - 2~3 years	24	10	3	1	-	12
Sales above break-even - 4~5 years	29	11	11	2	5	9
Sales above break-even - 6~9 years	62	29	38	6	4	16
Sales above break-even - 10 or more years	179	47	62	25	21	77
Sales above break-even - Unknown	1	-	1	-	-	-
Sales - Unknown	75	13	20	5	7	39
<input checked="" type="checkbox"/> <b>Main type of industry</b>						
Biopharmaceutical industry	305	84	84	46	38	132
Biochemical industry	204	83	80	13	20	73
Biofood industry	199	61	71	10	18	86
Bioenvironmental industry	75	21	31	-	1	38
Bioelectronics industry	26	16	11	3	-	7
Bioprocess and equipment industry	70	22	28	5	1	35
Bioenergy and bioresource industry	24	7	6	2	3	11
Bioassay, bioinformatics and R&D service industry	55	28	18	5	-	22
<input type="checkbox"/> <b>No sales</b>						
Biopharmaceutical industry	102	23	20	12	11	54
Biochemical industry	43	15	16	1	6	15
Biofood industry	58	10	11	5	11	28
Bioenvironmental industry	19	6	8	-	-	10
Bioelectronics industry	9	3	3	-	-	5
Bioprocess and equipment industry	18	5	7	2	-	10
Bioenergy and bioresource industry	8	2	2	-	2	3
Bioassay, bioinformatics and R&D service industry	12	7	2	1	-	5
<input type="checkbox"/> <b>Sales below break-even - 1 year</b>						
Biopharmaceutical industry	12	7	6	2	1	4
Biochemical industry	15	4	2	1	1	9
Biofood industry	6	2	1	-	-	3
Bioenvironmental industry	2	-	1	-	-	1
Bioelectronics industry	1	-	-	-	-	1
Bioprocess and equipment industry	1	1	1	-	-	-
Bioenergy and bioresource industry	1	-	-	-	-	1
Bioassay, bioinformatics and R&D service industry	1	1	-	-	-	-
<input type="checkbox"/> <b>Sales below break-even - 2~3 years</b>						
Biopharmaceutical industry	19	7	5	1	2	8
Biochemical industry	23	10	5	2	2	9
Biofood industry	21	8	7	-	-	11
Bioenvironmental industry	10	5	6	-	-	4
Bioelectronics industry	3	2	2	1	-	-
Bioprocess and equipment industry	9	2	2	-	-	6
Bioenergy and bioresource industry	4	3	2	-	-	1
Bioassay, bioinformatics and R&D service industry	5	2	2	-	-	3
<input type="checkbox"/> <b>Sales below break-even - 4~5 years</b>						
Biopharmaceutical industry	15	7	5	2	2	4
Biochemical industry	15	9	7	1	-	6
Biofood industry	19	7	10	-	-	9
Bioenvironmental industry	7	1	3	-	-	4
Bioelectronics industry	2	1	-	-	-	1
Bioprocess and equipment industry	2	1	2	-	-	-
Bioenergy and bioresource industry	1	1	1	-	-	-
Bioassay, bioinformatics and R&D service industry	4	3	3	-	-	-

	Total	Venture companies	INNO-BIZ	Kosdaq-listed companies	Listed companies	Not applicable/Unknown
<b>Number of companies</b>	<b>958</b>	<b>322</b>	<b>329</b>	<b>84</b>	<b>81</b>	<b>404</b>
<input type="checkbox"/> Sales below break-even - 6~9 years						
Biopharmaceutical industry	14	8	6	2	-	3
Biochemical industry	19	12	10	2	1	4
Biofood industry	10	4	3	-	-	4
Bioenvironmental industry	5	2	2	-	-	3
Bioelectronics industry	2	2	2	-	-	-
Bioprocess and equipment industry	3	2	1	1	-	1
Bioassay, bioinformatics and R&D service industry	2	-	-	-	-	2
<input type="checkbox"/> Sales below break-even - 10 or more years						
Biopharmaceutical industry	21	6	8	6	3	7
Biochemical industry	9	5	5	1	1	-
Biofood industry	17	7	11	2	-	4
Bioenvironmental industry	4	1	-	-	-	3
Bioelectronics industry	2	2	-	-	-	-
Bioprocess and equipment industry	4	1	2	-	-	2
Bioassay, bioinformatics and R&D service industry	3	1	-	-	-	2
<input type="checkbox"/> Sales below break-even - Unknown						
Biofood industry	1	1	1	-	-	-
<input type="checkbox"/> Sales above break-even - 1 year						
Biopharmaceutical industry	1	-	-	-	1	-
Biofood industry	2	1	1	-	-	1
Bioenvironmental industry	1	1	-	-	-	-
Bioprocess and equipment industry	1	1	-	-	-	-
<input type="checkbox"/> Sales above break-even - 2~3 years						
Biopharmaceutical industry	9	4	-	1	-	4
Biochemical industry	7	2	3	-	-	4
Biofood industry	3	1	-	-	-	2
Bioelectronics industry	2	2	-	-	-	-
Bioprocess and equipment industry	1	-	-	-	-	1
Bioassay, bioinformatics and R&D service industry	2	1	-	-	-	1
<input type="checkbox"/> Sales above break-even - 4~5 years						
Biopharmaceutical industry	8	3	4	2	1	2
Biochemical industry	7	3	4	-	1	2
Biofood industry	6	2	2	-	2	1
Bioenvironmental industry	1	1	-	-	-	-
Bioprocess and equipment industry	4	2	1	-	-	2
Bioenergy and biosource industry	2	-	-	-	1	1
Bioassay, bioinformatics and R&D service industry	1	-	-	-	-	1
<input type="checkbox"/> Sales above break-even - 6~9 years						
Biopharmaceutical industry	17	8	8	4	1	7
Biochemical industry	15	5	10	1	2	2
Biofood industry	16	10	13	-	-	3
Bioenvironmental industry	3	-	1	-	1	1
Bioelectronics industry	2	2	1	-	-	-
Bioprocess and equipment industry	3	1	2	-	-	1
Bioenergy and biosource industry	2	1	1	1	-	-
Bioassay, bioinformatics and R&D service industry	4	2	2	-	-	2
<input type="checkbox"/> Sales above break-even - 10 or more years						
Biopharmaceutical industry	66	9	16	10	15	31
Biochemical industry	33	15	14	4	1	13
Biofood industry	32	7	10	3	5	13
Bioenvironmental industry	12	3	6	-	-	6
Bioelectronics industry	3	2	3	2	-	-
Bioprocess and equipment industry	16	3	7	2	-	8
Bioenergy and biosource industry	2	-	-	1	-	1
Bioassay, bioinformatics and R&D service industry	15	8	6	3	-	5
<input type="checkbox"/> Sales above break-even - Unknown						
Bioenvironmental industry	1	-	1	-	-	-
<input type="checkbox"/> Sales - Unknown						
Biopharmaceutical industry	21	2	6	4	1	8
Biochemical industry	18	3	4	-	5	9
Biofood industry	8	1	1	-	-	7
Bioenvironmental industry	10	1	3	-	-	6
Bioprocess and equipment industry	8	3	3	-	1	4
Bioenergy and biosource industry	4	-	-	-	-	4
Bioassay, bioinformatics and R&D service industry	6	3	3	1	-	1



&lt; Table 1-4 &gt; Distribution by Establishment Year (Unit : number of firms)

	Total	Before 1950	1951~1980	1981~1990	1991~1995	1996~2000	2001~2005	2006~2012	Unknown
Number of companies	958	13	136	107	81	273	211	121	16
<input checked="" type="checkbox"/> Sales Situation									
No sales	269	5	51	38	25	53	57	38	2
Sales below break-even - 1 year	39	1	3	3	4	12	5	11	-
Sales below break-even - 2~3 years	94	-	4	7	-	32	30	21	-
Sales below break-even - 4~5 years	65	-	2	4	2	25	19	13	-
Sales below break-even - 6~9 years	55	-	4	1	7	19	22	2	-
Sales below break-even - 10 or more years	60	-	7	11	8	25	8	1	-
Sales below break-even - Unknown	1	-	-	-	-	1	-	-	-
Sales above break-even - 1 year	5	1	1	-	-	3	-	-	-
Sales above break-even - 2~3 years	24	-	1	2	-	4	5	12	-
Sales above break-even - 4~5 years	29	-	7	3	2	6	6	5	-
Sales above break-even - 6~9 years	62	2	2	1	2	21	29	5	-
Sales above break-even - 10 or more years	179	4	44	31	23	50	22	5	-
Sales above break-even - Unknown	1	-	-	-	-	1	-	-	-
Sales - Unknown	75	-	10	6	8	21	8	8	14
<input checked="" type="checkbox"/> Main type of industry									
Biopharmaceutical industry	305	10	63	50	31	77	45	28	1
Biochemical industry	204	2	24	15	10	64	43	40	6
Biofood industry	199	1	34	20	13	60	55	16	-
Bioenvironmental industry	75	-	8	9	5	18	27	3	5
Bioelectronics industry	26	-	-	1	2	10	7	6	-
Bioprocess and equipment industry	70	-	2	9	17	18	12	12	-
Bioenergy and bioresource industry	24	-	5	2	1	3	5	6	2
Bioassay, bioinformatics and R&D service industry	55	-	-	1	2	23	17	10	2
<input type="checkbox"/> No sales									
Biopharmaceutical industry	102	4	20	20	12	21	16	9	-
Biochemical industry	43	1	9	4	3	11	4	10	1
Biofood industry	58	-	18	9	5	8	15	3	-
Bioenvironmental industry	19	-	2	2	-	2	10	3	-
Bioelectronics industry	9	-	-	1	-	2	5	1	-
Bioprocess and equipment industry	18	-	-	1	5	5	2	5	-
Bioenergy and bioresource industry	8	-	2	-	-	1	2	3	-
Bioassay, bioinformatics and R&D service industry	12	-	-	1	-	3	3	4	1
<input type="checkbox"/> Sales below break-even - 1 year									
Biopharmaceutical industry	12	-	1	2	1	6	-	2	-
Biochemical industry	15	1	1	-	-	4	2	7	-
Biofood industry	6	-	-	1	1	1	1	2	-
Bioenvironmental industry	2	-	-	-	-	-	2	-	-
Bioelectronics industry	1	-	-	-	1	-	-	-	-
Bioprocess and equipment industry	1	-	1	-	-	-	-	-	-
Bioenergy and bioresource industry	1	-	-	-	1	-	-	-	-
Bioassay, bioinformatics and R&D service industry	1	-	-	-	-	1	-	-	-
<input type="checkbox"/> Sales below break-even - 2~3 years									
Biopharmaceutical industry	19	-	2	2	-	7	3	5	-
Biochemical industry	23	-	1	3	-	7	7	5	-
Biofood industry	21	-	1	-	-	9	6	5	-
Bioenvironmental industry	10	-	-	1	-	4	5	-	-
Bioelectronics industry	3	-	-	-	-	1	1	1	-
Bioprocess and equipment industry	9	-	-	1	-	4	2	2	-
Bioenergy and bioresource industry	4	-	-	-	-	-	2	2	-
Bioassay, bioinformatics and R&D service industry	5	-	-	-	-	-	4	1	-
<input type="checkbox"/> Sales below break-even - 4~5 years									
Biopharmaceutical industry	15	-	1	1	-	8	2	3	-
Biochemical industry	15	-	-	1	-	5	3	6	-
Biofood industry	19	-	1	2	-	9	6	1	-
Bioenvironmental industry	7	-	-	-	1	-	6	-	-
Bioelectronics industry	2	-	-	-	-	1	-	1	-
Bioprocess and equipment industry	2	-	-	-	1	-	-	1	-
Bioenergy and bioresource industry	1	-	-	-	-	-	1	-	-
Bioassay, bioinformatics and R&D service industry	4	-	-	-	-	2	1	1	-

	Total	Before 1950	1951~1980	1981~1990	1991~1995	1996~2000	2001~2005	2006~2012	Unknown
Number of companies	958	13	136	107	81	273	211	121	16
<input type="checkbox"/> Sales below break-even - 6~9 years									
Biopharmaceutical industry	14	-	2	-	2	4	6	-	-
Biochemical industry	19	-	-	-	2	10	6	1	-
Biofood industry	10	-	-	-	2	2	6	-	-
Bioenvironmental industry	5	-	2	-	1	1	1	-	-
Bioelectronics industry	2	-	-	-	-	2	-	-	-
Bioprocess and equipment industry	3	-	-	1	-	-	1	1	-
Bioassay, bioinformatics and R&D service industry	2	-	-	-	-	-	2	-	-
<input type="checkbox"/> Sales below break-even - 10 or more years									
Biopharmaceutical industry	21	-	3	6	3	7	1	1	-
Biochemical industry	9	-	2	-	-	5	2	-	-
Biofood industry	17	-	2	3	2	6	4	-	-
Bioenvironmental industry	4	-	-	1	-	3	-	-	-
Bioelectronics industry	2	-	-	-	1	1	-	-	-
Bioprocess and equipment industry	4	-	-	1	2	1	-	-	-
Bioassay, bioinformatics and R&D service industry	3	-	-	-	-	2	1	-	-
<input type="checkbox"/> Sales below break-even - Unknown									
Biofood industry	1	-	-	-	-	1	-	-	-
<input type="checkbox"/> Sales above break-even - 1 year									
Biopharmaceutical industry	1	1	-	-	-	-	-	-	-
Biofood industry	2	-	-	-	-	2	-	-	-
Bioenvironmental industry	1	-	1	-	-	-	-	-	-
Bioprocess and equipment industry	1	-	-	-	-	1	-	-	-
<input type="checkbox"/> Sales above break-even - 2~3 years									
Biopharmaceutical industry	9	-	-	2	-	1	3	3	-
Biochemical industry	7	-	1	-	-	2	1	3	-
Biofood industry	3	-	-	-	-	1	1	1	-
Bioelectronics industry	2	-	-	-	-	-	-	2	-
Bioprocess and equipment industry	1	-	-	-	-	-	-	1	-
Bioassay, bioinformatics and R&D service industry	2	-	-	-	-	-	-	2	-
<input type="checkbox"/> Sales above break-even - 4~5 years									
Biopharmaceutical industry	8	-	4	-	-	3	-	1	-
Biochemical industry	7	-	1	-	1	-	3	2	-
Biofood industry	6	-	1	1	-	1	2	1	-
Bioenvironmental industry	1	-	-	1	-	-	-	-	-
Bioprocess and equipment industry	4	-	-	1	1	1	1	-	-
Bioenergy and bioresource industry	2	-	1	-	-	1	-	-	-
Bioassay, bioinformatics and R&D service industry	1	-	-	-	-	-	-	1	-
<input type="checkbox"/> Sales above break-even - 6~9 years									
Biopharmaceutical industry	17	1	-	1	1	7	7	-	-
Biochemical industry	15	-	2	-	-	3	9	1	-
Biofood industry	16	1	-	-	-	5	8	2	-
Bioenvironmental industry	3	-	-	-	-	2	1	-	-
Bioelectronics industry	2	-	-	-	-	-	1	1	-
Bioprocess and equipment industry	3	-	-	-	-	1	2	-	-
Bioenergy and bioresource industry	2	-	-	-	-	1	-	1	-
Bioassay, bioinformatics and R&D service industry	4	-	-	-	1	2	1	-	-
<input type="checkbox"/> Sales above break-even - 10 or more years									
Biopharmaceutical industry	66	4	25	14	9	8	4	2	-
Biochemical industry	33	-	4	7	4	12	5	1	-
Biofood industry	32	-	11	3	3	9	5	1	-
Bioenvironmental industry	12	-	3	2	2	4	1	-	-
Bioelectronics industry	3	-	-	-	-	3	-	-	-
Bioprocess and equipment industry	16	-	-	4	5	4	3	-	-
Bioenergy and bioresource industry	2	-	1	1	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	15	-	-	-	-	10	4	1	-
<input type="checkbox"/> Sales above break-even - Unknown									
Bioenvironmental industry	1	-	-	-	-	1	-	-	-
<input type="checkbox"/> Sales - Unknown									
Biopharmaceutical industry	21	-	5	2	3	5	3	2	1
Biochemical industry	18	-	3	-	-	5	1	4	5
Biofood industry	8	-	-	1	-	6	1	-	-
Bioenvironmental industry	10	-	-	2	1	1	1	-	5
Bioprocess and equipment industry	8	-	1	-	3	1	1	2	-
Bioenergy and bioresource industry	4	-	1	1	-	-	-	-	2
Bioassay, bioinformatics and R&D service industry	6	-	-	-	1	3	1	-	1

&lt; Table 1-5 &gt; Distribution by total number of workers' size(II-3) (Unit : number of firms, people)

	Total	Less than 50	50~299	300~999	More than 1,000	Un-known	Average	CEO's gender			Employees' gender		
								Male	Female	Unknown	Male	Female	Unknown
Number of companies	958	564	252	76	41	25	354	848	73	37	243,364	72,080	14,727
<input checked="" type="checkbox"/> Sales Situation													
No sales	269	139	81	33	15	1	279	241	17	11	49,455	17,970	7,321
Sales below break-even - 1 year	39	28	9	1	1	-	112	33	6	-	3,398	895	61
Sales below break-even - 2~3 years	94	78	11	2	2	1	95	83	9	2	6,908	1,556	416
Sales below break-even - 4~5 years	65	56	7	2	-	-	44	59	5	1	1,781	895	168
Sales below break-even - 6~9 years	55	43	10	1	1	-	128	47	7	1	3,011	3,769	286
Sales below break-even - 10 or more years	60	40	17	3	-	-	80	56	4	-	3,147	1,556	70
Sales below break-even - Unknown	1	1	-	-	-	-	43	1	-	-	-	-	43
Sales above break-even - 1 year	5	4	1	-	-	-	67	4	1	-	280	57	-
Sales above break-even - 2~3 years	24	19	4	-	1	-	77	20	4	-	1,434	405	-
Sales above break-even - 4~5 years	29	16	11	1	1	-	140	25	3	1	2,735	1,060	270
Sales above break-even - 6~9 years	62	42	14	3	3	-	1061	57	5	-	61,552	4,086	160
Sales above break-even - 10 or more years	179	65	77	25	12	-	270	168	11	-	31,748	13,198	3,380
Sales above break-even - Unknown	1	1	-	-	-	-	5	1	-	-	4	1	-
Sales - Unknown	75	32	10	5	5	23	2100	53	1	21	77,911	26,632	2,552
<input checked="" type="checkbox"/> Main type of industry													
Biopharmaceutical industry	305	116	121	46	14	8	222	278	18	9	43,225	15,722	6,867
Biochemical industry	204	141	38	7	14	4	1002	175	19	10	162,255	36,373	1,705
Biofood industry	199	126	43	16	11	3	247	178	16	5	28,460	15,919	4,039
Bioenvironmental industry	75	56	11	1	1	6	61	67	5	3	3,010	647	466
Bioelectronics industry	26	18	5	3	-	-	88	22	3	1	1,264	883	152
Bioprocess and equipment industry	70	50	17	2	-	1	59	60	4	6	2,102	845	1,091
Bioenergy and bioresource industry	24	15	5	1	1	2	126	20	2	2	2,028	462	277
Bioassay, bioinformatics and R&D service industry	55	42	12	-	-	1	44	48	6	1	1,020	1,229	130
<input type="checkbox"/> No sales													
Biopharmaceutical industry	102	42	42	17	1	-	157	94	6	2	9,441	3,859	2,705
Biochemical industry	43	26	9	4	4	-	531	40	2	1	19,775	2,557	487
Biofood industry	58	21	16	11	9	1	552	52	3	3	17,256	10,459	3,721
Bioenvironmental industry	19	14	5	-	-	-	35	18	1	-	437	126	101
Bioelectronics industry	9	6	2	1	-	-	110	5	3	1	427	407	152
Bioprocess and equipment industry	18	15	3	-	-	-	32	15	-	3	334	151	85
Bioenergy and bioresource industry	8	6	1	-	1	-	214	7	1	-	1,486	198	26
Bioassay, bioinformatics and R&D service industry	12	9	3	-	-	-	46	10	1	1	299	213	-
<input type="checkbox"/> Sales below break-even - 1 year													
Biopharmaceutical industry	12	6	6	-	-	-	78	11	1	-	656	275	-
Biochemical industry	15	12	1	1	1	-	196	12	3	-	2,468	444	34
Biofood industry	6	5	1	-	-	-	30	6	-	-	121	53	8
Bioenvironmental industry	2	2	-	-	-	-	27	1	1	-	25	28	-
Bioelectronics industry	1	1	-	-	-	-	24	1	-	-	17	7	-
Bioprocess and equipment industry	1	-	1	-	-	-	160	1	-	-	80	80	-
Bioenergy and bioresource industry	1	1	-	-	-	-	39	1	-	-	31	8	-
Bioassay, bioinformatics and R&D service industry	1	1	-	-	-	-	19	-	1	-	-	-	-
<input type="checkbox"/> Sales below break-even - 2~3 years													
Biopharmaceutical industry	19	12	6	-	1	-	173	16	2	1	2,596	593	89
Biochemical industry	23	19	1	2	1	-	183	20	2	1	3,446	673	91
Biofood industry	21	20	1	-	-	-	20	19	2	-	303	73	52
Bioenvironmental industry	10	9	-	-	-	1	20	8	2	-	47	13	117
Bioelectronics industry	3	1	2	-	-	-	121	3	-	-	285	79	-
Bioprocess and equipment industry	9	9	-	-	-	-	21	8	1	-	83	51	52
Bioenergy and bioresource industry	4	3	1	-	-	-	40	4	-	-	110	48	-
Bioassay, bioinformatics and R&D service industry	5	5	-	-	-	-	16	5	-	-	38	26	-
<input type="checkbox"/> Sales below break-even - 4~5 years													
Biopharmaceutical industry	15	10	4	1	-	-	77	12	3	-	780	369	-
Biochemical industry	15	13	2	-	-	-	30	14	-	1	165	131	159
Biofood industry	19	18	-	1	-	-	43	19	-	-	503	308	9
Bioenvironmental industry	7	6	1	-	-	-	36	7	-	-	229	26	-
Bioelectronics industry	2	2	-	-	-	-	21	2	-	-	28	14	-
Bioprocess and equipment industry	2	2	-	-	-	-	7	2	-	-	9	5	-
Bioenergy and bioresource industry	1	1	-	-	-	-	26	-	1	-	14	12	-
Bioassay, bioinformatics and R&D service industry	4	4	-	-	-	-	21	3	1	-	53	30	-

	Total	Less than 50	50~299	300~999	More than 1,000	Un-known	Average	CEO's gender			Employees' gender		
								Male	Female	Unknown	Male	Female	Unknown
<b>Number of companies</b>	<b>958</b>	<b>564</b>	<b>252</b>	<b>76</b>	<b>41</b>	<b>25</b>	<b>354</b>	<b>848</b>	<b>73</b>	<b>37</b>	<b>243,364</b>	<b>72,080</b>	<b>14,727</b>
<input type="checkbox"/> Sales below break-even - 6~9 years													
Biopharmaceutical industry	14	10	3	1	-	-	75	11	2	1	527	327	201
Biochemical industry	19	15	3	-	1	-	278	17	2	-	2,045	3,235	2
Biofood industry	10	8	2	-	-	-	28	8	2	-	140	83	54
Bioenvironmental industry	5	4	1	-	-	-	48	5	-	-	170	46	25
Bioelectronics industry	2	2	-	-	-	-	15	2	-	-	19	10	-
Bioprocess and equipment industry	3	2	1	-	-	-	58	3	-	-	110	65	-
Bioassay, bioinformatics and R&D service industry	2	2	-	-	-	-	4	1	1	-	-	3	4
<input type="checkbox"/> Sales below break-even - 10 or more years													
Biopharmaceutical industry	21	9	9	3	-	-	166	20	1	-	2,265	1,148	70
Biochemical industry	9	7	2	-	-	-	34	9	-	-	193	114	-
Biofood industry	17	12	5	-	-	-	40	14	3	-	457	216	-
Bioenvironmental industry	4	4	-	-	-	-	9	4	-	-	27	8	-
Bioelectronics industry	2	2	-	-	-	-	14	2	-	-	17	11	-
Bioprocess and equipment industry	4	3	1	-	-	-	58	4	-	-	177	53	-
Bioassay, bioinformatics and R&D service industry	3	3	-	-	-	-	6	3	-	-	11	6	-
<input type="checkbox"/> Sales below break-even - Unknown													
Biofood industry	1	1	-	-	-	-	43	1	-	-	-	-	43
<input type="checkbox"/> Sales above break-even - 1 year													
Biopharmaceutical industry	1	-	1	-	-	-	244	1	-	-	197	47	-
Biofood industry	2	2	-	-	-	-	7	1	1	-	11	3	-
Bioenvironmental industry	1	1	-	-	-	-	47	1	-	-	43	4	-
Bioprocess and equipment industry	1	1	-	-	-	-	32	1	-	-	29	3	-
<input type="checkbox"/> Sales above break-even - 2~3 years													
Biopharmaceutical industry	9	5	4	-	-	-	53	8	1	-	302	176	-
Biochemical industry	7	6	-	-	1	-	183	6	1	-	1,091	192	-
Biofood industry	3	3	-	-	-	-	10	2	1	-	19	10	-
Bioelectronics industry	2	2	-	-	-	-	16	2	-	-	15	16	-
Bioprocess and equipment industry	1	1	-	-	-	-	10	1	-	-	6	4	-
Bioassay, bioinformatics and R&D service industry	2	2	-	-	-	-	4	1	1	-	1	7	-
<input type="checkbox"/> Sales above break-even - 4~5 years													
Biopharmaceutical industry	8	3	3	1	1	-	325	7	1	-	1,879	692	29
Biochemical industry	7	4	3	-	-	-	88	5	2	-	312	96	210
Biofood industry	6	3	3	-	-	-	96	6	-	-	400	178	-
Bioenvironmental industry	1	1	-	-	-	-	9	1	-	-	7	2	-
Bioprocess and equipment industry	4	3	1	-	-	-	38	3	-	1	84	41	25
Bioenergy and bioresource industry	2	1	1	-	-	-	35	2	-	-	41	23	6
Bioassay, bioinformatics and R&D service industry	1	1	-	-	-	-	40	1	-	-	12	28	-
<input type="checkbox"/> Sales above break-even - 6~9 years													
Biopharmaceutical industry	17	7	7	2	1	-	195	17	-	-	2,227	1,089	-
Biochemical industry	15	12	1	-	2	-	4092	11	4	-	58,585	2,729	70
Biofood industry	16	14	2	-	-	-	17	15	1	-	168	92	6
Bioenvironmental industry	3	1	1	1	-	-	133	3	-	-	296	43	60
Bioelectronics industry	2	2	-	-	-	-	7	2	-	-	8	5	-
Bioprocess and equipment industry	3	1	2	-	-	-	58	3	-	-	107	67	-
Bioenergy and bioresource industry	2	2	-	-	-	-	32	2	-	-	58	5	-
Bioassay, bioinformatics and R&D service industry	4	3	1	-	-	-	46	4	-	-	103	56	24
<input type="checkbox"/> Sales above break-even - 10 or more years													
Biopharmaceutical industry	66	7	33	17	9	-	399	65	1	-	17,206	6,331	-
Biochemical industry	33	20	13	-	-	-	67	30	3	-	1,527	452	222
Biofood industry	32	14	12	4	2	-	425	29	3	-	9,081	4,444	67
Bioenvironmental industry	12	8	3	-	1	-	182	12	-	-	1,691	333	155
Bioelectronics industry	3	-	1	2	-	-	261	3	-	-	448	334	-
Bioprocess and equipment industry	16	8	7	1	-	-	95	13	3	-	1,070	319	132
Bioenergy and bioresource industry	2	-	1	1	-	-	228	2	-	-	288	168	-
Bioassay, bioinformatics and R&D service industry	15	8	7	-	-	-	84	14	1	-	437	817	-
<input type="checkbox"/> Sales above break-even - Unknown													
Bioenvironmental industry	1	1	-	-	-	-	5	1	-	-	4	1	-
<input type="checkbox"/> Sales - Unknown													
Biopharmaceutical industry	21	5	3	4	1	8	533	16	-	5	5,149	816	969
Biochemical industry	18	7	3	-	4	4	7059	11	-	7	72,648	25,750	430
Biofood industry	8	5	1	-	-	2	13	6	-	2	1	-	79
Bioenvironmental industry	10	5	-	-	-	5	15	6	1	3	34	17	8
Bioprocess and equipment industry	8	5	1	1	-	1	117	6	-	2	13	6	797
Bioenergy and bioresource industry	4	1	1	-	-	2	123	2	-	2	-	-	245
Bioassay, bioinformatics and R&D service industry	6	4	1	-	-	1	27	6	-	-	66	43	24

&lt; Table 1-6 &gt; Size of Capital(Ⅱ-1) (Unit : number of firms, million Won)

	Total	Capital			
		Number of respondent companies	Sum	Average	
<b>Number of companies</b>	<b>958</b>	<b>880</b>	<b>12,384,174</b>	<b>14,073</b>	
<input checked="" type="checkbox"/> Sales Situation					
No sales	269	243	4,072,049	16,757	
Sales below break-even - 1 year	39	32	226,472	7,077	
Sales below break-even - 2~3 years	94	86	998,821	11,614	
Sales below break-even - 4~5 years	65	62	148,219	2,391	
Sales below break-even - 6~9 years	55	52	237,666	4,571	
Sales below break-even - 10 or more years	60	58	230,546	3,975	
Sales below break-even - Unknown	1	1	1,620	1,620	
Sales above break-even - 1 year	5	5	13,304	2,661	
Sales above break-even - 2~3 years	24	22	84,088	3,822	
Sales above break-even - 4~5 years	29	26	308,888	11,880	
Sales above break-even - 6~9 years	62	59	2,236,539	37,907	
Sales above break-even - 10 or more years	179	175	2,068,859	11,822	
Sales above break-even - Unknown	1	1	1,384	1,384	
Sales - Unknown	75	58	1,755,719	30,271	
<input checked="" type="checkbox"/> Main type of industry					
Biopharmaceutical industry	305	284	3,488,843	12,285	
Biochemical industry	204	187	5,704,037	30,503	
Biofood industry	199	179	2,581,309	14,421	
Bioenvironmental industry	75	71	91,537	1,289	
Bioelectronics industry	26	23	49,352	2,146	
Bioprocess and equipment industry	70	65	137,935	2,122	
Bioenergy and bioresource industry	24	22	265,021	12,046	
Bioassay, bioinformatics and R&D service industry	55	49	66,140	1,350	
<input checked="" type="checkbox"/> Number of employees					
Less than 50	564	509	626,468	1,231	
50~299	252	242	2,570,652	10,623	
300~999	76	75	1,796,531	23,954	
More than 1,000	41	41	7,381,208	180,029	
Unknown	25	13	9,315	717	
<input type="checkbox"/> Sales situation - No sales					
Biopharmaceutical industry	Less than 50	42	39	112,564	2,886
	50~299	42	39	331,508	8,500
	300~999	17	17	342,973	20,175
	More than 1,000	1	1	25,068	25,068
Biochemical industry	Less than 50	26	21	32,654	1,555
	50~299	9	9	47,312	5,257
	300~999	4	4	111,970	27,993
	More than 1,000	4	4	1,227,070	306,768
Biofood industry	Less than 50	21	17	28,347	1,667
	50~299	16	13	651,624	50,125
	300~999	11	10	172,339	17,234
	More than 1,000	9	9	695,439	77,271
	Unknown	1	-	-	-
Bioenvironmental industry	Less than 50	14	13	9,756	750
	50~299	5	4	8,500	2,125
Bioelectronics industry	Less than 50	6	5	16,537	3,307
	50~299	2	1	6,172	6,172
	300~999	1	1	200	200
Bioprocess and equipment industry	Less than 50	15	15	12,899	860
	50~299	3	3	34,784	11,595
Bioenergy and bioresource industry	Less than 50	6	5	2,400	480
	50~299	1	1	16,020	16,020
	More than 1,000	1	1	167,456	167,456
Bioassay, bioinformatics and R&D service industry	Less than 50	9	8	2,720	340
	50~299	3	3	15,737	5,246
<input type="checkbox"/> Sales below break-even - 1 year					
Biopharmaceutical industry	Less than 50	6	6	13,272	2,212
	50~299	6	6	21,930	3,655
Biochemical industry	Less than 50	12	8	4,794	599
	50~299	1	1	7,500	7,500
	300~999	1	1	1,925	1,925
	More than 1,000	1	1	171,377	171,377

		Total	Capital		
			Number of respondent companies	Sum	Average
Number of companies		958	880	12,384,174	14,073
Biofood industry	Less than 50	5	4	2,480	620
	50~299	1	1	1,090	1,090
Bioenvironmental industry	Less than 50	2	2	150	75
Bioelectronics industry	Less than 50	1	-	-	-
Bioprocess and equipment industry	50~299	1	1	900	900
Bioenergy and bioresource industry	Less than 50	1	1	1,054	1,054
Bioassay, bioinformatics and R&D service industry	Less than 50	1	-	-	-
<input type="checkbox"/> Sales below break-even - 2~3 years					
Biopharmaceutical industry	Less than 50	12	12	20,909	1,742
	50~299	6	5	47,433	9,487
	More than 1,000	1	1	707,036	707,036
Biochemical industry	Less than 50	19	19	12,318	648
	50~299	1	1	2,483	2,483
	300~999	2	2	29,742	14,871
	More than 1,000	1	1	127,247	127,247
Biofood industry	Less than 50	20	18	10,101	561
	50~299	1	1	13,687	13,687
Bioenvironmental industry	Less than 50	9	8	8,055	1,007
	Unknown	1	-	-	-
Bioelectronics industry	Less than 50	1	1	193	193
	50~299	2	2	6,101	3,051
Bioprocess and equipment industry	Less than 50	9	8	4,296	537
Bioenergy and bioresource industry	Less than 50	3	3	4,500	1,500
	50~299	1	1	3,325	3,325
Bioassay, bioinformatics and R&D service industry	Less than 50	5	3	1,395	465
<input type="checkbox"/> Sales below break-even - 4~5 years					
Biopharmaceutical industry	Less than 50	10	8	17,373	2,172
	50~299	4	4	30,838	7,710
	300~999	1	1	20,392	20,392
Biochemical industry	Less than 50	13	13	13,913	1,070
	50~299	2	1	1,867	1,867
Biofood industry	Less than 50	18	18	41,031	2,280
	300~999	1	1	9,100	9,100
Bioenvironmental industry	Less than 50	6	6	2,709	452
	50~299	1	1	3,000	3,000
Bioelectronics industry	Less than 50	2	2	2,454	1,227
Bioprocess and equipment industry	Less than 50	2	2	609	305
Bioenergy and bioresource industry	Less than 50	1	1	944	944
Bioassay, bioinformatics and R&D service industry	Less than 50	4	4	3,989	997
<input type="checkbox"/> Sales below break-even - 6~9 years					
Biopharmaceutical industry	Less than 50	10	9	15,314	1,702
	50~299	3	3	76,286	25,429
	300~999	1	1	22,230	22,230
Biochemical industry	Less than 50	15	14	9,766	698
	50~299	3	3	38,575	12,858
	More than 1,000	1	1	34,508	34,508
Biofood industry	Less than 50	8	7	8,843	1,263
	50~299	2	2	12,613	6,307
Bioenvironmental industry	Less than 50	4	4	2,815	704
	50~299	1	1	2,500	2,500
Bioelectronics industry	Less than 50	2	2	1,614	807
Bioprocess and equipment industry	Less than 50	2	2	1,619	810
	50~299	1	1	9,728	9,728
Bioassay, bioinformatics and R&D service industry	Less than 50	2	2	1,255	628
<input type="checkbox"/> Sales below break-even - 10 or more years					
Biopharmaceutical industry	Less than 50	9	8	19,817	2,477
	50~299	9	9	91,034	10,115
	300~999	3	3	32,880	10,960
Biochemical industry	Less than 50	7	7	16,462	2,352
	50~299	2	2	14,688	7,344
Biofood industry	Less than 50	12	12	6,078	507
	50~299	5	5	34,128	6,826
Bioenvironmental industry	Less than 50	4	4	2,575	644
Bioelectronics industry	Less than 50	2	2	2,489	1,245

		Total	Capital		
			Number of respondent companies	Sum	Average
Number of companies		958	880	12,384,174	14,073
Bioprocess and equipment industry	Less than 50	3	3	2,442	814
	50~299	1	1	1,741	1,741
Bioassay, bioinformatics and R&D service industry	Less than 50	3	2	6,212	3,106
<input type="checkbox"/> Sales below break-even - Unknown					
Biofood industry	Less than 50	1	1	1,620	1,620
<input type="checkbox"/> Sales above break-even - 1 year					
Biopharmaceutical industry	50~299	1	1	7,506	7,506
Biofood industry	Less than 50	2	2	1,525	763
Bioenvironmental industry	Less than 50	1	1	2,700	2,700
Bioprocess and equipment industry	Less than 50	1	1	1,573	1,573
<input type="checkbox"/> Sales above break-even - 2~3 years					
Biopharmaceutical industry	Less than 50	5	4	2,827	707
	50~299	4	4	9,749	2,437
Biochemical industry	Less than 50	6	6	4,710	785
	More than 1,000	1	1	63,837	63,837
Biofood industry	Less than 50	3	3	868	289
Bioelectronics industry	Less than 50	2	2	1,547	774
Bioprocess and equipment industry	Less than 50	1	1	250	250
Bioassay, bioinformatics and R&D service industry	Less than 50	2	1	300	300
<input type="checkbox"/> Sales above break-even - 4~5 years					
Biopharmaceutical industry	Less than 50	3	2	755	378
	50~299	3	3	58,032	19,344
	300~999	1	1	11,949	11,949
	More than 1,000	1	1	118,300	118,300
Biochemical industry	Less than 50	4	4	1,711	428
	50~299	3	3	35,056	11,685
Biofood industry	Less than 50	3	3	1,460	487
	50~299	3	3	36,405	12,135
Bioenvironmental industry	Less than 50	1	1	400	400
Bioprocess and equipment industry	Less than 50	3	2	743	372
	50~299	1	1	2,987	2,987
Bioenergy and biosource industry	Less than 50	1	-	-	-
	50~299	1	1	40,105	40,105
Bioassay, bioinformatics and R&D service industry	Less than 50	1	1	985	985
<input type="checkbox"/> Sales above break-even - 6~9 years					
Biopharmaceutical industry	Less than 50	7	7	6,176	882
	50~299	7	7	85,310	12,187
	300~999	2	2	92,654	46,327
	More than 1,000	1	1	28,955	28,955
Biochemical industry	Less than 50	12	11	7,194	654
	50~299	1	1	6,809	6,809
	More than 1,000	2	2	1,963,993	981,997
Biofood industry	Less than 50	14	13	8,465	651
	50~299	2	2	4,453	2,227
Bioenvironmental industry	Less than 50	1	1	5,009	5,009
	50~299	1	1	1,488	1,488
	300~999	1	1	10,846	10,846
Bioelectronics industry	Less than 50	2	2	275	138
Bioprocess and equipment industry	Less than 50	1	-	-	-
	50~299	2	2	800	400
Bioenergy and biosource industry	Less than 50	2	2	8,837	4,419
Bioassay, bioinformatics and R&D service industry	Less than 50	3	3	3,598	1,199
	50~299	1	1	1,677	1,677
<input type="checkbox"/> Sales above break-even - 10 or more years					
Biopharmaceutical industry	Less than 50	7	6	4,310	718
	50~299	33	33	161,796	4,903
	300~999	17	17	261,601	15,388
	More than 1,000	9	9	352,763	39,196
Biochemical industry	Less than 50	20	19	23,551	1,240
	50~299	13	13	334,488	25,730
Biofood industry	Less than 50	14	13	9,255	712
	50~299	12	12	152,545	12,712
	300~999	4	4	562,763	140,691
	More than 1,000	2	2	108,050	54,025

		Total	Capital		
			Number of respondent companies	Sum	Average
Number of companies		958	880	12,384,174	14,073
Bioenvironmental industry	Less than 50	8	8	6,918	865
	50~299	3	3	12,200	4,067
	More than 1,000	1	1	596	596
Bioelectronics industry	50~299	1	1	3,391	3,391
	300~999	2	2	8,379	4,190
Bioprocess and equipment industry	Less than 50	8	7	1,600	229
	50~299	7	7	10,907	1,558
	300~999	1	1	14,000	14,000
Bioenergy and bioresource industry	50~299	1	1	8,130	8,130
	300~999	1	1	7,150	7,150
Bioassay, bioinformatics and R&D service industry	Less than 50	8	8	10,516	1,315
	50~299	7	7	13,950	1,993
<input type="checkbox"/> Sales above break-even - Unknown					
Bioenvironmental industry	Less than 50	1	1	1,384	1,384
<input type="checkbox"/> Sales - Unknown					
Biopharmaceutical industry	Less than 50	5	4	9,214	2,304
	50~299	3	3	10,975	3,658
	300~999	4	4	50,744	12,686
	More than 1,000	1	1	265,650	265,650
	Unknown	8	2	720	360
Biochemical industry	Less than 50	7	5	2,362	472
	50~299	3	3	26,731	8,910
	More than 1,000	4	4	1,323,863	330,966
	Unknown	4	2	3,561	1,781
Biofood industry	Less than 50	5	1	250	250
	50~299	1	1	6,000	6,000
	Unknown	2	1	750	750
Bioenvironmental industry	Less than 50	5	5	6,005	1,201
	Unknown	5	5	3,931	786
Bioprocess and equipment industry	Less than 50	5	5	3,163	633
	50~299	1	1	200	200
	300~999	1	1	32,694	32,694
	Unknown	1	-	-	-
Bioenergy and bioresource industry	Less than 50	1	1	600	600
	50~299	1	1	4,200	4,200
	Unknown	2	2	300	150
Bioassay, bioinformatics and R&D service industry	Less than 50	4	4	2,095	524
	50~299	1	1	1,658	1,658
	Unknown	1	1	53	53



&lt; Table 1-7 &gt; Ratio of Net Worth(Ⅱ-2)

(Unit : number of firms, %)

		Total	Ratio of Net worth	
			Number of respondent companies	Average
Number of companies		958	773	51
<input checked="" type="checkbox"/> Sales Situation				
No sales		269	209	51
Sales below break-even - 1 year		39	29	49
Sales below break-even - 2~3 years		94	69	45
Sales below break-even - 4~5 years		65	54	48
Sales below break-even - 6~9 years		55	43	47
Sales below break-even - 10 or more years		60	53	43
Sales below break-even - Unknown		1	1	9
Sales above break-even - 1 year		5	3	58
Sales above break-even - 2~3 years		24	21	49
Sales above break-even - 4~5 years		29	26	44
Sales above break-even - 6~9 years		62	53	62
Sales above break-even - 10 or more years		179	166	57
Sales above break-even - Unknown		1	1	71
Sales - Unknown		75	45	45
<input checked="" type="checkbox"/> Main type of industry				
Biopharmaceutical industry		305	258	53
Biochemical industry		204	167	52
Biofood industry		199	154	51
Bioenvironmental industry		75	58	55
Bioelectronics industry		26	22	42
Bioprocess and equipment industry		70	54	48
Bioenergy and bioresource industry		24	20	43
Bioassay, bioinformatics and R&D service industry		55	40	35
<input checked="" type="checkbox"/> Number of employees				
Less than 50		564	418	49
50~299		252	232	51
300~999		76	73	58
More than 1,000		41	41	58
Unknown		25	9	53
<input type="checkbox"/> Sales situation - No sales				
Biopharmaceutical industry	Less than 50	42	29	47
	50~299	42	35	52
	300~999	17	17	57
	More than 1,000	1	1	61
Biochemical industry	Less than 50	26	17	51
	50~299	9	8	41
	300~999	4	4	52
	More than 1,000	4	4	66
Biofood industry	Less than 50	21	14	51
	50~299	16	12	52
	300~999	11	9	46
	More than 1,000	9	9	63
	Unknown	1	-	-
Bioenvironmental industry	Less than 50	14	10	50
	50~299	5	3	39
Bioelectronics industry	Less than 50	6	4	59
	50~299	2	1	43
	300~999	1	1	75
Bioprocess and equipment industry	Less than 50	15	13	50
	50~299	3	2	77
Bioenergy and bioresource industry	Less than 50	6	5	29
	50~299	1	1	35
	More than 1,000	1	1	36
Bioassay, bioinformatics and R&D service industry	Less than 50	9	6	63
	50~299	3	3	13
<input type="checkbox"/> Sales below break-even - 1 year				
Biopharmaceutical industry	Less than 50	6	6	48
	50~299	6	6	47
Biochemical industry	Less than 50	12	7	53
	50~299	1	1	81
	300~999	1	1	47
	More than 1,000	1	1	59

		Total	Ratio of Net worth	
			Number of respondent companies	Average
Number of companies		958	773	51
Biofood industry	Less than 50	5	3	29
	50~299	1	1	59
Bioenvironmental industry	Less than 50	2	1	76
Bioelectronics industry	Less than 50	1	-	-
Bioprocess and equipment industry	50~299	1	1	10
Bioenergy and bioresource industry	Less than 50	1	1	70
Bioassay, bioinformatics and R&D service industry	Less than 50	1	-	-
<input type="checkbox"/> Sales below break-even - 2~3 years				
Biopharmaceutical industry	Less than 50	12	9	56
	50~299	6	4	28
	More than 1,000	1	1	37
Biochemical industry	Less than 50	19	15	39
	50~299	1	1	89
	300~999	2	2	60
	More than 1,000	1	1	56
Biofood industry	Less than 50	20	14	62
	50~299	1	1	44
Bioenvironmental industry	Less than 50	9	7	53
	Unknown	1	-	-
Bioelectronics industry	Less than 50	1	1	78
	50~299	2	2	-54
Bioprocess and equipment industry	Less than 50	9	5	38
Bioenergy and bioresource industry	Less than 50	3	3	51
	50~299	1	1	-38
Bioassay, bioinformatics and R&D service industry	Less than 50	5	2	38
<input type="checkbox"/> Sales below break-even - 4~5 years				
Biopharmaceutical industry	Less than 50	10	8	45
	50~299	4	4	61
	300~999	1	1	27
Biochemical industry	Less than 50	13	13	49
	50~299	2	1	39
Biofood industry	Less than 50	18	12	50
	300~999	1	1	52
Bioenvironmental industry	Less than 50	6	4	60
	50~299	1	1	80
Bioelectronics industry	Less than 50	2	2	8
Bioprocess and equipment industry	Less than 50	2	2	65
Bioenergy and bioresource industry	Less than 50	1	1	49
Bioassay, bioinformatics and R&D service industry	Less than 50	4	4	26
<input type="checkbox"/> Sales below break-even - 6~9 years				
Biopharmaceutical industry	Less than 50	10	9	41
	50~299	3	3	70
	300~999	1	1	77
Biochemical industry	Less than 50	15	11	37
	50~299	3	3	42
	More than 1,000	1	1	82
Biofood industry	Less than 50	8	4	50
	50~299	2	2	38
Bioenvironmental industry	Less than 50	4	4	40
	50~299	1	1	75
Bioelectronics industry	Less than 50	2	2	54
Bioprocess and equipment industry	Less than 50	2	1	79
	50~299	1	1	52
Bioassay, bioinformatics and R&D service industry	Less than 50	2	-	-
<input type="checkbox"/> Sales below break-even - 10 or more years				
Biopharmaceutical industry	Less than 50	9	6	36
	50~299	9	9	56
	300~999	3	3	70
Biochemical industry	Less than 50	7	7	27
	50~299	2	2	54
Biofood industry	Less than 50	12	12	49
	50~299	5	5	53
Bioenvironmental industry	Less than 50	4	3	49
Bioelectronics industry	Less than 50	2	2	11

		Total	Ratio of Net worth	
			Number of respondent companies	Average
Number of companies		958	773	51
Bioprocess and equipment industry	Less than 50	3	2	52
	50~299	1	1	38
Bioassay, bioinformatics and R&D service industry	Less than 50	3	1	-99
<input type="checkbox"/> Sales below break-even - Unknown				
Biofood industry	Less than 50	1	1	9
<input type="checkbox"/> Sales above break-even - 1 year				
Biopharmaceutical industry	50~299	1	1	81
Biofood industry	Less than 50	2	-	-
Bioenvironmental industry	Less than 50	1	1	46
Bioprocess and equipment industry	Less than 50	1	1	48
<input type="checkbox"/> Sales above break-even - 2~3 years				
Biopharmaceutical industry	Less than 50	5	4	59
	50~299	4	4	59
Biochemical industry	Less than 50	6	5	62
	More than 1,000	1	1	37
Biofood industry	Less than 50	3	3	17
Bioelectronics industry	Less than 50	2	2	35
Bioprocess and equipment industry	Less than 50	1	1	48
Bioassay, bioinformatics and R&D service industry	Less than 50	2	1	39
<input type="checkbox"/> Sales above break-even - 4~5 years				
Biopharmaceutical industry	Less than 50	3	2	36
	50~299	3	3	44
	300~999	1	1	65
	More than 1,000	1	1	43
Biochemical industry	Less than 50	4	4	60
	50~299	3	3	36
Biofood industry	Less than 50	3	3	31
	50~299	3	3	41
Bioenvironmental industry	Less than 50	1	1	66
Bioprocess and equipment industry	Less than 50	3	2	56
	50~299	1	1	4
Bioenergy and bioresource industry	Less than 50	1	-	-
	50~299	1	1	45
Bioassay, bioinformatics and R&D service industry	Less than 50	1	1	37
<input type="checkbox"/> Sales above break-even - 6~9 years				
Biopharmaceutical industry	Less than 50	7	6	46
	50~299	7	7	80
	300~999	2	2	45
	More than 1,000	1	1	27
Biochemical industry	Less than 50	12	10	77
	50~299	1	1	75
	More than 1,000	2	2	62
Biofood industry	Less than 50	14	11	50
	50~299	2	2	49
Bioenvironmental industry	Less than 50	1	1	66
	50~299	1	1	44
	300~999	1	1	56
Bioelectronics industry	Less than 50	2	2	80
Bioprocess and equipment industry	Less than 50	1	-	-
	50~299	2	2	54
Bioenergy and bioresource industry	Less than 50	2	2	71
Bioassay, bioinformatics and R&D service industry	Less than 50	3	1	53
	50~299	1	1	64
<input type="checkbox"/> Sales above break-even - 10 or more years				
Biopharmaceutical industry	Less than 50	7	5	43
	50~299	33	32	56
	300~999	17	16	64
	More than 1,000	9	9	62
Biochemical industry	Less than 50	20	16	53
	50~299	13	13	66
Biofood industry	Less than 50	14	12	57
	50~299	12	12	64
	300~999	4	4	48
	More than 1,000	2	2	44

		Total	Ratio of Net worth	
			Number of respondent companies	Average
Number of companies		958	773	51
Bioenvironmental industry	Less than 50	8	8	64
	50~299	3	3	69
	More than 1,000	1	1	59
Bioelectronics industry	50~299	1	1	86
	300~999	2	2	73
Bioprocess and equipment industry	Less than 50	8	5	40
	50~299	7	7	51
	300~999	1	1	38
Bioenergy and bioresource industry	50~299	1	1	69
	300~999	1	1	93
Bioassay, bioinformatics and R&D service industry	Less than 50	8	8	51
	50~299	7	7	36
<input type="checkbox"/> Sales above break-even - Unknown				
Bioenvironmental industry	Less than 50	1	1	71
<input type="checkbox"/> Sales - Unknown				
Biopharmaceutical industry	Less than 50	5	4	51
	50~299	3	3	64
	300~999	4	4	64
	More than 1,000	1	1	47
	Unknown	8	-	-
Biochemical industry	Less than 50	7	3	37
	50~299	3	3	36
	More than 1,000	4	4	53
	Unknown	4	2	76
Biofood industry	Less than 50	5	-	-
	50~299	1	1	22
	Unknown	2	1	24
Bioenvironmental industry	Less than 50	5	2	34
	Unknown	5	4	53
Bioprocess and equipment industry	Less than 50	5	4	44
	50~299	1	1	68
	300~999	1	1	46
	Unknown	1	-	-
Bioenergy and bioresource industry	Less than 50	1	-	-
	50~299	1	1	26
	Unknown	2	1	34
Bioassay, bioinformatics and R&D service industry	Less than 50	4	3	49
	50~299	1	1	-156
	Unknown	1	1	61

&lt; Table 2 &gt; Manpower Status of Bioindustry

&lt; Table 2-1 &gt; Manpower Size of Researchers(III-2) (Unit : number of firms, people)

	Total	Bioindustry Workers		Researcher: Doctor		Researcher: Master		Researcher: Bachelor		Researcher: Others		Researcher: Total		
		Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	
<b>Number of companies</b>	<b>958</b>	<b>37,778</b>	<b>39</b>	<b>1,536</b>	<b>2</b>	<b>5,181</b>	<b>5</b>	<b>3,282</b>	<b>3</b>	<b>1,285</b>	<b>1</b>	<b>11,284</b>	<b>12</b>	
<b>■ Sales Situation</b>														
No sales	269	5,331	20	300	1	973	4	632	2	173	1	2,078	8	
Sales below break-even - 1 year	39	975	25	52	1	111	3	101	3	20	1	284	7	
Sales below break-even - 2~3 years	94	2,089	22	129	1	372	4	266	3	55	1	822	9	
Sales below break-even - 4~5 years	65	1,304	20	76	1	210	3	127	2	72	1	485	7	
Sales below break-even - 6~9 years	55	1,508	27	76	1	236	4	150	3	67	1	529	10	
Sales below break-even - 10 or more years	60	2,468	41	136	2	335	6	219	4	27	0	717	12	
Sales below break-even - Unknown	1	43	43	3	3	14	14	8	8	2	2	27	27	
Sales above break-even - 1 year	5	141	28	7	1	20	4	20	4	-	-	47	9	
Sales above break-even - 2~3 years	24	612	26	45	2	162	7	88	4	12	1	307	13	
Sales above break-even - 4~5 years	29	1,415	49	36	1	162	6	168	6	92	3	458	16	
Sales above break-even - 6~9 years	62	3,369	54	151	2	609	10	242	4	101	2	1,103	18	
Sales above break-even - 10 or more years	179	17,870	100	469	3	1,857	10	1,164	7	646	4	4,136	23	
Sales above break-even - Unknown	1	2	2	-	-	2	2	-	-	-	-	2	2	
Sales - Unknown	75	651	9	56	1	118	2	97	1	18	0	289	4	
<b>■ Main type of industry</b>														
Biopharmaceutical industry	305	17,988	59	645	2	2,264	7	1,121	4	507	2	4,537	15	
Biochemical industry	204	5,064	25	328	2	1,132	6	617	3	138	1	2,215	11	
Biofood industry	199	8,103	41	278	1	883	4	473	2	204	1	1,838	9	
Bioenvironmental industry	75	1,370	18	38	1	148	2	170	2	62	1	418	6	
Bioelectronics industry	26	1,099	42	40	2	143	6	108	4	25	1	316	12	
Bioprocess and equipment industry	70	1,301	19	47	1	158	2	166	2	35	1	406	6	
Bioenergy and bioresource industry	24	1,017	42	48	2	97	4	96	4	171	7	412	17	
Bioassay, bioinformatics and R&D service industry	55	1,836	33	112	2	356	6	531	10	143	3	1,142	21	
<b>■ Number of employees</b>														
Less than 50	564	6,952	12	485	1	1,232	2	1,086	2	206	0	3,009	5	
50~299	252	15,566	62	446	2	1,598	6	1,491	6	441	2	3,976	16	
300~999	76	6,049	80	169	2	663	9	317	4	237	3	1,386	18	
More than 1,000	41	9,081	221	434	11	1,683	41	367	9	401	10	2,885	70	
Unknown	25	130	5	2	0	5	0	21	1	-	-	28	1	
<b>□ Sales situation - No sales</b>														
Biopharmaceutical industry	Less than 50	42	467	11	55	1	119	3	73	2	27	1	274	7
	50~299	42	922	22	22	1	71	2	115	3	26	1	234	6
	300~999	17	769	45	37	2	170	10	49	3	8	0	264	16
	More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	0
Biochemical industry	Less than 50	26	168	6	11	0	26	1	36	1	12	0	85	3
	50~299	9	301	33	11	1	29	3	27	3	10	1	77	9
	300~999	4	22	6	1	0	7	2	2	1	3	1	13	3
	More than 1,000	4	82	21	33	8	32	8	10	3	-	-	75	19
Biofood industry	Less than 50	21	249	12	10	0	39	2	35	2	3	0	87	4
	50~299	16	412	26	15	1	45	3	38	2	19	1	117	7
	300~999	11	594	54	16	1	80	7	40	4	18	2	154	14
	More than 1,000	9	459	51	24	3	151	17	45	5	8	1	228	25
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	Less than 50	14	96	7	5	0	21	2	22	2	5	0	53	4
	50~299	5	143	29	3	1	11	2	16	3	3	1	33	7
Bioelectronics industry	Less than 50	6	58	10	9	2	21	4	15	3	-	-	45	8
	50~299	2	18	9	1	1	7	4	5	3	-	-	13	7
	300~999	1	32	32	-	-	2	2	5	5	10	10	17	17
Bioprocess and equipment industry	Less than 50	15	92	6	4	0	11	1	10	1	2	0	27	2
	50~299	3	64	21	4	1	15	5	11	4	3	1	33	11
Bioenergy and bioresource industry	Less than 50	6	54	9	4	1	8	1	11	2	5	1	28	5
	50~299	1	60	60	-	-	5	5	8	8	-	-	13	13
	More than 1,000	1	80	80	11	11	21	21	6	6	5	5	43	43
Bioassay, bioinformatics and R&D service industry	Less than 50	9	73	8	9	1	23	3	22	2	2	0	56	6
	50~299	3	116	39	15	5	59	20	31	10	4	1	109	36

		Total	Bioindustry		Researcher: Doctor		Researcher: Master		Researcher: Bachelor		Researcher: Others		Researcher: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	1,536	2	5,181	5	3,282	3	1,285	1	11,284	12
<input type="checkbox"/> Sales below break-even - 1 year														
Biopharmaceutical industry	Less than 50	6	89	15	11	2	20	3	7	1	-	-	38	6
	50~299	6	499	83	14	2	31	5	29	5	4	1	78	13
Biochemical industry	Less than 50	12	105	9	9	1	14	1	30	3	4	0	57	5
	50~299	1	50	50	2	2	5	5	-	-	2	2	9	9
	300~999	1	17	17	1	1	1	1	5	5	1	1	8	8
	More than 1,000	1	10	10	4	4	6	6	-	-	-	-	10	10
Biofood industry	Less than 50	5	69	14	5	1	13	3	12	2	1	0	31	6
	50~299	1	30	30	-	-	4	4	4	4	1	1	9	9
Bioenvironmental industry	Less than 50	2	37	19	-	-	2	1	5	3	1	1	8	4
Bioelectronics industry	Less than 50	1	24	24	1	1	3	3	4	4	4	4	12	12
Bioprocess and equipment industry	50~299	1	6	6	2	2	1	1	1	1	-	-	4	4
Bioenergy and bioresource industry	Less than 50	1	31	31	2	2	7	7	3	3	2	2	14	14
Bioassay, bioinformatics and R&D service industry	Less than 50	1	8	8	1	1	4	4	1	1	-	-	6	6
<input type="checkbox"/> Sales below break-even - 2~3 years														
Biopharmaceutical industry	Less than 50	12	219	18	16	1	44	4	35	3	6	1	101	8
	50~299	6	295	49	12	2	35	6	27	5	5	1	79	13
	More than 1,000	1	169	169	20	20	40	40	10	10	10	10	80	80
Biochemical industry	Less than 50	19	190	10	18	1	42	2	45	2	4	0	109	6
	50~299	1	33	33	1	1	9	9	2	2	-	-	12	12
	300~999	2	206	103	7	4	63	32	25	13	2	1	97	49
	More than 1,000	1	30	30	2	2	6	6	2	2	2	2	12	12
Biofood industry	Less than 50	20	165	8	15	1	37	2	24	1	4	0	80	4
	50~299	1	226	226	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	Less than 50	9	138	15	7	1	27	3	23	3	5	1	62	7
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioelectronics industry	Less than 50	1	7	7	1	1	2	2	2	2	-	-	5	5
	50~299	2	50	25	4	2	14	7	14	7	4	2	36	18
Bioprocess and equipment industry	Less than 50	9	136	15	9	1	20	2	19	2	5	1	53	6
Bioenergy and bioresource industry	Less than 50	3	44	15	1	0	3	1	1	0	3	1	8	3
	50~299	1	107	107	3	3	5	5	20	20	2	2	30	30
Bioassay, bioinformatics and R&D service industry	Less than 50	5	74	15	13	3	25	5	17	3	3	1	58	12
<input type="checkbox"/> Sales below break-even - 4~5 years														
Biopharmaceutical industry	Less than 50	10	136	14	17	2	33	3	12	1	-	-	62	6
	50~299	4	258	65	6	2	27	7	13	3	49	12	95	24
	300~999	1	20	20	-	-	-	-	-	-	-	-	0	0
Biochemical industry	Less than 50	13	230	18	9	1	32	2	31	2	8	1	80	6
	50~299	2	83	42	4	2	17	9	9	5	1	1	31	16
Biofood industry	Less than 50	18	187	10	19	1	27	2	24	1	4	0	74	4
	300~999	1	36	36	2	2	23	23	3	3	8	8	36	36
Bioenvironmental industry	Less than 50	6	24	4	3	1	4	1	5	1	1	0	13	2
	50~299	1	176	176	1	1	2	2	1	1	-	-	4	4
Bioelectronics industry	Less than 50	2	30	15	6	3	16	8	2	1	1	1	25	13
Bioprocess and equipment industry	Less than 50	2	14	7	-	-	3	2	6	3	-	-	9	5
Bioenergy and bioresource industry	Less than 50	1	25	25	3	3	5	5	10	10	-	-	18	18
Bioassay, bioinformatics and R&D service industry	Less than 50	4	85	21	6	2	21	5	11	3	-	-	38	10
<input type="checkbox"/> Sales below break-even - 6~9 years														
Biopharmaceutical industry	Less than 50	10	116	12	9	1	36	4	24	2	3	0	72	7
	50~299	3	130	43	6	2	28	9	22	7	10	3	66	22
	300~999	1	76	76	5	5	28	28	14	14	1	1	48	48
Biochemical industry	Less than 50	15	234	16	15	1	35	2	23	2	4	0	77	5
	50~299	3	308	103	14	5	58	19	9	3	5	2	86	29
	More than 1,000	1	14	14	9	9	5	5	-	-	-	-	14	14
Biofood industry	Less than 50	8	103	13	4	1	8	1	13	2	3	0	28	4
	50~299	2	137	69	5	3	10	5	7	4	7	4	29	15
Bioenvironmental industry	Less than 50	4	41	10	1	0	4	1	8	2	2	1	15	4
	50~299	1	160	160	-	-	-	-	-	-	26	26	26	26
Bioelectronics industry	Less than 50	2	29	15	3	2	6	3	10	5	-	-	19	10
Bioprocess and equipment industry	Less than 50	2	45	23	1	1	2	1	4	2	5	3	12	6
	50~299	1	112	112	4	4	16	16	14	14	-	-	34	34
Bioassay, bioinformatics and R&D service industry	Less than 50	2	3	2	-	-	-	-	2	1	1	1	3	2

		Total	Bioindustry Workers		Researcher: Doctor		Researcher: Master		Researcher: Bachelor		Researcher: Others		Researcher: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	1,536	2	5,181	5	3,282	3	1,285	1	11,284	12
<input type="checkbox"/> Sales below break-even - 10 or more years														
Bio pharmaceutical industry	Less than 50	9	137	15	8	1	29	3	37	4	5	1	79	9
	50~299	9	1,152	128	87	10	182	20	103	11	13	1	385	43
	300~999	3	76	25	9	3	13	4	8	3	4	1	34	11
Biochemical industry	Less than 50	7	131	19	7	1	20	3	15	2	2	0	44	6
	50~299	2	193	97	5	3	26	13	10	5	-	-	41	21
Biofood industry	Less than 50	12	153	13	8	1	16	1	24	2	1	0	49	4
	50~299	5	517	103	4	1	34	7	13	3	-	-	51	10
Bioenvironmental industry	Less than 50	4	32	8	-	-	5	1	-	-	-	-	5	1
Bioelectronics industry	Less than 50	2	28	14	3	2	3	2	-	-	-	-	6	3
Bioprocess and equipment industry	Less than 50	3	24	8	-	-	1	0	3	1	1	0	5	2
	50~299	1	8	8	1	1	3	3	4	4	-	-	8	8
Bioassay, bioinformatics and R&D service industry	Less than 50	3	17	6	4	1	3	1	2	1	1	0	10	3
<input type="checkbox"/> Sales below break-even - Unknown														
Biofood industry	Less than 50	1	43	43	3	3	14	14	8	8	2	2	27	27
<input type="checkbox"/> Sales above break-even - 1 year														
Bio pharmaceutical industry	50~299	1	50	50	3	3	16	16	5	5	-	-	24	24
Biofood industry	Less than 50	2	12	6	2	1	-	-	4	2	-	-	6	3
Bioenvironmental industry	Less than 50	1	47	47	1	1	2	2	6	6	-	-	9	9
Bioprocess and equipment industry	Less than 50	1	32	32	1	1	2	2	5	5	-	-	8	8
<input type="checkbox"/> Sales above break-even - 2~3 years														
Bio pharmaceutical industry	Less than 50	5	96	19	8	2	21	4	13	3	2	0	44	9
	50~299	4	277	69	5	1	58	15	43	11	2	1	108	27
Biochemical industry	Less than 50	6	59	10	3	1	10	2	1	0	-	-	14	2
	More than 1,000	1	122	122	27	27	65	65	24	24	6	6	122	122
Biofood industry	Less than 50	3	14	5	-	-	1	0	4	1	1	0	6	2
Bioelectronics industry	Less than 50	2	26	13	1	1	2	1	2	1	-	-	5	3
Bioprocess and equipment industry	Less than 50	1	10	10	-	-	2	2	-	-	-	-	2	2
Bioassay, bioinformatics and R&D service industry	Less than 50	2	8	4	1	1	3	2	1	1	1	1	6	3
<input type="checkbox"/> Sales above break-even - 4~5 years														
Bio pharmaceutical industry	Less than 50	3	73	24	2	1	8	3	8	3	1	0	19	6
	50~299	3	186	62	5	2	16	5	36	12	8	3	65	22
	300~999	1	114	114	3	3	19	19	1	1	-	-	23	23
	More than 1,000	1	354	354	9	9	58	58	35	35	64	64	166	166
Biochemical industry	Less than 50	4	60	15	4	1	8	2	7	2	6	2	25	6
	50~299	3	180	60	2	1	8	3	19	6	2	1	31	10
Biofood industry	Less than 50	3	40	13	2	1	2	1	4	1	-	-	8	3
	50~299	3	176	59	5	2	14	5	9	3	1	0	29	10
Bioenvironmental industry	Less than 50	1	9	9	1	1	2	2	6	6	-	-	9	9
Bioprocess and equipment industry	Less than 50	3	55	18	1	0	7	2	9	3	1	0	18	6
	50~299	1	58	58	1	1	6	6	14	14	-	-	21	21
Bioenergy and biosource industry	Less than 50	1	6	6	1	1	3	3	1	1	1	1	6	6
	50~299	1	64	64	-	-	-	-	-	-	8	8	8	8
Bioassay, bioinformatics and R&D service industry	Less than 50	1	40	40	-	-	11	11	19	19	-	-	30	30
<input type="checkbox"/> Sales above break-even - 6~9 years														
Bio pharmaceutical industry	Less than 50	7	104	15	3	0	15	2	14	2	2	0	34	5
	50~299	7	647	92	25	4	65	9	38	5	9	1	137	20
	300~999	2	1,287	644	29	15	60	30	3	2	15	8	107	54
	More than 1,000	1	33	33	4	4	10	10	-	-	-	-	14	14
Biochemical industry	Less than 50	12	213	18	9	1	38	3	41	3	4	0	92	8
	50~299	1	5	5	-	-	-	-	1	1	-	-	1	1
	More than 1,000	2	484	242	47	24	327	164	84	42	15	8	473	237
Biofood industry	Less than 50	14	142	10	14	1	26	2	19	1	-	-	59	4
	50~299	2	69	35	3	2	15	8	11	6	-	-	29	15
Bioenvironmental industry	Less than 50	1	33	33	-	-	1	1	4	4	-	-	5	5
	50~299	1	29	29	2	2	9	9	3	3	1	1	15	15
	300~999	1	27	27	3	3	8	8	-	-	-	-	11	11
Bioelectronics industry	Less than 50	2	13	7	2	1	5	3	2	1	-	-	9	5
Bioprocess and equipment industry	Less than 50	1	8	8	-	-	3	3	3	3	1	1	7	7
	50~299	2	64	32	1	1	5	3	4	2	-	-	10	5
Bioenergy and biosource industry	Less than 50	2	63	32	3	2	6	3	4	2	2	1	15	8
Bioassay, bioinformatics and R&D service industry	Less than 50	3	28	9	6	2	11	4	6	2	2	1	25	8
	50~299	1	120	120	-	-	5	5	5	5	50	50	60	60

		Total	Bioindustry Workers		Researcher: Doctor		Researcher: Master		Researcher: Bachelor		Researcher: Others		Researcher: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	1,536	2	5,181	5	3,282	3	1,285	1	11,284	12
<input type="checkbox"/> Sales above break-even - 10 or more years														
Biopharmaceutical industry	Less than 50	7	156	22	1	0	20	3	23	3	6	1	50	7
	50~299	33	2,928	89	45	1	202	6	129	4	37	1	413	13
	300~999	17	929	55	24	1	84	5	68	4	16	1	192	11
	More than 1,000	9	5,005	556	132	15	667	74	91	10	174	19	1,064	118
Biochemical industry	Less than 50	20	289	14	17	1	53	3	30	2	8	0	108	5
	50~299	13	1,093	84	23	2	132	10	96	7	23	2	274	21
Biofood industry	Less than 50	14	281	20	19	1	26	2	27	2	12	1	84	6
	50~299	12	1,152	96	9	1	55	5	63	5	6	1	133	11
	300~999	4	738	185	7	2	14	4	21	5	5	1	47	12
	More than 1,000	2	2,080	1,040	82	41	225	113	19	10	99	50	425	213
Bioenvironmental industry	Less than 50	8	129	16	8	1	18	2	16	2	4	1	46	6
	50~299	3	81	27	1	0	9	3	19	6	9	3	38	13
	More than 1,000	1	57	57	2	2	20	20	30	30	5	5	57	57
Bioelectronics industry	50~299	1	92	92	1	1	5	5	4	4	-	-	10	10
	300~999	2	692	346	8	4	57	29	43	22	6	3	114	57
Bioprocess and equipment industry	Less than 50	8	173	22	4	1	17	2	10	1	5	1	36	5
	50~299	7	328	47	9	1	34	5	37	5	9	1	89	13
	300~999	1	2	2	-	-	-	-	2	2	-	-	2	2
Bioenergy and bioresource industry	50~299	1	84	84	6	6	6	6	3	3	5	5	20	20
	300~999	1	372	372	14	14	27	27	23	23	138	138	202	202
Bioassay, bioinformatics and R&D service industry	Less than 50	8	142	18	16	2	34	4	45	6	3	0	98	12
	50~299	7	1,067	152	41	6	152	22	365	52	76	11	634	91
<input type="checkbox"/> Sales above break-even - Unknown														
Bioenvironmental industry	Less than 50	1	2	-	-	-	2	2	-	-	-	-	2	2
<input type="checkbox"/> Sales - Unknown														
Biopharmaceutical industry	Less than 50	5	45	9	2	0	5	1	7	1	-	-	14	3
	50~299	3	172	57	11	4	33	11	28	9	-	-	72	24
	300~999	4	-	-	-	-	-	-	-	-	-	-	0	0
	More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	8	2	0	-	-	1	0	1	0	-	-	2	0
Biochemical industry	Less than 50	7	14	2	1	0	5	1	4	1	-	-	10	1
	50~299	3	21	7	2	1	2	1	6	2	1	0	11	4
	More than 1,000	4	102	26	28	7	50	13	11	3	13	3	102	26
	Unknown	4	15	4	2	1	1	0	12	3	-	-	15	4
Biofood industry	Less than 50	5	19	4	5	1	4	1	2	0	1	0	12	2
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	Less than 50	5	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	5	109	22	-	-	1	0	6	1	-	-	7	1
Bioprocess and equipment industry	Less than 50	5	13	3	2	0	3	1	5	1	1	0	11	2
	50~299	1	17	17	-	-	-	-	-	-	-	-	0	0
	300~999	1	40	40	3	3	7	7	5	5	2	2	17	17
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioenergy and bioresource industry	Less than 50	1	27	27	-	-	1	1	6	6	-	-	7	7
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	0
Bioassay, bioinformatics and R&D service industry	Less than 50	4	11	3	-	-	1	0	2	1	-	-	3	1
	50~299	1	40	40	-	-	2	2	-	-	-	-	2	2
	Unknown	1	4	4	-	-	2	2	2	2	-	-	4	4



&lt; Table 2-2 &gt; Manpower Size of Production Workers (Unit : number of firms, people)

	Total	Bioindustry Workers		Production workers: Doctor		Production workers: Master		Production workers: Bachelor		Production workers: Others		Production workers: Total	
		Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies	958	37,778	39	99	0	821	1	3,928	4	7,076	7	11,924	12
<b>■ Sales Situation</b>													
No sales	269	5,331	20	30	0	184	1	949	4	1,008	4	2,171	8
Sales below break-even - 1 year	39	975	25	1	0	18	0	125	3	269	7	413	11
Sales below break-even - 2~3 years	94	2,089	22	5	0	113	1	427	5	331	4	876	9
Sales below break-even - 4~5 years	65	1,304	20	9	0	29	0	151	2	150	2	339	5
Sales below break-even - 6~9 years	55	1,508	27	2	0	25	0	123	2	273	5	423	8
Sales below break-even - 10 or more years	60	2,468	41	6	0	30	1	223	4	509	8	768	13
Sales below break-even - Unknown	1	43	43	1	1	3	3	7	7	5	5	16	16
Sales above break-even - 1 year	5	141	28	1	0	4	1	46	9	16	3	67	13
Sales above break-even - 2~3 years	24	612	26	1	0	3	0	42	2	45	2	91	4
Sales above break-even - 4~5 years	29	1,415	49	1	0	32	1	162	6	321	11	516	18
Sales above break-even - 6~9 years	62	3,369	54	8	0	174	3	343	6	602	10	1,127	18
Sales above break-even - 10 or more years	179	17,870	100	33	0	199	1	1,290	7	3,466	19	4,988	28
Sales above break-even - Unknown	1	2	2	-	-	-	-	-	-	-	-	0	-
Sales - Unknown	75	651	9	1	0	7	0	40	1	81	1	129	2
<b>■ Main type of industry</b>													
Biopharmaceutical industry	305	17,988	59	41	0	474	2	1,606	5	3,194	10	5,315	17
Biochemical industry	204	5,064	25	13	0	89	0	530	3	901	4	1,533	8
Biofood industry	199	8,103	41	30	0	133	1	1,181	6	1,971	10	3,315	17
Bioenvironmental industry	75	1,370	18	6	0	23	0	208	3	167	2	404	5
Bioelectronics industry	26	1,099	42	1	0	21	1	88	3	411	16	521	20
Bioprocess and equipment industry	70	1,301	19	3	0	43	1	124	2	275	4	445	6
Bioenergy and bioresource industry	24	1,017	42	2	0	32	1	109	5	126	5	269	11
Bioassay, bioinformatics and R&D service industry	55	1,836	33	3	0	6	0	82	1	31	1	122	2
<b>■ Number of employees</b>													
Less than 50	564	6,952	12	40	0	172	0	861	2	916	2	1,989	4
50~299	252	15,566	62	27	0	285	1	1,614	6	3,862	15	5,788	23
300~999	76	6,049	80	15	0	254	3	898	12	1,200	16	2,367	31
More than 1,000	41	9,081	221	17	0	110	3	549	13	1,098	27	1,774	43
Unknown	25	130	5	-	-	-	-	6	0	-	-	6	0
<b>□ Sales situation - No sales</b>													
Biopharmaceutical industry	42	467	11	-	-	13	0	33	1	46	1	92	2
50~299	42	922	22	2	0	31	1	168	4	226	5	427	10
300~999	17	769	45	2	0	22	1	51	3	86	5	161	9
More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	0
Biochemical industry	26	168	6	-	-	2	0	25	1	18	1	45	2
50~299	9	301	33	1	0	10	1	42	5	119	13	172	19
300~999	4	22	6	-	-	-	-	4	1	5	1	9	2
More than 1,000	4	82	21	-	-	-	-	-	-	5	1	5	1
Biofood industry	21	249	12	16	1	6	0	35	2	29	1	86	4
50~299	16	412	26	2	0	24	2	66	4	114	7	206	13
300~999	11	594	54	3	0	26	2	274	25	137	12	440	40
More than 1,000	9	459	51	3	0	28	3	81	9	119	13	231	26
Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	14	96	7	-	-	1	0	7	1	17	1	25	2
50~299	5	143	29	-	-	4	1	71	14	19	4	94	19
Bioelectronics industry	6	58	10	-	-	2	0	3	1	-	-	5	1
50~299	2	18	9	-	-	2	1	3	2	-	-	5	3
300~999	1	32	32	-	-	-	-	-	-	10	10	10	10
Bioprocess and equipment industry	15	92	6	-	-	-	-	15	1	8	1	23	2
50~299	3	64	21	-	-	3	1	9	3	19	6	31	10
Bioenergy and bioresource industry	6	54	9	-	-	3	1	7	1	10	2	20	3
50~299	1	60	60	-	-	-	-	43	43	-	-	43	43
More than 1,000	1	80	80	1	1	5	5	10	10	21	21	37	37
Bioassay, bioinformatics and R&D service industry	9	73	8	-	-	2	0	2	0	-	-	4	0
50~299	3	116	39	-	-	-	-	-	-	-	-	0	0

		Total	Bioindustry Workers		Production workers: Doctor		Production workers: Master		Production workers: Bachelor		Production workers: Others		Production workers: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	99	0	821	1	3,928	4	7,076	7	11,924	12
□ Sales below break-even - 1 year														
Biopharmaceutical industry	Less than 50	6	89	15	-	-	1	0	18	3	1	0	20	3
	50~299	6	499	83	-	-	6	1	46	8	163	27	215	36
Biochemical industry	Less than 50	12	105	9	-	-	1	0	12	1	23	2	36	3
	50~299	1	50	50	-	-	1	1	7	7	20	20	28	28
	300~999	1	17	17	-	-	1	1	5	5	3	3	9	9
	More than 1,000	1	10	10	-	-	-	-	-	-	-	-	0	0
Biofood industry	Less than 50	5	69	14	-	-	2	0	18	4	16	3	36	7
	50~299	1	30	30	-	-	1	1	5	5	13	13	19	19
Bioenvironmental industry	Less than 50	2	37	19	-	-	1	1	-	-	19	10	20	10
Bioelectronics industry	Less than 50	1	24	24	-	-	1	1	6	6	3	3	10	10
Bioprocess and equipment industry	50~299	1	6	6	-	-	-	-	1	1	-	-	1	1
Bioenergy and bioresource industry	Less than 50	1	31	31	1	1	3	3	5	5	8	8	17	17
Bioassay, bioinformatics and R&D service industry	Less than 50	1	8	8	-	-	-	-	2	2	-	-	2	2
□ Sales below break-even - 2~3 years														
Biopharmaceutical industry	Less than 50	12	219	18	1	0	13	1	23	2	23	2	60	5
	50~299	6	295	49	1	0	16	3	58	10	105	18	180	30
	More than 1,000	1	169	169	-	-	20	20	30	30	15	15	65	65
Biochemical industry	Less than 50	19	190	10	1	0	5	0	34	2	12	1	52	3
	50~299	1	33	33	-	-	2	2	10	10	9	9	21	21
	300~999	2	206	103	-	-	10	5	76	38	8	4	94	47
	More than 1,000	1	30	30	-	-	3	3	6	6	9	9	18	18
Biofood industry	Less than 50	20	165	8	-	-	1	0	21	1	19	1	41	2
	50~299	1	226	226	-	-	-	-	57	57	62	62	119	119
Bioenvironmental industry	Less than 50	9	138	15	-	-	4	0	41	5	18	2	63	7
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioelectronics industry	Less than 50	1	7	7	-	-	-	-	-	-	1	1	1	1
	50~299	2	50	25	1	1	2	1	8	4	3	2	14	7
Bioprocess and equipment industry	Less than 50	9	136	15	1	0	18	2	27	3	24	3	70	8
Bioenergy and bioresource industry	Less than 50	3	44	15	-	-	18	6	3	1	6	2	27	9
	50~299	1	107	107	-	-	-	-	33	33	14	14	47	47
Bioassay, bioinformatics and R&D service industry	Less than 50	5	74	15	-	-	1	0	-	-	3	1	4	1
□ Sales below break-even - 4~5 years														
Biopharmaceutical industry	Less than 50	10	136	14	1	0	2	0	21	2	-	-	24	2
	50~299	4	258	65	-	-	3	1	12	3	41	10	56	14
	300~999	1	20	20	1	1	3	3	12	12	1	1	17	17
Biochemical industry	Less than 50	13	230	18	3	0	5	0	43	3	51	4	102	8
	50~299	2	83	42	1	1	5	3	13	7	23	12	42	21
Biofood industry	Less than 50	18	187	10	2	0	5	0	25	1	27	2	59	3
	300~999	1	36	36	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	Less than 50	6	24	4	-	-	1	0	3	1	3	1	7	1
	50~299	1	176	176	-	-	-	-	-	-	-	-	0	0
Bioelectronics industry	Less than 50	2	30	15	-	-	1	1	3	2	-	-	4	2
Bioprocess and equipment industry	Less than 50	2	14	7	-	-	-	-	-	-	4	2	4	2
Bioenergy and bioresource industry	Less than 50	1	25	25	-	-	2	2	2	2	-	-	4	4
Bioassay, bioinformatics and R&D service industry	Less than 50	4	85	21	1	0	2	1	17	4	-	-	20	5
□ Sales below break-even - 6~9 years														
Biopharmaceutical industry	Less than 50	10	116	12	-	-	4	0	15	2	5	1	24	2
	50~299	3	130	43	-	-	5	2	23	8	11	4	39	13
	300~999	1	76	76	-	-	5	5	8	8	15	15	28	28
Biochemical industry	Less than 50	15	234	16	1	0	1	0	16	1	37	2	55	4
	50~299	3	308	103	-	-	2	1	9	3	41	14	52	17
	More than 1,000	1	14	14	-	-	-	-	-	-	-	-	0	0
Biofood industry	Less than 50	8	103	13	-	-	-	-	15	2	19	2	34	4
	50~299	2	137	69	-	-	2	1	18	9	49	25	69	35
Bioenvironmental industry	Less than 50	4	41	10	-	-	-	-	5	1	10	3	15	4
	50~299	1	160	160	-	-	-	-	-	-	26	26	26	26
Bioelectronics industry	Less than 50	2	29	15	-	-	2	1	4	2	-	-	6	3
Bioprocess and equipment industry	Less than 50	2	45	23	-	-	-	-	-	-	20	10	20	10
	50~299	1	112	112	1	1	4	4	10	10	40	40	55	55
Bioassay, bioinformatics and R&D service industry	Less than 50	2	3	2	-	-	-	-	-	-	-	-	0	0
		Total	Bioindustry Workers	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:	Production workers:

		Total		Doctor		Master		Bachelor		Others		Total		
		Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	
Number of companies		958	37,778	39	99	0	821	1	3,928	4	7,076	7	11,924	12
<input type="checkbox"/> Sales below break-even - 10 or more years														
Biopharmaceutical industry	Less than 50	9	137	15	-	-	2	0	8	1	13	1	23	3
	50~299	9	1,152	128	-	-	7	1	93	10	177	20	277	31
	300~999	3	76	25	-	-	5	2	19	6	7	2	31	10
Biochemical industry	Less than 50	7	131	19	-	-	2	0	10	1	16	2	28	4
	50~299	2	193	97	1	1	9	5	39	20	80	40	129	65
Biofood industry	Less than 50	12	153	13	-	-	1	0	10	1	37	3	48	4
	50~299	5	517	103	-	-	3	1	32	6	172	34	207	41
Bioenvironmental industry	Less than 50	4	32	8	5	1	-	-	1	0	-	-	6	2
Bioelectronics industry	Less than 50	2	28	14	-	-	1	1	7	4	4	2	12	6
Bioprocess and equipment industry	Less than 50	3	24	8	-	-	-	-	4	1	3	1	7	2
	50~299	1	8	8	-	-	-	-	-	-	-	-	0	0
Bioassay, bioinformatics and R&D service industry	Less than 50	3	17	6	-	-	-	-	-	-	-	-	0	0
<input type="checkbox"/> Sales below break-even - Unknown														
Biofood industry	Less than 50	1	43	43	1	1	3	3	7	7	5	5	16	16
<input type="checkbox"/> Sales above break-even - 1 year														
Biopharmaceutical industry	50~299	1	50	50	1	1	3	3	10	10	12	12	26	26
Biofood industry	Less than 50	2	12	6	-	-	-	-	1	1	-	-	1	1
Bioenvironmental industry	Less than 50	1	47	47	-	-	1	1	23	23	-	-	24	24
Bioprocess and equipment industry	Less than 50	1	32	32	-	-	-	-	12	12	4	4	16	16
<input type="checkbox"/> Sales above break-even - 2~3 years														
Biopharmaceutical industry	Less than 50	5	96	19	-	-	-	-	7	1	8	2	15	3
	50~299	4	277	69	-	-	2	1	15	4	25	6	42	11
Biochemical industry	Less than 50	6	59	10	-	-	1	0	13	2	6	1	20	3
	More than 1,000	1	122	122	-	-	-	-	-	-	-	-	0	0
Biofood industry	Less than 50	3	14	5	1	0	-	-	1	0	2	1	4	1
Bioelectronics industry	Less than 50	2	26	13	-	-	-	-	6	3	3	2	9	5
Bioprocess and equipment industry	Less than 50	1	10	10	-	-	-	-	-	-	-	-	0	0
Bioassay, bioinformatics and R&D service industry	Less than 50	2	8	4	-	-	-	-	-	-	1	1	1	1
<input type="checkbox"/> Sales above break-even - 4~5 years														
Biopharmaceutical industry	Less than 50	3	73	24	-	-	-	-	5	2	23	8	28	9
	50~299	3	186	62	-	-	-	-	26	9	3	1	29	10
	300~999	1	114	114	-	-	12	12	26	26	14	14	52	52
	More than 1,000	1	354	354	-	-	5	5	25	25	92	92	122	122
Biochemical industry	Less than 50	4	60	15	-	-	1	0	6	2	10	3	17	4
	50~299	3	180	60	-	-	6	2	20	7	28	9	54	18
Biofood industry	Less than 50	3	40	13	-	-	-	-	10	3	16	5	26	9
	50~299	3	176	59	-	-	3	1	32	11	95	32	130	43
Bioenvironmental industry	Less than 50	1	9	9	-	-	-	-	-	-	-	-	0	0
Bioprocess and equipment industry	Less than 50	3	55	18	1	0	5	2	6	2	18	6	30	10
	50~299	1	58	58	-	-	-	-	6	6	10	10	16	16
Bioenergy and bioresource industry	Less than 50	1	6	6	-	-	-	-	-	-	-	-	0	0
	50~299	1	64	64	-	-	-	-	-	-	12	12	12	12
Bioassay, bioinformatics and R&D service industry	Less than 50	1	40	40	-	-	-	-	-	-	-	-	0	0
<input type="checkbox"/> Sales above break-even - 6~9 years														
Biopharmaceutical industry	Less than 50	7	104	15	-	-	4	1	14	2	16	2	34	5
	50~299	7	647	92	3	0	38	5	91	13	238	34	370	53
	300~999	2	1,287	644	4	2	112	56	118	59	246	123	480	240
	More than 1,000	1	33	33	-	-	-	-	7	7	-	-	7	7
Biochemical industry	Less than 50	12	213	18	-	-	5	0	46	4	20	2	71	6
	50~299	1	5	5	-	-	-	-	1	1	-	-	1	1
	More than 1,000	2	484	242	-	-	2	1	1	1	5	3	8	4
Biofood industry	Less than 50	14	142	10	-	-	-	-	24	2	10	1	34	2
	50~299	2	69	35	-	-	3	2	15	8	10	5	28	14
Bioenvironmental industry	Less than 50	1	33	33	-	-	-	-	-	-	7	7	7	7
	50~299	1	29	29	1	1	3	3	9	9	1	1	14	14
	300~999	1	27	27	-	-	3	3	8	8	5	5	16	16
Bioelectronics industry	Less than 50	2	13	7	-	-	-	-	-	-	-	-	0	0
Bioprocess and equipment industry	Less than 50	1	8	8	-	-	-	-	-	-	-	-	0	0
	50~299	2	64	32	-	-	4	2	5	3	30	15	39	20
Bioenergy and bioresource industry	Less than 50	2	63	32	-	-	-	-	4	2	14	7	18	9
Bioassay, bioinformatics and R&D service industry	Less than 50	3	28	9	-	-	-	-	-	-	-	-	0	0
	50~299	1	120	120	-	-	-	-	-	-	-	-	0	0

	Total	Bioindustry Workers		Production workers: Doctor		Production workers: Master		Production workers: Bachelor		Production workers: Others		Production workers: Total		
		Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	
Number of companies	958	37,778	39	99	0	821	1	3,928	4	7,076	7	11,924	12	
<input type="checkbox"/> Sales above break-even - 10 or more years														
Biopharmaceutical industry	Less than 50	7	156	22	-	-	7	1	36	5	30	4	73	10
	50~299	33	2,928	89	8	0	53	2	193	6	892	27	1,146	35
	300~999	17	929	55	4	0	36	2	180	11	179	11	399	23
	More than 1,000	9	5,005	556	13	1	42	5	208	23	441	49	704	78
Biochemical industry	Less than 50	20	289	14	3	0	6	0	27	1	17	1	53	3
	50~299	13	1,093	84	2	0	8	1	58	4	333	26	401	31
Biofood industry	Less than 50	14	281	20	-	-	3	0	19	1	77	6	99	7
	50~299	12	1,152	96	-	-	12	1	163	14	424	35	599	50
	300~999	4	738	185	1	0	5	1	67	17	126	32	199	50
	More than 1,000	2	2,080	1,040	-	-	5	3	181	91	391	196	577	289
Bioenvironmental industry	Less than 50	8	129	16	-	-	2	0	21	3	15	2	38	5
	50~299	3	81	27	-	-	3	1	13	4	27	9	43	14
	More than 1,000	1	57	57	-	-	-	-	-	-	-	-	0	0
Bioelectronics industry	50~299	1	92	92	-	-	1	1	8	8	55	55	64	64
	300~999	2	692	346	-	-	9	5	40	20	332	166	381	191
Bioprocess and equipment industry	Less than 50	8	173	22	-	-	3	0	5	1	41	5	49	6
	50~299	7	328	47	-	-	2	0	16	2	43	6	61	9
	300~999	1	2	2	-	-	-	-	-	-	-	-	0	0
Bioenergy and bioresource industry	50~299	1	84	84	-	-	-	-	-	-	26	26	26	26
	300~999	1	372	372	-	-	1	1	2	2	15	15	18	18
Bioassay, bioinformatics and R&D service industry	Less than 50	8	142	18	-	-	-	-	11	1	2	0	13	2
	50~299	7	1,067	152	2	0	1	0	42	6	-	-	45	6
<input type="checkbox"/> Sales above break-even - Unknown														
Bioenvironmental industry	Less than 50	1	2	2	-	-	-	-	-	-	-	-	0	0
<input type="checkbox"/> Sales - Unknown														
Biopharmaceutical industry	Less than 50	5	45	9	-	-	2	0	7	1	10	2	19	4
	50~299	3	172	57	-	-	-	-	-	-	30	10	30	10
	300~999	4	-	-	-	-	-	-	-	-	-	-	0	0
	More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	8	2	0	-	-	-	-	-	-	-	-	0	0
Biochemical industry	Less than 50	7	14	2	-	-	-	-	-	-	1	0	1	0
	50~299	3	21	7	-	-	1	0	7	2	2	1	10	3
	More than 1,000	4	102	26	-	-	-	-	-	-	-	-	0	0
	Unknown	4	15	4	-	-	-	-	-	-	-	-	0	0
Biofood industry	Less than 50	5	19	4	1	0	-	-	4	1	2	0	7	1
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	0
Bioenvironmental industry	Less than 50	5	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	5	109	22	-	-	-	-	6	1	-	-	6	1
Bioprocess and equipment industry	Less than 50	5	13	3	-	-	-	-	-	-	-	-	0	0
	50~299	1	17	17	-	-	-	-	-	-	-	-	0	0
	300~999	1	40	40	-	-	4	4	8	8	11	11	23	23
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	0
Bioenergy and bioresource industry	Less than 50	1	27	27	-	-	-	-	-	-	-	-	0	0
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	0
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	0
Bioassay, bioinformatics and R&D service industry	Less than 50	4	11	3	-	-	-	-	-	-	5	1	5	1
	50~299	1	40	40	-	-	-	-	8	8	20	20	28	28
	Unknown	1	4	4	-	-	-	-	-	-	-	-	0	0

&lt; Table 2-3 &gt; Manpower Size of Others such as sales/administrative(III-2)

(Unit : number of firms, people)

	Total	Bioindustry Workers		Others: Doctor		Others: Master		Others: Bachelor		Others: Others		Others: Total	
		Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies	958	37,778	39	322	0	1,229	1	7,537	8	5,482	6	14,570	15
<b>■ Sales Situation</b>													
No sales	269	5,331	20	89	0	70	0	669	2	254	1	1,082	4
Sales below break-even - 1 year	39	975	25	1	0	10	0	231	6	36	1	278	7
Sales below break-even - 2~3 years	94	2,089	22	12	0	54	1	271	3	54	1	391	4
Sales below break-even - 4~5 years	65	1,304	20	9	0	18	0	300	5	153	2	480	7
Sales below break-even - 6~9 years	55	1,508	27	19	0	58	1	241	4	238	4	556	10
Sales below break-even - 10 or more years	60	2,468	41	42	1	104	2	493	8	344	6	983	16
Sales below break-even - Unknown	1	43	43	-	-	-	-	-	-	-	-	0	-
Sales above break-even - 1 year	5	141	28	1	0	2	0	20	4	4	1	27	5
Sales above break-even - 2~3 years	24	612	26	9	0	21	1	155	6	29	1	214	9
Sales above break-even - 4~5 years	29	1,415	49	13	0	72	2	242	8	114	4	441	15
Sales above break-even - 6~9 years	62	3,369	54	21	0	143	2	815	13	160	3	1,139	18
Sales above break-even - 10 or more years	179	17,870	100	102	1	665	4	3,929	22	4,050	23	8,746	49
Sales above break-even - Unknown	1	2	2	-	-	-	-	-	-	-	-	0	-
Sales - Unknown	75	651	9	4	0	12	0	171	2	46	1	233	3
<b>■ Main type of industry</b>													
Biopharmaceutical industry	305	17,988	59	192	1	485	2	3,630	12	3,829	13	8,136	27
Biochemical industry	204	5,064	25	36	0	198	1	791	4	291	1	1,316	6
Biofood industry	199	8,103	41	33	0	335	2	1,844	9	738	4	2,950	15
Bioenvironmental industry	75	1,370	18	12	0	20	0	336	4	180	2	548	7
Bioelectronics industry	26	1,099	42	7	0	37	1	136	5	82	3	262	10
Bioprocess and equipment industry	70	1,301	19	10	0	35	1	283	4	122	2	450	6
Bioenergy and bioresource industry	24	1,017	42	10	0	34	1	173	7	119	5	336	14
Bioassay, bioinformatics and R&D service industry	55	1,836	33	22	0	85	2	344	6	121	2	572	10
<b>■ Number of employees</b>													
Less than 50	564	6,952	12	73	0	202	0	1,228	2	451	1	1,954	3
50~299	252	15,566	62	114	0	644	3	3,314	13	1,730	7	5,802	23
300~999	76	6,049	80	95	1	221	3	1,553	20	427	6	2,296	30
More than 1,000	41	9,081	221	40	1	161	4	1,356	33	2,865	70	4,422	108
Unknown	25	130	5	-	-	1	0	86	3	9	0	96	4
<b>□ Sales situation - No sales</b>													
Biopharmaceutical industry													
Less than 50	42	467	11	5	0	4	0	55	1	37	1	101	2
50~299	42	922	22	4	0	28	1	186	4	43	1	261	6
300~999	17	769	45	71	4	4	0	250	15	19	1	344	20
More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	-
Biochemical industry													
Less than 50	26	168	6	-	-	4	0	20	1	14	1	38	1
50~299	9	301	33	1	0	3	0	46	5	2	0	52	6
300~999	4	22	6	-	-	-	-	-	-	-	-	0	-
More than 1,000	4	82	21	-	-	-	-	2	1	-	-	2	1
Biofood industry													
Less than 50	21	249	12	2	0	10	0	37	2	27	1	76	4
50~299	16	412	26	1	0	5	0	5	0	78	5	89	6
300~999	11	594	54	-	-	-	-	-	-	-	-	0	-
More than 1,000	9	459	51	-	-	-	-	-	-	-	-	0	-
Unknown	1	-	-	-	-	-	-	-	-	-	-	0	-
Bioenvironmental industry													
Less than 50	14	96	7	-	-	2	0	5	0	11	1	18	1
50~299	5	143	29	-	-	-	-	8	2	8	2	16	3
Bioelectronics industry													
Less than 50	6	58	10	1	0	1	0	2	0	4	1	8	1
50~299	2	18	9	-	-	-	-	-	-	-	-	0	-
300~999	1	32	32	-	-	-	-	-	-	5	5	5	5
Bioprocess and equipment industry													
Less than 50	15	92	6	1	0	3	0	35	2	3	0	42	3
50~299	3	64	21	-	-	-	-	-	-	-	-	0	-
Bioenergy and bioresource industry													
Less than 50	6	54	9	-	-	2	0	2	0	2	0	6	1
50~299	1	60	60	-	-	-	-	4	4	-	-	4	4
More than 1,000	1	80	80	-	-	-	-	-	-	-	-	0	-
Bioassay, bioinformatics and R&D service industry													
Less than 50	9	73	8	1	0	4	0	7	1	1	0	13	1
50~299	3	116	39	2	1	-	-	5	2	-	-	7	2
<b>□ Sales below break-even - 1 year</b>													
Biopharmaceutical industry													
Less than 50	6	89	15	1	0	1	0	27	5	2	0	31	5
50~299	6	499	83	-	-	5	1	181	30	20	3	206	34

		Total	Bioindustry Workers		Others: Doctor		Others: Master		Others: Bachelor		Others: Others		Others: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	322	0	1,229	1	7,537	8	5,482	6	14,570	15
Biochemical industry	Less than 50	12	105	9	-	-	1	0	9	1	2	0	12	1
	50~299	1	50	50	-	-	2	2	3	3	8	8	13	13
	300~999	1	17	17	-	-	-	-	-	-	-	-	0	-
	More than 1,000	1	10	10	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	5	69	14	-	-	1	0	1	0	-	-	2	0
	50~299	1	30	30	-	-	-	-	2	2	-	-	2	2
Bioenvironmental industry	Less than 50	2	37	19	-	-	-	-	5	3	4	2	9	5
Bioelectronics industry	Less than 50	1	24	24	-	-	-	-	2	2	-	-	2	2
Bioprocess and equipment industry	50~299	1	6	6	-	-	-	-	1	1	-	-	1	1
Bioenergy and bioresource industry	Less than 50	1	31	31	-	-	-	-	-	-	-	-	0	-
Bioassay, bioinformatics and R&D service industry	Less than 50	1	8	8	-	-	-	-	-	-	-	-	0	-
<input type="checkbox"/> Sales below break-even - 2~3 years														
Biopharmaceutical industry	Less than 50	12	219	18	2	0	13	1	33	3	10	1	58	5
	50~299	6	295	49	-	-	6	1	22	4	8	1	36	6
	More than 1,000	1	169	169	4	4	8	8	10	10	2	2	24	24
Biochemical industry	Less than 50	19	190	10	3	0	2	0	23	1	1	0	29	2
	50~299	1	33	33	-	-	-	-	-	-	-	-	0	-
	300~999	2	206	103	-	-	-	-	15	8	-	-	15	8
	More than 1,000	1	30	30	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	20	165	8	1	0	4	0	26	1	13	1	44	2
	50~299	1	226	226	-	-	7	7	94	94	6	6	107	107
Bioenvironmental industry	Less than 50	9	138	15	-	-	1	0	12	1	-	-	13	1
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	-
Bioelectronics industry	Less than 50	1	7	7	-	-	-	-	1	1	-	-	1	1
	50~299	2	50	25	-	-	-	-	-	-	-	-	0	-
Bioprocess and equipment industry	Less than 50	9	136	15	-	-	-	-	8	1	5	1	13	1
Bioenergy and bioresource industry	Less than 50	3	44	15	-	-	9	3	-	-	-	-	9	3
	50~299	1	107	107	2	2	2	2	17	17	9	9	30	30
Bioassay, bioinformatics and R&D service industry	Less than 50	5	74	15	-	-	2	0	10	2	-	-	12	2
<input type="checkbox"/> Sales below break-even - 4~5 years														
Biopharmaceutical industry	Less than 50	10	136	14	6	1	4	0	34	3	6	1	50	5
	50~299	4	258	65	-	-	-	-	-	-	107	27	107	27
	300~999	1	20	20	-	-	1	1	2	2	-	-	3	3
Biochemical industry	Less than 50	13	230	18	-	-	3	0	36	3	9	1	48	4
	50~299	2	83	42	-	-	-	-	10	5	-	-	10	5
Biofood industry	Less than 50	18	187	10	1	0	3	0	32	2	18	1	54	3
	300~999	1	36	36	-	-	-	-	-	-	-	-	0	-
Bioenvironmental industry	Less than 50	6	24	4	-	-	1	0	2	0	1	0	4	1
	50~299	1	176	176	1	1	5	5	155	155	11	11	172	172
Bioelectronics industry	Less than 50	2	30	15	-	-	-	-	-	-	1	1	1	1
Bioprocess and equipment industry	Less than 50	2	14	7	-	-	-	-	1	1	-	-	1	1
Bioenergy and bioresource industry	Less than 50	1	25	25	-	-	-	-	3	3	-	-	3	3
Bioassay, bioinformatics and R&D service industry	Less than 50	4	85	21	1	0	1	0	25	6	-	-	27	7
<input type="checkbox"/> Sales below break-even - 6~9 years														
Biopharmaceutical industry	Less than 50	10	116	12	-	-	3	0	12	1	5	1	20	2
	50~299	3	130	43	1	0	2	1	17	6	5	2	25	8
	300~999	1	76	76	-	-	-	-	-	-	-	-	0	-
Biochemical industry	Less than 50	15	234	16	3	0	4	0	54	4	41	3	102	7
	50~299	3	308	103	9	3	32	11	75	25	54	18	170	57
	More than 1,000	1	14	14	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	8	103	13	1	0	5	1	26	3	9	1	41	5
	50~299	2	137	69	2	1	5	3	24	12	8	4	39	20
Bioenvironmental industry	Less than 50	4	41	10	-	-	1	0	5	1	5	1	11	3
	50~299	1	160	160	-	-	-	-	-	-	108	108	108	108
Bioelectronics industry	Less than 50	2	29	15	1	1	1	1	2	1	-	-	4	2
Bioprocess and equipment industry	Less than 50	2	45	23	-	-	1	1	9	5	3	2	13	7
	50~299	1	112	112	2	2	4	4	17	17	-	-	23	23
Bioassay, bioinformatics and R&D service industry	Less than 50	2	3	2	-	-	-	-	-	-	-	-	0	-
<input type="checkbox"/> Sales below break-even - 10 or more years														
Biopharmaceutical industry	Less than 50	9	137	15	4	0	2	0	18	2	11	1	35	4
	50~299	9	1,152	128	11	1	58	6	205	23	216	24	490	54
	300~999	3	76	25	2	1	4	1	5	2	-	-	11	4
Biochemical industry	Less than 50	7	131	19	3	0	7	1	23	3	26	4	59	8
	50~299	2	193	97	5	3	5	3	13	7	-	-	23	12

		Total	Bioindustry Workers		Others: Doctor		Others: Master		Others: Bachelor		Others: Others		Others: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	322	0	1,229	1	7,537	8	5,482	6	14,570	15
Biofood industry	Less than 50	12	153	13	1	0	4	0	37	3	14	1	56	5
	50~299	5	517	103	4	1	20	4	169	34	66	13	259	52
Bioenvironmental industry	Less than 50	4	32	8	10	3	2	1	4	1	5	1	21	5
Bioenvironmental industry	Less than 50	2	28	14	-	-	2	1	4	2	4	2	10	5
Bioprocess and equipment industry	Less than 50	3	24	8	-	-	-	-	10	3	2	1	12	4
	50~299	1	8	8	-	-	-	-	-	-	-	-	0	-
Bioassay, bioinformatics and R&D service industry	Less than 50	3	17	6	2	1	-	-	5	2	-	-	7	2
<input type="checkbox"/> Sales below break-even - Unknown														
Biofood industry	Less than 50	1	43	43	-	-	-	-	-	-	-	-	0	-
<input type="checkbox"/> Sales above break-even - 1 year														
Biopharmaceutical industry	50~299	1	50	50	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	2	12	6	-	-	1	1	4	2	-	-	5	3
Bioenvironmental industry	Less than 50	1	47	47	-	-	1	1	13	13	-	-	14	14
Bioprocess and equipment industry	Less than 50	1	32	32	1	1	-	-	3	3	4	4	8	8
<input type="checkbox"/> Sales above break-even - 2~3 years														
Biopharmaceutical industry	Less than 50	5	96	19	-	-	7	1	27	5	3	1	37	7
	50~299	4	277	69	8	2	10	3	94	24	15	4	127	32
Biochemical industry	Less than 50	6	59	10	1	0	2	0	13	2	9	2	25	4
	More than 1,000	1	122	122	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	3	14	5	-	-	-	-	3	1	1	0	4	1
Bioelectronics industry	Less than 50	2	26	13	-	-	2	1	10	5	-	-	12	6
Bioprocess and equipment industry	Less than 50	1	10	10	-	-	-	-	8	8	-	-	8	8
Bioassay, bioinformatics and R&D service industry	Less than 50	2	8	4	-	-	-	-	-	-	1	1	1	1
<input type="checkbox"/> Sales above break-even - 4~5 years														
Biopharmaceutical industry	Less than 50	3	73	24	-	-	-	-	25	8	1	0	26	9
	50~299	3	186	62	6	2	5	2	52	17	29	10	92	31
	300~999	1	114	114	2	2	11	11	20	20	6	6	39	39
	More than 1,000	1	354	354	2	2	4	4	59	59	1	1	66	66
Biochemical industry	Less than 50	4	60	15	-	-	2	1	14	4	2	1	18	5
	50~299	3	180	60	-	-	43	14	30	10	22	7	95	32
Biofood industry	Less than 50	3	40	13	1	0	-	-	5	2	-	-	6	2
	50~299	3	176	59	-	-	2	1	7	2	8	3	17	6
Bioenvironmental industry	Less than 50	1	9	9	-	-	-	-	-	-	-	-	0	-
Bioprocess and equipment industry	Less than 50	3	55	18	-	-	-	-	6	2	1	0	7	2
	50~299	1	58	58	-	-	3	3	18	18	-	-	21	21
Bioenergy and bioresource industry	Less than 50	1	6	6	-	-	-	-	-	-	-	-	0	-
	50~299	1	64	64	-	-	-	-	-	-	44	44	44	44
Bioassay, bioinformatics and R&D service industry	Less than 50	1	40	40	2	2	2	2	6	6	-	-	10	10
<input type="checkbox"/> Sales above break-even - 6~9 years														
Biopharmaceutical industry	Less than 50	7	104	15	-	-	6	1	21	3	9	1	36	5
	50~299	7	647	92	8	1	24	3	92	13	16	2	140	20
	300~999	2	1,287	644	8	4	86	43	553	277	53	27	700	350
	More than 1,000	1	33	33	-	-	-	-	12	12	-	-	12	12
Biochemical industry	Less than 50	12	213	18	2	0	10	1	35	3	3	0	50	4
	50~299	1	5	5	-	-	-	-	3	3	-	-	3	3
	More than 1,000	2	484	242	-	-	-	-	3	2	-	-	3	2
Biofood industry	Less than 50	14	142	10	1	0	12	1	33	2	3	0	49	4
	50~299	2	69	35	-	-	2	1	8	4	2	1	12	6
Bioenvironmental industry	Less than 50	1	33	33	-	-	1	1	12	12	8	8	21	21
	50~299	1	29	29	-	-	-	-	-	-	-	-	0	-
	300~999	1	27	27	-	-	-	-	-	-	-	-	0	-
Bioelectronics industry	Less than 50	2	13	7	-	-	1	1	3	2	-	-	4	2
Bioprocess and equipment industry	Less than 50	1	8	8	-	-	-	-	-	-	1	1	1	1
	50~299	2	64	32	-	-	-	-	15	8	-	-	15	8
Bioenergy and bioresource industry	Less than 50	2	63	32	1	1	-	-	25	13	4	2	30	15
Bioassay, bioinformatics and R&D service industry	Less than 50	3	28	9	1	0	1	0	-	-	1	0	3	1
	50~299	1	120	120	-	-	-	-	-	-	60	60	60	60
<input type="checkbox"/> Sales above break-even - 10 or more years														
Biopharmaceutical industry	Less than 50	7	156	22	-	-	1	0	15	2	17	2	33	5
	50~299	33	2,928	89	15	0	106	3	819	25	429	13	1,369	41
	300~999	17	929	55	1	0	29	2	267	16	41	2	338	20
	More than 1,000	9	5,005	556	27	3	42	5	458	51	2,710	301	3,237	360



		Total	Bioindustry Workers		Others: Doctor		Others: Master		Others: Bachelor		Others: Others		Others: Total	
			Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	37,778	39	322	0	1,229	1	7,537	8	5,482	6	14,570	15
Biochemical industry	Less than 50	20	289	14	1	0	10	1	102	5	15	1	128	6
	50~299	13	1,093	84	8	1	68	5	260	20	82	6	418	32
Biofood industry	Less than 50	14	281	20	3	0	6	0	46	3	43	3	98	7
	50~299	12	1,152	96	2	0	96	8	222	19	100	8	420	35
	300~999	4	738	185	6	2	45	11	251	63	190	48	492	123
	More than 1,000	2	2,080	1,040	7	4	107	54	812	406	152	76	1,078	539
Bioenvironmental industry	Less than 50	8	129	16	1	0	5	1	29	4	10	1	45	6
	50~299	3	81	27	-	-	-	-	-	-	-	-	0	-
	More than 1,000	1	57	57	-	-	-	-	-	-	-	-	0	-
Bioelectronics industry	50~299	1	92	92	1	1	4	4	9	9	4	4	18	18
	300~999	2	692	346	4	2	26	13	103	52	64	32	197	99
Bioprocess and equipment industry	Less than 50	8	173	22	5	1	21	3	56	7	6	1	88	11
	50~299	7	328	47	1	0	3	0	94	13	80	11	178	25
	300~999	1	2	2	-	-	-	-	-	-	-	-	0	-
Bioenergy and bioresource industry	50~299	1	84	84	6	6	6	6	15	15	11	11	38	38
	300~999	1	372	372	1	1	15	15	87	87	49	49	152	152
Bioassay, bioinformatics and R&D service industry	Less than 50	8	142	18	3	0	3	0	22	3	3	0	31	4
	50~299	7	1,067	152	10	1	72	10	262	37	44	6	388	55
<input type="checkbox"/> Sales above break-even - Unknown														
Bioenvironmental industry	Less than 50	1	2	2	-	-	-	-	-	-	-	-	0	-
<input type="checkbox"/> Sales - Unknown														
Biopharmaceutical industry	Less than 50	5	45	9	-	-	-	-	4	1	8	2	12	2
	50~299	3	172	57	4	1	11	4	55	18	-	-	70	23
	300~999	4	-	-	-	-	-	-	-	-	-	-	0	-
	More than 1,000	1	-	-	-	-	-	-	-	-	-	-	0	-
	Unknown	8	2	0	-	-	-	-	-	-	-	-	0	-
Biochemical industry	Less than 50	7	14	2	-	-	-	-	2	0	1	0	3	0
	50~299	3	21	7	-	-	-	-	-	-	-	-	0	-
	More than 1,000	4	102	26	-	-	-	-	-	-	-	-	0	-
	Unknown	4	15	4	-	-	-	-	-	-	-	-	0	-
Biofood industry	Less than 50	5	19	4	-	-	-	-	-	-	-	-	0	-
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	-
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	-
Bioenvironmental industry	Less than 50	5	-	-	-	-	-	-	-	-	-	-	0	-
	Unknown	5	109	22	-	-	1	0	86	17	9	2	96	19
Bioprocess and equipment industry	Less than 50	5	13	3	-	-	-	-	2	0	-	-	2	0
	50~299	1	17	17	-	-	-	-	-	-	17	17	17	17
	300~999	1	40	40	-	-	-	-	-	-	-	-	0	-
	Unknown	1	-	-	-	-	-	-	-	-	-	-	0	-
Bioenergy and bioresource industry	Less than 50	1	27	27	-	-	-	-	20	20	-	-	20	20
	50~299	1	-	-	-	-	-	-	-	-	-	-	0	-
	Unknown	2	-	-	-	-	-	-	-	-	-	-	0	-
Bioassay, bioinformatics and R&D service industry	Less than 50	4	11	3	-	-	-	-	2	1	1	0	3	1
	50~299	1	40	40	-	-	-	-	-	-	10	10	10	10
	Unknown	1	4	4	-	-	-	-	-	-	-	-	0	-



&lt; Table 3 &gt; Investment Status of Bioindustry (Unit : number of firms, million Won)

	Total	Total R&D Investment		R&D Investment in Bioindustry		Total Facility Investment		Facility Investment in Bioindustry		
		Total	Average	Total	Average	Total	Average	Total	Average	
<b>Number of companies</b>	<b>958</b>	<b>4,407,675</b>	<b>4,601</b>	<b>998,824</b>	<b>1,043</b>	<b>770,010</b>	<b>804</b>	<b>546,671</b>	<b>571</b>	
<b>■ Sales Situation</b>										
No sales	269	852,809	3,170	112,968	420	250,807	932	184,776	687	
Sales below break-even - 1 year	39	33,467	858	19,327	496	31,366	804	1,754	45	
Sales below break-even - 2~3 years	94	98,944	1,053	44,059	469	15,999	170	6,405	68	
Sales below break-even - 4~5 years	65	47,052	724	34,656	533	31,343	482	11,060	170	
Sales below break-even - 6~9 years	55	120,059	2,183	58,284	1,060	12,582	229	12,321	224	
Sales below break-even - 10 or more years	60	111,806	1,863	68,515	1,142	32,810	547	21,926	365	
Sales below break-even - Unknown	1	563	563	563	563	-	-	-	-	
Sales above break-even - 1 year	5	3,027	605	1,513	303	500	100	500	100	
Sales above break-even - 2~3 years	24	30,323	1,263	15,615	651	15,120	630	14,010	584	
Sales above break-even - 4~5 years	29	94,484	3,258	34,087	1,175	135,300	4,666	121,749	4,198	
Sales above break-even - 6~9 years	62	1,874,112	30,228	202,522	3,266	27,437	443	7,124	115	
Sales above break-even - 10 or more years	179	999,508	5,584	395,898	2,212	214,936	1,201	163,292	912	
Sales above break-even - Unknown	1	-	-	-	-	-	-	-	-	
Sales - Unknown	75	141,521	1,887	10,817	144	1,810	24	1,754	23	
<b>■ Main type of industry</b>										
Biopharmaceutical industry	305	1,379,756	4,524	664,052	2,177	577,435	1,893	480,766	1,576	
Biochemical industry	204	2,461,202	12,065	111,739	548	112,253	550	21,064	103	
Biofood industry	199	293,406	1,474	123,032	618	39,156	197	16,836	85	
Bioenvironmental industry	75	24,627	328	11,348	151	3,671	49	3,173	42	
Bioelectronics industry	26	27,080	1,042	17,646	679	2,418	93	1,618	62	
Bioprocess and equipment industry	70	105,701	1,510	21,164	302	10,664	152	1,996	29	
Bioenergy and bioresource industry	24	41,825	1,743	18,435	768	2,778	116	1,602	67	
Bioassay, bioinformatics and R&D service industry	55	74,078	1,347	31,408	571	21,635	393	19,616	357	
<b>■ Number of employees</b>										
Less than 50	564	202,466	359	123,224	218	43,907	78	36,249	64	
50~299	252	422,747	1,678	264,498	1,050	291,657	1,157	251,805	999	
300~999	76	523,292	6,885	256,978	3,381	45,642	601	12,153	160	
More than 1,000	41	3,258,972	79,487	354,050	8,635	388,804	9,483	246,464	6,011	
Unknown	25	198	8	74	3	-	-	-	-	
<b>□ Sales situation - Nosales</b>										
Biopharmaceutical industry	Less than 50	42	12,241	291	9,448	225	844	20	825	20
	50~299	42	39,297	936	16,232	386	172,836	4,115	171,981	4,095
	300~999	17	95,749	5,632	33,585	1,976	6,521	384	1,980	116
	More than 1,000	1	31,102	31,102	100	100	-	-	-	-
Biochemical industry	Less than 50	26	5,726	220	3,476	134	530	20	365	14
	50~299	9	7,204	800	1,740	193	1,460	162	250	28
	300~999	4	12,900	3,225	650	163	1	0	1	0
	More than 1,000	4	483,420	120,855	8,500	2,125	45,000	11,250	3,500	875
Biofood industry	Less than 50	21	3,516	167	2,461	117	927	44	619	29
	50~299	16	5,286	330	2,355	147	1,370	86	401	25
	300~999	11	22,522	2,047	6,292	572	4,200	382	700	64
	More than 1,000	9	45,502	5,056	6,270	697	14,650	1,628	2,300	256
	Unknown	1	-	-	-	-	-	-	-	-
Bioenvironmental industry	Less than 50	14	2,140	153	950	68	-	-	-	-
	50~299	5	369	74	194	39	1	0	1	0
Bioelectronics industry	Less than 50	6	1,284	214	580	97	20	3	20	3
	50~299	2	1,974	987	900	450	500	250	300	150
	300~999	1	4,000	4,000	700	700	100	100	100	100
Bioprocess and equipment industry	Less than 50	15	2,156	144	1,016	68	1,106	74	705	47
	50~299	3	4,729	1,576	4,529	1,510	-	-	-	-
Bioenergy and bioresource industry	Less than 50	6	1,988	331	419	70	274	46	274	46
	50~299	1	-	-	-	-	-	-	-	-
	More than 1,000	1	23,000	23,000	3,000	3,000	-	-	-	-
Bioassay, bioinformatics and R&D service industry	Less than 50	9	2,345	261	2,155	239	45	5	32	4
	50~299	3	44,359	14,786	7,416	2,472	422	141	422	141
<b>□ Sales below break-even - 1 year</b>										
Biopharmaceutical industry	Less than 50	6	5,389	898	5,289	882	434	72	434	72
	50~299	6	13,008	2,168	10,111	1,685	240	40	180	30

		Total	Total R&D Investment		R&D Investment in Bioindustry		Total Facility Investment		Facility Investment in Bioindustry	
			Total	Average	Total	Average	Total	Average	Total	Average
<b>Number of companies</b>		<b>958</b>	<b>4,407,675</b>	<b>4,601</b>	<b>998,824</b>	<b>1,043</b>	<b>770,010</b>	<b>804</b>	<b>546,671</b>	<b>571</b>
<b>Biochemical industry</b>	<b>Less than 50</b>	12	1,087	91	1,027	86	460	38	460	38
	<b>50~299</b>	1	780	780	-	-	-	-	-	-
	<b>300~999</b>	1	500	500	200	200	100	100	50	50
	<b>More than 1,000</b>	1	10,000	10,000	1,000	1,000	30,000	30,000	500	500
<b>Biofood industry</b>	<b>Less than 50</b>	5	893	179	560	112	2	0	-	-
	<b>50~299</b>	1	281	281	150	150	-	-	-	-
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	2	329	165	170	85	30	15	30	15
<b>Bioelectronics industry</b>	<b>Less than 50</b>	1	250	250	250	250	-	-	-	-
<b>Bioprocess and equipment industry</b>	<b>50~299</b>	1	200	200	20	20	-	-	-	-
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	1	500	500	300	300	100	100	100	100
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	1	250	250	250	250	-	-	-	-
<input type="checkbox"/> Sales below break-even - 2~3 years										
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	12	5,655	471	5,416	451	1,119	93	1,115	93
	<b>50~299</b>	6	2,781	464	2,072	345	305	51	305	51
	<b>More than 1,000</b>	1	57,700	57,700	20,000	20,000	10,000	10,000	2,000	2,000
<b>Biochemical industry</b>	<b>Less than 50</b>	19	4,646	245	3,642	192	844	44	569	30
	<b>50~299</b>	1	861	861	75	75	-	-	-	-
	<b>300~999</b>	2	11,016	5,508	2,252	1,126	2,250	1,125	990	495
	<b>More than 1,000</b>	1	-	-	-	-	-	-	-	-
<b>Biofood industry</b>	<b>Less than 50</b>	20	3,810	191	3,144	157	504	25	491	25
	<b>50~299</b>	1	-	-	-	-	-	-	-	-
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	9	2,935	326	2,554	284	153	17	150	17
	<b>Unknown</b>	1	68	68	-	-	-	-	-	-
<b>Bioelectronics industry</b>	<b>Less than 50</b>	1	150	150	100	100	-	-	-	-
	<b>50~299</b>	2	2,651	1,326	1,500	750	-	-	-	-
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	9	3,459	384	1,859	207	134	15	121	13
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	3	130	43	130	43	140	47	140	47
	<b>50~299</b>	1	1,029	1,029	1	1	1	1	1	1
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	5	2,053	411	1,314	263	549	110	523	105
<input type="checkbox"/> Sales below break-even - 4~5 years										
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	10	8,529	853	5,946	595	285	29	85	9
	<b>50~299</b>	4	16,025	4,006	14,806	3,702	9,831	2,458	1,956	489
	<b>300~999</b>	1	1,305	1,305	1,305	1,305	9,385	9,385	1,725	1,725
<b>Biochemical industry</b>	<b>Less than 50</b>	13	5,742	442	4,490	345	2,635	203	1,697	131
	<b>50~299</b>	2	182	91	182	91	1,000	500	-	-
<b>Biofood industry</b>	<b>Less than 50</b>	18	4,319	240	3,035	169	3,667	204	3,603	200
	<b>300~999</b>	1	1,780	1,780	10	10	30	30	10	10
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	6	1,795	299	790	132	595	99	415	69
	<b>50~299</b>	1	950	950	950	950	-	-	-	-
<b>Bioelectronics industry</b>	<b>Less than 50</b>	2	2,181	1,091	1,181	591	1,000	500	400	200
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	2	340	170	150	75	110	55	100	50
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	1	950	950	507	507	805	805	369	369
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	4	2,954	739	1,304	326	2,000	500	700	175
<input type="checkbox"/> Sales below break-even - 6~9 years										
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	10	4,288	429	4,059	406	290	29	206	21
	<b>50~299</b>	3	4,761	1,587	4,761	1,587	9,050	3,017	9,050	3,017
	<b>300~999</b>	1	7,967	7,967	7,967	7,967	86	86	86	86
<b>Biochemical industry</b>	<b>Less than 50</b>	15	4,943	330	4,772	318	397	26	387	26
	<b>50~299</b>	3	14,392	4,797	13,870	4,623	2,020	673	2,009	670
	<b>More than 1,000</b>	1	71,483	71,483	14,000	14,000	300	300	300	300
<b>Biofood industry</b>	<b>Less than 50</b>	8	2,259	282	671	84	200	25	115	14
	<b>50~299</b>	2	1,145	573	510	255	-	-	-	-
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	4	848	212	748	187	-	-	-	-
	<b>50~299</b>	1	847	847	-	-	-	-	-	-
<b>Bioelectronics industry</b>	<b>Less than 50</b>	2	2,145	1,073	2,145	1,073	30	15	30	15
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	2	670	335	470	235	164	82	93	47
	<b>50~299</b>	1	4,306	4,306	4,306	4,306	40	40	40	40
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	2	5	3	5	3	5	3	5	3
<input type="checkbox"/> Sales below break-even - 10 or more years										
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	9	8,083	898	6,154	684	28	3	23	3
	<b>50~299</b>	9	57,589	6,399	48,763	5,418	22,665	2,518	17,084	1,898
	<b>300~999</b>	3	25,338	8,446	3,160	1,053	6,157	2,052	1,400	467

		Total	Total R&D Investment		R&D Investment in Bioindustry		Total Facility Investment		Facility Investment in Bioindustry	
			Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	4,407,675	4,601	998,824	1,043	770,010	804	546,671	571
Biochemical industry	Less than 50	7	4,149	593	1,947	278	382	55	270	39
	50~299	2	3,436	1,718	2,411	1,206	434	217	134	67
Biofood industry	Less than 50	12	2,953	246	983	82	119	10	58	5
	50~299	5	4,665	933	3,771	754	2,667	533	2,667	533
Bioenvironmental industry	Less than 50	4	20	5	10	3	-	-	-	-
Bioelectronics industry	Less than 50	2	431	216	431	216	50	25	50	25
Bioprocess and equipment industry	Less than 50	3	577	192	320	107	50	17	50	17
	50~299	1	4,280	4,280	280	280	248	248	180	180
Bioassay, bioinformatics and R&D service industry	Less than 50	3	285	95	285	95	10	3	10	3
<input type="checkbox"/> Sales below break-even - Unknown										
Biofood industry	Less than 50	1	563	563	563	563	-	-	-	-
<input type="checkbox"/> Sales above break-even - 1 year										
Biopharmaceutical industry	50~299	1	1,243	1,243	1,243	1,243	-	-	-	-
Biofood industry	Less than 50	2	110	55	110	55	-	-	-	-
Bioenvironmental industry	Less than 50	1	1,674	1,674	160	160	500	500	500	500
Bioprocess and equipment industry	Less than 50	1	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 2~3 years										
Biopharmaceutical industry	Less than 50	5	1,839	368	1,438	288	11,931	2,386	11,031	2,206
	50~299	4	5,395	1,349	4,506	1,127	2,150	538	2,150	538
Biochemical industry	Less than 50	6	1,270	212	1,240	207	705	118	655	109
	More than 1,000	1	19,957	19,957	6,652	6,652	158	158	-	-
Biofood industry	Less than 50	3	60	20	37	12	10	3	8	3
Bioelectronics industry	Less than 50	2	1,542	771	1,542	771	166	83	166	83
Bioprocess and equipment industry	Less than 50	1	60	60	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	Less than 50	2	200	100	200	100	-	-	-	-
<input type="checkbox"/> Sales above break-even - 4~5 years										
Biopharmaceutical industry	Less than 50	3	342	114	311	104	161	54	161	54
	50~299	3	2,110	703	1,581	527	-	-	-	-
	300~999	1	3,082	3,082	1,570	1,570	12	12	12	12
	More than 1,000	1	66,607	66,607	22,797	22,797	134,900	134,900	121,415	121,415
Biochemical industry	Less than 50	4	955	239	905	226	50	13	-	-
	50~299	3	5,990	1,997	2,391	797	57	19	47	16
Biofood industry	Less than 50	3	717	239	709	236	31	10	25	8
	50~299	3	12,889	4,296	2,181	727	89	30	89	30
Bioenvironmental industry	Less than 50	1	100	100	100	100	-	-	-	-
Bioprocess and equipment industry	Less than 50	3	150	50	150	50	-	-	-	-
	50~299	1	609	609	609	609	-	-	-	-
Bioenergy and biosource industry	Less than 50	1	500	500	350	350	-	-	-	-
	50~299	1	433	433	433	433	-	-	-	-
Bioassay, bioinformatics and R&D service industry	Less than 50	1	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales above break-even - 6~9 years										
Biopharmaceutical industry	Less than 50	7	1,891	270	1,360	194	1,462	209	1,462	209
	50~299	7	21,429	3,061	20,302	2,900	1,619	231	974	139
	300~999	2	163,405	81,703	158,254	79,127	2,405	1,203	2,318	1,159
	More than 1,000	1	26,715	26,715	4,909	4,909	-	-	-	-
Biochemical industry	Less than 50	12	4,412	368	3,677	306	1,026	86	832	69
	50~299	1	4,328	4,328	10	10	215	215	10	10
	More than 1,000	2	1,631,670	815,835	6,000	3,000	8,500	4,250	600	300
Biofood industry	Less than 50	14	4,415	315	4,026	288	890	64	871	62
	50~299	2	994	497	994	497	3,228	1,614	5	3
Bioenvironmental industry	Less than 50	1	217	217	50	50	-	-	-	-
	50~299	1	450	450	450	450	-	-	-	-
	300~999	1	5,846	5,846	358	358	40	40	-	-
Bioelectronics industry	Less than 50	2	187	94	110	55	52	26	52	26
Bioprocess and equipment industry	Less than 50	1	150	150	100	100	-	-	-	-
	50~299	2	5,581	2,791	-	-	8,000	4,000	-	-
Bioenergy and biosource industry	Less than 50	2	966	483	966	483	-	-	-	-
Bioassay, bioinformatics and R&D service industry	Less than 50	3	1,256	419	956	319	-	-	-	-
	50~299	1	200	200	-	-	-	-	-	-

		Total	Total R&D Investment		R&D Investment in Bioindustry		Total Facility Investment		Facility Investment in Bioindustry	
			Total	Average	Total	Average	Total	Average	Total	Average
Number of companies		958	4,407,675	4,601	998,824	1,043	770,010	804	546,671	571
<input type="checkbox"/> Sales above break-even - 10 or more years										
Biopharmaceutical industry	Less than 50	7	2,957	422	2,265	324	92	13	90	13
	50~299	33	45,063	1,366	28,442	862	13,039	395	11,700	355
	300~999	17	86,797	5,106	15,730	925	13,179	775	1,615	95
	More than 1,000	9	545,118	60,569	192,122	21,347	144,599	16,067	115,649	12,850
Biochemical industry	Less than 50	20	6,315	316	4,933	247	546	27	395	20
	50~299	13	21,068	1,621	19,697	1,515	13,183	1,014	7,043	542
Biofood industry	Less than 50	14	9,852	704	4,256	304	617	44	296	21
	50~299	12	20,195	1,683	6,861	572	5,248	437	4,368	364
	300~999	4	21,483	5,371	7,383	1,846	10	3	10	3
	More than 1,000	2	123,197	61,599	65,700	32,850	697	349	200	100
Bioenvironmental industry	Less than 50	8	2,315	289	1,890	236	1,802	225	1,802	225
	50~299	3	2,650	883	900	300	550	183	275	92
	More than 1,000	1	1,000	1,000	1,000	1,000	-	-	-	-
Bioelectronics industry	50~299	1	728	728	728	728	-	-	-	-
	300~999	2	9,557	4,779	7,479	3,740	500	250	500	250
Bioprocess and equipment industry	Less than 50	8	30,485	3,811	319	40	110	14	105	13
	50~299	7	6,855	979	6,305	901	700	100	600	86
	300~999	1	32,124	32,124	731	731	2	2	2	2
Bioenergy and bioresource industry	50~299	1	2,577	2,577	2,577	2,577	794	794	64	64
	300~999	1	9,352	9,352	9,352	9,352	664	664	654	654
Bioassay, bioinformatics and R&D service industry	Less than 50	8	3,166	396	2,188	274	2,719	340	2,159	270
	50~299	7	16,654	2,379	15,040	2,149	15,885	2,269	15,765	2,252
<input type="checkbox"/> Sales above break-even - Unknown										
Bioenvironmental industry	Less than 50	1	-	-	-	-	-	-	-	-
<input type="checkbox"/> Sales - Unknown										
Biopharmaceutical industry	Less than 50	5	1,479	296	1,000	200	-	-	-	-
	50~299	3	7,477	2,492	7,048	2,349	1,810	603	1,754	585
	300~999	4	-	-	-	-	-	-	-	-
	More than 1,000	1	-	-	-	-	-	-	-	-
	Unknown	8	-	-	-	-	-	-	-	-
Biochemical industry	Less than 50	7	122	17	-	-	-	-	-	-
	50~299	3	147	49	-	-	-	-	-	-
	More than 1,000	4	122,501	30,625	2,000	500	-	-	-	-
	Unknown	4	-	-	-	-	-	-	-	-
Biofood industry	Less than 50	5	-	-	-	-	-	-	-	-
	50~299	1	-	-	-	-	-	-	-	-
	Unknown	2	-	-	-	-	-	-	-	-
Bioenvironmental industry	Less than 50	5	-	-	-	-	-	-	-	-
	Unknown	5	74	15	74	15	-	-	-	-
Bioprocess and equipment industry	Less than 50	5	401	80	-	-	-	-	-	-
	50~299	1	-	-	-	-	-	-	-	-
	300~999	1	8,569	8,569	-	-	-	-	-	-
	Unknown	1	-	-	-	-	-	-	-	-
Bioenergy and bioresource industry	Less than 50	1	400	400	400	400	-	-	-	-
	50~299	1	-	-	-	-	-	-	-	-
	Unknown	2	-	-	-	-	-	-	-	-
Bioassay, bioinformatics and R&D service industry	Less than 50	4	-	-	-	-	-	-	-	-
	50~299	1	295	295	295	295	-	-	-	-
	Unknown	1	56	56	-	-	-	-	-	-











		Total	Domestic																																																											
			Business Entities																Research Institutes																																											
			Sub Total				1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																															
			Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial	Total	Basic	Experimental	Product	Commercial																									
<b>Number of companies</b>		958	20	11	7	1	0	1	11	6	3	1	-	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	6	2	4	-	-	-	1	1	-	-	-	-
<b>Biochemical industry</b>	Less than 50	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Biofood industry</b>	Less than 50	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioprocess and equipment industry</b>	Less than 50	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<input type="checkbox"/> Sales above break-even - 6~9 years																																																														
<b>Biopharmaceutical industry</b>	Less than 50	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	300~999	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Biochemical industry</b>	Less than 50	12	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	More than 1,000	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Biofood industry</b>	Less than 50	14	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioenergy and bioresource industry</b>	Less than 50	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<input type="checkbox"/> Sales above break-even - 10 or more years																																																														
<b>Biopharmaceutical industry</b>	Less than 50	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	33	2	2	0	0	0	2	-	2	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	300~999	17	10	3	6	1	0	6	-	3	2	1	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	More than 1,000	9	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Biochemical industry</b>	Less than 50	20	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	13	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
<b>Biofood industry</b>	Less than 50	14	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									
	50~299	12	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-									

		Total	Domestic																																																																
			Business Entities																				Research Institutes																																												
			Sub Total					1~299					300~999					1,000 or more					Government-invested					Private					Universities					Medical Institutes																													
			Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product	Total	Basic	Experimental	Prototype	Product																									
<b>Number of companies</b>		958	20	11	7	1	0	1	11	6	3	1	-	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	1	1	-	-	-	-	1	1	-	-	-	-	-	6	2	4	-	-	-	-	1	1	-	-	-	-	-	-
<b>Bioenvironmental industry</b>	Less than 50	8	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0					
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0											
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0											
<b>Bioelectronics industry</b>	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0											
	300~999	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																	
<b>Bioprocess and equipment industry</b>	Less than 50	8	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0											
	50~299	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																	
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																	
<b>Bioenergy and bioresource industry</b>	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																	
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																							
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	8	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																	
	50~299	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																							
<input type="checkbox"/> Sales above break-even - Unknown																																																																			
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																							
<input type="checkbox"/> Sales - Unknown																																																																			
<b>Biopharmaceutical industry</b>	Less than 50	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																							
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	300~999	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	8	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Biochemical industry</b>	Less than 50	7	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	More than 1,000	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Bioenvironmental industry</b>	Less than 50	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Bioprocess and equipment industry</b>	Less than 50	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													
	Unknown	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0																													









		Total	Overseas																																																				
			Sub Total		Business Entities												Research Institutes																																						
					1~299				300~999				1,000 or more				Government-invested						Private						Universities						Medical Institutes																				
			Total	Basic	Exper	Prot	Proct	Con	Total	Basic	Exper	Prot	Proct	Con	Total	Basic	Exper	Prot	Proct	Con	Total	Basic	Exper	Prot	Proct	Con	Total	Basic	Exper	Prot	Proct	Con	Total	Basic	Exper	Prot	Proct	Con																	
<b>Number of companies</b>		958	20	11	7	1	0	1	11	6	3	1	-	1	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	6	2	4	-	-	-	1	1	-	-	-	-
<b>Biochemical industry</b>	<b>Less than 50</b>	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Biofood industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<input type="checkbox"/> Sales above break-even - 6~9 years																																																							
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>300~999</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>More than 1,000</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Biochemical industry</b>	<b>Less than 50</b>	12	1	0	0	0	1	0	1	-	-	-	1	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>More than 1,000</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Biofood industry</b>	<b>Less than 50</b>	14	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>300~999</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioelectronics industry</b>	<b>Less than 50</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<input type="checkbox"/> Sales above break-even - 10 or more years																																																							
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	33	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>300~999</b>	17	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>More than 1,000</b>	9	5	0	4	0	0	1	1	-	-	-	1	0	-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Biochemical industry</b>	<b>Less than 50</b>	20	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	13	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
<b>Biofood industry</b>	<b>Less than 50</b>	14	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>50~299</b>	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>300~999</b>	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								
	<b>More than 1,000</b>	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-								







		Total	Domestic																																															
			Business Entities																		Research Institutes																													
			Sub Total						1~299						300~999						1,000 or more						Government-invested						Private						Universities						Medical Institutes					
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com
<b>Number of companies</b>		958	733	234	265	104	80	50	134	29	62	21	17	5	23	7	2	1	3	10	18	5	7	5	1	-	174	80	44	22	15	13	33	9	11	5	7	1	285	90	114	33	30	18	66	14	25	17	7	3
<b>Biochemical industry</b>	Less than 50	26	5	0	3	1	1	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	4	-	2	1	1	-	0	-	-	-	-	1	-	1	-	-	0	-	-	-	-	-		
	50~299	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	More than 1,000	4	12	10	1	1	0	0	3	3	-	-	-	-	1	1	-	-	-	2	1	1	-	-	-	-	3	2	-	1	-	-	0	-	-	-	-	3	3	-	-	-	0	-	-	-	-	-		
<b>Biofood industry</b>	Less than 50	21	34	13	8	10	2	1	2	-	2	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	5	1	1	2	-	1	0	-	-	-	-	23	10	5	8	-	-	4	2	-	-	2	-	
	50~299	16	1	0	1	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	1	-	-	0	-	-	-	-	-		
	300~999	11	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	More than 1,000	9	5	0	3	2	0	0	2	-	-	2	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	3	-	3	-	-	0	-	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	14	2	0	0	2	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	-	
	50~299	5	1	0	1	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	1	-	-	0	-	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	6	3	1	1	0	1	0	2	1	-	-	1	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	1	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	15	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	6	4	4	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	2	2	-	-	-	-	0	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 1 year																																																		
<b>Biopharmaceutical industry</b>	Less than 50	6	5	1	2	0	0	2	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	1	-	-	2	-	-	-	-	2		
	50~299	6	6	0	4	0	1	1	3	-	2	-	-	1	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	3	-	2	-	1	-	0	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	12	2	0	0	0	2	0	1	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	300~999	1	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	More than 1,000	1	1	1	0	0	0	0	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioprocess and equipment industry</b>	50~299	1	1	0	0	0	0	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 2~3 years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	12	6	0	4	1	1	0	0	-	-	-	-	0	-	-	-	-	4	-	4	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	1	-	-	-	1	-	0	-	-	-	-			
	50~299	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		





		Total	Domestic																																																
			Business Entities															Research Institutes																																	
			Sub Total					1~299					300~999					1,000 or more					Government-invested						Private						Universities						Medical Institutes										
			Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	Total	Basic	Exper	Protype	Proct	Comer	
<b>Number of companies</b>		958	733	234	265	104	80	50	134	29	62	21	17	5	23	7	2	1	3	10	18	5	7	5	1	-	174	80	44	22	15	13	33	9	11	5	7	1	285	90	114	33	30	18	66	14	25	17	7	3	
<b>Biochemical industry</b>	Less than 50	4	2	0	2	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	2	-	-	-	0	-	-	-	-	-		
	50~299	3	1	1	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	-		
<b>Biofood industry</b>	Less than 50	3	2	1	0	1	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
	50~299	3	4	4	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	4	-	-	-	-	0	-	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
	50~299	1	1	0	1	0	0	0	1	-	1	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-		
<input type="checkbox"/> Sales above break-even - 6~9 years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	7	5	1	4	0	0	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	2	-	-	-	0	-	-	-	-	-	2	-	2	-	-	-	0	-	-	-	-	-			
	50~299	7	4	0	3	1	0	0	2	-	1	1	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	0	-	-	-	-	-			
	300~999	2	16	3	3	10	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	3	3	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	13	-	3	10	-	-			
	More than 1,000	1	1	0	0	0	1	0	1	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-			
<b>Biochemical industry</b>	Less than 50	12	5	3	0	1	1	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	-	-	1	-	0	-	-	-	-	-	2	1	-	1	-	-	0	-	-	-	-	-				
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-
	More than 1,000	2	17	0	0	0	0	17	0	-	-	-	-	10	-	-	-	-	10	0	-	-	-	-	2	-	-	-	-	2	-	-	-	-	-	5	-	-	-	5	0	-	-	-	-	5	0	-	-	-	-
<b>Biofood industry</b>	Less than 50	14	9	5	1	2	1	0	1	1	-	-	-	0	-	-	-	-	1	-	-	-	-	5	3	1	-	1	-	0	-	-	-	-	-	2	1	-	1	-	-	0	-	-	-	-	-				
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	2	28	27	1	0	0	0	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	10	10	-	-	-	5	5	-	-	-	-	10	10	-	-	-	-	1	1	-	-	-	-	-				
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales above break-even - 10 or more years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	7	5	1	3	1	0	0	1	-	1	-	-	0	-	-	-	-	0	-	-	-	-	3	1	1	1	-	1	-	1	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	33	63	17	15	18	12	1	15	2	1	8	3	1	0	-	-	-	0	-	-	-	-	8	3	3	2	-	0	-	-	-	-	-	31	11	9	2	9	-	9	1	2	6	-	-					
	300~999	17	16	11	5	0	0	0	4	2	2	-	-	3	3	-	-	-	0	-	-	-	-	4	4	-	-	-	0	-	-	-	-	-	2	1	1	-	-	2	1	1	-	-	0	-	-	-	-		
	More than 1,000	9	22	19	2	1	0	0	4	1	2	1	-	0	0	-	-	-	0	-	-	-	-	15	15	-	-	-	0	-	-	-	-	-	1	1	-	-	-	2	2	-	-	0	-	-	-	-			
<b>Biochemical industry</b>	Less than 50	20	15	2	4	2	4	3	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	8	1	3	1	3	-	0	-	-	-	-	6	1	1	-	1	3	0	-	-	-	-	-	-				
	50~299	13	26	13	12	1	0	0	1	1	-	-	-	0	-	-	-	-	1	1	-	-	-	10	7	2	1	-	2	1	1	-	-	8	2	6	-	-	4	1	3	-	-	0	-	-	-	-			
<b>Biofood industry</b>	Less than 50	14	7	2	2	2	1	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	-	1	-	0	-	-	-	-	3	-	2	1	-	-	1	-	-	-	1	-	-	-	-			
	50~299	12	9	1	4	4	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	1	1	-	1	-	-	-	-	5	1	3	1	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	2	65	1	59	1	4	0	27	-	26	1	-	0	-	-	-	-	0	-	-	-	-	7	-	7	-	-	4	-	-	-	-	4	-	-	-	-	4	-	-	-	-	26	-	26	-	-			

















< Table4 > Cooperation in Bioindustry

< Table4-5 > Domestic Scale of Technical Tie-up (Licensing) Cooperation (III-4) (Unit : Cases, Count)

	Total	Domestic																																																	
		Sub Total																Business Entities												Research Institutes																					
		1~299								300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																					
		Tota	Bas	Expe	Prot	Prod	Com	Tota	Bas	Expe	Prot	Prod	Com	Tota	Bas	Expe	Prot	Prod	Com	Tota	Bas	Expe	Prot	Prod	Com	Tota	Bas	Expe	Prot	Prod	Com	Tota	Bas	Expe	Prot	Prod	Com														
Number of companies	958	90	33	24	10	5	18	26	6	7	3	2	8	3	2	-	-	1	-	4	1	2	1	-	-	16	6	5	-	1	4	4	2	1	-	-	1	36	16	8	6	1	5	1	-	1	-	-	-	-	
<input checked="" type="checkbox"/> Sales Situation																																																			
No sales	269	19	8	8	0	0	3	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-	-	5	1	2	-	-	2	0	-	-	-	-	12	6	5	-	-	1	0	-	-	-	-	-				
Sales below break-even - 1 year	39	7	2	3	1	0	1	5	1	3	-	-	1	0	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	0	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	-	-				
Sales below break-even - 2~3 years	94	8	1	5	1	0	1	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	1	-	-	-	2	-	2	-	-	0	-	-	-	-	3	-	1	1	-	1	1	-	1	-	-	-
Sales below break-even - 4~5 years	65	7	1	2	0	0	4	2	-	1	-	-	1	0	-	-	-	-	1	-	1	-	-	-	1	-	-	-	1	-	-	-	-	1	2	1	-	-	-	1	0	-	-	-	-	-	-	-			
Sales below break-even - 6~9 years	55	18	11	1	0	1	5	8	3	1	-	-	4	2	2	-	-	-	1	1	-	-	-	-	3	3	-	-	-	0	-	-	-	-	4	2	-	-	1	1	0	-	-	-	-	-	-	-	-		
Sales below break-even - 10 or more years	60	10	4	3	2	0	1	1	-	1	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	1	-	-	-	1	1	-	-	-	7	3	1	2	-	1	0	-	-	-	-	-	-	-	-		
Sales below break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Sales above break-even - 1 year	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Sales above break-even - 2~3 years	24	3	1	0	1	0	1	1	-	-	-	-	1	0	-	-	-	-	1	-	-	-	-	-	0	-	-	-	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	
Sales above break-even - 4~5 years	29	2	0	0	1	0	1	2	-	1	-	-	1	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	
Sales above break-even - 6~9 years	62	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Sales above break-even - 10 or more years	179	14	5	2	2	4	1	2	-	-	-	2	-	1	-	-	-	1	-	0	-	-	-	3	1	-	-	1	1	2	1	1	-	-	6	3	1	2	-	-	0	-	-	-	-	-	-	-	-	-	
Sales above break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Sales - Unknown	75	2	0	0	2	0	0	2	-	-	2	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
<input checked="" type="checkbox"/> Main type of industry																																																			
Biopharmaceutical industry	305	53	22	15	7	2	7	22	6	7	2	1	6	3	2	-	-	1	-	4	1	2	1	-	-	7	4	3	-	-	-	1	1	-	-	-	15	8	2	4	-	1	1	-	1	-	1	-	-	-	
Biochemical industry	204	13	5	1	2	2	3	2	-	-	1	-	1	0	-	-	-	-	0	-	-	-	-	-	3	1	-	-	1	1	2	1	1	-	-	6	3	-	1	1	1	0	-	-	-	-	-	-	-	-	
Biofood industry	199	17	6	5	1	0	5	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	-	2	1	-	-	-	1	1	-	-	-	1	13	5	5	1	-	2	0	-	-	-	-	-	-	-		
Bioenvironmental industry	75	4	0	0	0	1	3	1	-	-	-	1	0	-	-	-	-	0	-	-	-	-	-	2	-	-	-	2	0	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	
Bioelectronics industry	26	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Bioprocess and equipment industry	70	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Bioenergy and bioresource industry	24	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Bioassay, bioinformatics and R&D service industry	55	3	0	3	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	2	-	-	-	0	-	-	-	-	1	-	1	-	-	-	0	-	-	-	-	0	-	-	-	-	
<input checked="" type="checkbox"/> Number of employees																																																			
Less than 50	564	52	23	12	2	3	12	12	4	2	-	2	4	2	2	-	-	-	-	4	1	2	1	-	-	13	6	2	-	1	4	1	-	-	-	-	1	20	10	6	1	-	3	0	-	-	-	-	-	-	
50~299	252	28	6	8	7	1	6	12	1	4	3	-	4	0	-	-	-	-	0	-	-	-	-	-	1	-	1	-	-	-	3	2	1	-	-	11	3	1	4	1	2	1	-	1	-	-	-	-	-	-	
300~999	76	9	4	4	1	0	0	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	2	-	-	-	0	-	-	-	-	5	3	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-
More than 1,000	41	1	0	0	0	1	0	0	-	-	-	-	1	-	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-
Unknown	25	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
<input type="checkbox"/> Sales situation - No sales																																																			
Biopharmaceutical industry																																																			
Less than 50	42	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	
50~299	42	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
300~999	17	4	1	3	0	0	0	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	2	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	

		Total	Domestic																																																	
			Business Entities																		Research Institutes																															
			Sub Total						1~299						300~999						1,000 or more						Government-invested						Private						Universities						Medical Institutes							
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com								
<b>Number of companies</b>		958	90	33	24	10	5	18	26	6	7	3	2	8	3	2	-	-	1	-	4	1	2	1	-	-	16	6	5	-	1	4	4	2	1	-	-	1	36	16	8	6	1	5	1	-	1	-	-	-	-	
<b>Biochemical industry</b>	Less than 50	26	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-							
	50~299	9	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-							
	300~999	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-							
	More than 1,000	4	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-							
<b>Biofood industry</b>	Less than 50	21	12	6	5	0	0	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	2	1	-	-	-	1	0	-	-	-	-	-	10	5	5	-	-	-	0	-	-	-	-
	50~299	16	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	11	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	More than 1,000	9	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	Less than 50	14	2	0	0	0	0	2	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	
	50~299	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioelectronics industry</b>	Less than 50	6	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	Less than 50	15	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	Less than 50	6	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	9	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	3	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales below break-even - 1 year																																																				
<b>Biopharmaceutical industry</b>	Less than 50	6	2	2	0	0	0	0	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	6	5	0	3	1	0	1	4	-	3	-	-	1	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	
<b>Biochemical industry</b>	Less than 50	12	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	Less than 50	2	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	50~299	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales below break-even - 2~3 years																																																				
<b>Biopharmaceutical industry</b>	Less than 50	12	1	0	1	0	0	0	-	-	-	-	-	0	-	-	-	-	1	-	1	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	6	3	1	1	1	0	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	1	-	-	1	-	-	1	-	-	-	-				
	More than 1,000	1	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			

		Total	Domestic																																																
			Business Entities																		Research Institutes																														
			Sub Total						1~299						300~999						1,000 or more						Government-invested						Private						Universities						Medical Institutes						
			Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial							
<b>Number of companies</b>		958	90	33	24	10	5	18	26	6	7	3	2	8	3	2	-	-	1	-	4	1	2	1	-	-	16	6	5	-	1	4	4	2	1	-	-	1	36	16	8	6	1	5	1	-	1	-	-	-	-
<b>Biochemical industry</b>	Less than 50	19	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	20	1	0	0	0	0	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	5	3	0	3	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	2	-	2	-	-	0	-	-	-	-	1	-	1	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 4~5 years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	10	2	0	2	0	0	0	1	-	1	-	-	0	-	-	-	-	1	-	1	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	13	2	1	0	0	0	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	1	0	-	-	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	18	3	0	0	0	0	3	1	-	-	-	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	1	0	-	-	-	-	-	-	-			
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 6~9 years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	10	14	11	1	0	0	2	6	3	1	-	-	2	2	2	-	-	-	-	1	1	-	-	-	3	3	-	-	-	-	0	-	-	-	-	2	2	-	-	-	-	0	-	-	-	-				
	50~299	3	2	0	0	0	0	2	2	-	-	-	2	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	15	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	2	0	0	0	1	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-	1	1	0	-	-	-	-	0	-	-	-	-	
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		





		Total	Domestic																																																
			Business Entities																Research Institutes																																
			Sub Total								1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com													
<b>Number of companies</b>		958	90	33	24	10	5	18	26	6	7	3	2	8	3	2	-	-	1	-	4	1	2	1	-	-	16	6	5	-	1	4	4	2	1	-	-	1	36	16	8	6	1	5	1	-	1	-	-	-	-
<b>Biochemical industry</b>	<b>Less than 50</b>	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	3	2	0	0	1	0	1	2	-	-	1	-	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales above break-even - 6~9 years																																																			
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>300~999</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>More than 1,000</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biochemical industry</b>	<b>Less than 50</b>	12	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>More than 1,000</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biofood industry</b>	<b>Less than 50</b>	14	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>300~999</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioelectronics industry</b>	<b>Less than 50</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	<b>Less than 50</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	<b>Less than 50</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	<b>Less than 50</b>	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales above break-even - 10 or more years																																																			
<b>Biopharmaceutical industry</b>	<b>Less than 50</b>	7	1	0	0	0	1	0	1	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	<b>50~299</b>	33	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>300~999</b>	17	4	2	1	1	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>More than 1,000</b>	9	1	0	0	0	1	0	0	-	-	-	-	1	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biochemical industry</b>	<b>Less than 50</b>	20	3	1	0	1	1	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	13	3	2	1	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biofood industry</b>	<b>Less than 50</b>	14	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>50~299</b>	12	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>300~999</b>	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	<b>More than 1,000</b>	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			

		Total	Domestic																																																
			Sub Total		Business Entities												Research Institutes																																		
					1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																						
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com													
<b>Number of companies</b>		958	90	33	24	10	5	18	26	6	7	3	2	8	3	2	-	-	1	-	4	1	2	1	-	-	16	6	5	-	1	4	4	2	1	-	-	1	36	16	8	6	1	5	1	-	1	-	-	-	-
<b>Bioenvironmental industry</b>	Less than 50	8	2	0	0	0	1	1	1	-	-	-	1	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	-	0	-	-	-	-	-				
	50~299	3	0	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales above break-even - Unknown																																																			
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<input type="checkbox"/> Sales - Unknown																																																			
<b>Biopharmaceutical industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	3	2	0	0	2	0	0	2	-	-	2	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biochemical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	More than 1,000	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioprocess and equipment industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			

< Table4-6 > Overseas Scale of Technical Tie-up (Licensing) Cooperation (III-4) (Unit : Cases, Count)

	Total	Overseas																																																	
		Sub Total												Business Entities												Research Institutes																									
								1~299						300~999						1,000 or more						Government-invested				Private				Universities				Medical Institutes													
		Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com	Tota	Basim	Expe	Prot	Proct	Com		
Number of companies	958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	-	1	1	-	-	-	-	
<b>■ Sales Situation</b>																																																			
No sales	269	1	1	0	0	0	0	0	-	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales below break-even - 1 year	39	3	0	3	0	0	0	3	-	3	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales below break-even - 2~3 years	94	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales below break-even - 4~5 years	65	3	0	1	2	0	0	2	-	1	1	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales below break-even - 6~9 years	55	4	1	1	0	1	1	1	-	1	-	-	-	0	-	-	-	-	0	-	-	3	1	-	1	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-
Sales below break-even - 10 or more years	60	3	1	0	0	1	1	1	-	-	-	1	-	0	-	-	-	-	1	-	-	-	-	-	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-		
Sales below break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales above break-even - 1 year	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales above break-even - 2~3 years	24	3	0	3	0	0	0	0	-	-	-	-	-	3	-	3	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales above break-even - 4~5 years	29	1	0	0	1	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-
Sales above break-even - 6~9 years	62	1	0	0	0	1	1	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales above break-even - 10 or more years	179	12	3	0	3	2	4	5	1	-	2	-	2	1	-	-	1	-	4	-	-	-	2	2	0	-	-	-	-	-	0	-	-	-	-	-	2	2	-	-	-	-	0	-	-	-	-	-	-		
Sales above break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Sales - Unknown	75	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>■ Main type of industry</b>																																																			
Biopharmaceutical industry	305	28	6	8	6	4	4	11	1	5	3	1	1	5	1	3	1	-	8	1	-	1	3	3	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-			
Biochemical industry	204	1	0	0	0	0	1	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Biofood industry	199	2	0	0	0	0	2	1	-	-	-	-	1	0	-	-	-	-	1	-	-	-	-	-	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	
Bioenvironmental industry	75	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Bioelectronics industry	26	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Bioprocess and equipment industry	70	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Bioenergy and bioresource industry	24	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
Bioassay, bioinformatics and R&D service industry	55	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>■ Number of employees</b>																																																			
Less than 50	564	13	1	5	4	0	3	6	-	2	3	-	1	3	-	3	-	-	3	1	-	-	-	-	2	0	-	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	
50~299	252	10	2	3	0	2	3	6	-	3	-	1	2	1	1	-	-	-	2	-	-	-	-	-	1	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	
300~999	76	1	0	0	1	0	0	0	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	1	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-
More than 1,000	41	7	3	0	1	2	1	1	1	-	-	-	-	1	-	-	1	-	3	-	-	-	-	-	2	1	0	-	-	-	-	-	0	-	-	-	-	-	2	2	-	-	-	-	0	-	-	-	-	-	-
Unknown	25	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>□ Sales situation - No sales</b>																																																			
Biopharmaceutical industry																																																			
Less than 50	42	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
50~299	42	1	1	0	0	0	0	0	-	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
300~999	17	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		

		Total	Overseas																																															
			Business Entities																		Research Institutes																													
			Sub Total						1~299			300~999			1,000 or more			Government-invested			Private			Universities			Medical Institutes																							
			Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial												
<b>Number of companies</b>		958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-
<b>Biochemical industry</b>	Less than 50	26	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	21	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	16	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	11	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
Unknown	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
<b>Bioenvironmental industry</b>	Less than 50	14	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	15	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 1 year																																																		
<b>Biopharmaceutical industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	6	3	0	3	0	0	0	3	-	3	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales below break-even - 2~3 years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-		

		Total	Overseas																																																
			Business Entities																		Research Institutes																														
			Sub Total							1~299			300~999			1,000 or more			Government-invested						Private						Universities						Medical Institutes														
			Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial							
<b>Number of companies</b>		958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-	-
<b>Biochemical industry</b>	Less than 50	19	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Biofood industry</b>	Less than 50	20	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioenvironmental industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioprocess and equipment industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioenergy and bioresource industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<input type="checkbox"/> Sales below break-even - 4~5 years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	10	3	0	1	2	0	0	2	-	1	1	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	1	-	-	0	-	-	-	-	-	0						
	50~299	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Biochemical industry</b>	Less than 50	13	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Biofood industry</b>	Less than 50	18	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioenvironmental industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioprocess and equipment industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<input type="checkbox"/> Sales below break-even - 6~9 years																																																			
<b>Biopharmaceutical industry</b>	Less than 50	10	3	1	1	0	0	1	1	-	1	-	-	-	0	-	-	-	-	-	2	1	-	-	-	1	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	3	1	0	0	0	1	0	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	1	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Biochemical industry</b>	Less than 50	15	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Biofood industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
<b>Bioenvironmental industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0						

		Total	Overseas																																															
			Sub Total												Business Entities												Research Institutes																							
															1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes											
			Total	Basic	Expe	Proti	Proct	Con	Total	Basic	Expe	Proti	Proct	Con	Total	Basic	Expe	Proti	Proct	Con	Total	Basic	Expe	Proti	Proct	Con	Total	Basic	Expe	Proti	Proct	Con	Total	Basic	Expe	Proti	Proct	Con												
<b>Number of companies</b>		958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales below break-even - 10 or more years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	9	3	1	0	0	1	1	1	-	-	-	1	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-
	300~999	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Biochemical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Biofood industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioenvironmental industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales below break-even - Unknown																																																		
<b>Biofood industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 1 year																																																		
<b>Biopharmaceutical industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Biofood industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 2~3 years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	5	3	0	3	0	0	0	0	-	-	-	-	3	-	3	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-		
	50~299	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Biochemical industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Biofood industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 4~5 years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	300~999	1	1	0	0	1	0	0	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	

		Total	Overseas																																															
			Sub Total												Business Entities												Research Institutes																							
															1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes											
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com												
<b>Number of companies</b>		958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-
<b>Biochemical industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Biofood industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioprocess and equipment industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<input type="checkbox"/> Sales above break-even - 6~9 years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Biochemical industry</b>	Less than 50	12	1	0	0	0	0	1	1	-	-	-	-	1	0	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	More than 1,000	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Biofood industry</b>	Less than 50	14	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioelectronics industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioenergy and bioresource industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<input type="checkbox"/> Sales above break-even - 10 or more years																																																		
<b>Biopharmaceutical industry</b>	Less than 50	7	2	0	0	2	0	0	2	-	-	2	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	33	1	0	0	0	0	1	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-						
	300~999	17	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	More than 1,000	9	7	3	0	1	2	1	1	1	-	-	-	1	-	-	1	-	3	-	-	2	1	0	-	-	-	-	0	-	-	-	-	2	2	-	-	-	0	-	-	-	-							
<b>Biochemical industry</b>	Less than 50	20	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	50~299	13	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
<b>Biofood industry</b>	Less than 50	14	1	0	0	0	0	1	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-						
	50~299	12	1	0	0	0	0	1	1	-	-	-	-	1	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-						
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							
	More than 1,000	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-							

		Total	Overseas																																																
			Business Entities																				Research Institutes																												
			Sub Total							1~299							300~999						1,000 or more							Government-invested					Private					Universities					Medical Institutes						
			Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial							
<b>Number of companies</b>		958	31	6	8	6	4	7	13	1	5	3	1	3	5	1	3	1	-	-	9	1	-	1	3	4	0	-	-	-	-	-	1	-	-	1	-	-	2	2	-	-	-	-	1	1	-	-	-	-	-
<b>Bioenvironmental industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioelectronics industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<input type="checkbox"/> Sales above break-even - Unknown																																																			
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<input type="checkbox"/> Sales - Unknown																																																			
<b>Biopharmaceutical industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	More than 1,000	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioenvironmental industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-		



< Table4 > Cooperation in Bioindustry

< Table4-7 > Domestic Scale of Domestic/International Technical Manpower Exchange Cooperation (III-4) (Unit : Cases, Count)

	Total	Domestic																																																
		Sub Total																Business Entities												Research Institutes																				
		1~299								300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																				
		Tot	Bas	Expe	Prot	Prod	Com	Tot	Bas	Expe	Prot	Prod	Com	Tot	Bas	Expe	Prot	Prod	Com	Tot	Bas	Expe	Prot	Prod	Com	Tot	Bas	Expe	Prot	Prod	Com	Tot	Bas	Expe	Prot	Prod	Com													
Number of companies	958	69	42	10	6	9	2	5	3	1	-	1	-	0	-	-	-	-	1	-	-	-	-	1	19	12	3	1	3	-	9	5	1	2	1	-	31	20	5	3	2	1	4	2	-	-	2	-		
<input checked="" type="checkbox"/> Sales Situation																																																		
No sales	269	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-			
Sales below break-even - 1 year	39	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
Sales below break-even - 2~3 years	94	3	3	0	0	0	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	2	-	-	-	0	-	-	-	-			
Sales below break-even - 4~5 years	65	5	0	0	0	4	1	1	-	-	-	1	-	0	-	-	-	1	-	1	-	-	-	1	1	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-	-	0	-	-	-	-			
Sales below break-even - 6~9 years	55	8	1	2	2	1	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-	-	-	6	1	2	2	-	1	0	-	-	-	-	
Sales below break-even - 10 or more years	60	2	2	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-			
Sales below break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
Sales above break-even - 1 year	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-			
Sales above break-even - 2~3 years	24	10	3	3	4	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	1	1	-	-	3	-	1	2	-	-	5	3	1	1	-	0	-	-	-	-	
Sales above break-even - 4~5 years	29	3	2	1	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	1	-	-	-	1	1	-	-	-	-	
Sales above break-even - 6~9 years	62	34	29	3	0	2	0	3	2	1	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	11	10	1	-	-	5	5	-	-	-	12	11	1	-	-	-	3	1	-	-	2	-	
Sales above break-even - 10 or more years	179	3	1	1	0	1	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	1	-	-	1	-	-	1	-	0	-	-	-	-	0	-	-	-	-	-		
Sales above break-even - Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
Sales - Unknown	75	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-		
<input checked="" type="checkbox"/> Main type of industry																																																		
Biopharmaceutical industry	305	20	5	9	4	2	0	1	-	1	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	6	2	3	1	-	-	2	-	1	1	-	-	9	3	4	2	-	-	2	-	-	2	-
Biochemical industry	204	9	2	0	2	3	2	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-	-	1	2	-	-	-	2	-	1	-	-	1	-	-	5	2	-	1	1	1	0	-	-	-	-
Biofood industry	199	2	1	0	0	1	0	1	1	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	1	-	0	-	-	-	-	-	
Bioenvironmental industry	75	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-		
Bioelectronics industry	26	28	28	0	0	0	0	2	2	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	10	10	-	-	-	5	5	-	-	-	10	10	-	-	-	-	1	1	-	-	-	-	
Bioprocess and equipment industry	70	7	3	1	0	3	0	1	-	-	-	1	-	0	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	1	-	1	-	-	1	-	3	2	1	-	-	-	1	1	-	-	-	-
Bioenergy and bioresource industry	24	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-		
Bioassay, bioinformatics and R&D service industry	55	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-		
<input checked="" type="checkbox"/> Number of employees																																																		
Less than 50	564	54	37	6	4	6	1	4	3	-	-	1	-	0	-	-	-	1	-	-	-	-	1	15	10	1	1	3	-	7	5	1	1	-	-	25	17	4	2	2	-	2	2	-	-	-	-	-		
50~299	252	12	4	3	1	3	1	1	-	1	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	1	-	-	1	-	-	1	-	6	3	1	1	-	1	2	-	-	-	2	-	
300~999	76	2	1	1	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	1	1	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
More than 1,000	41	1	0	0	1	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	1	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
Unknown	25	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
<input type="checkbox"/> Sales situation - No sales																																																		
Biopharmaceutical industry																																																		
Less than 50	42	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	
50~299	42	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-
300~999	17	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-
More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-

		Total	Domestic																																														
			Business Entities																Research Institutes																														
			Sub Total								1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes														
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com											
<b>Number of companies</b>		958	69	42	10	6	9	2	5	3	1	-	1	-	0	-	-	-	-	1	-	-	-	-	1	19	12	3	1	3	-	9	5	1	2	1	-	31	20	5	3	2	1	4	2	-	-	2	-
<b>Biochemical industry</b>	Less than 50	26	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-		
	50~299	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
	More than 1,000	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-
<b>Biofood industry</b>	Less than 50	21	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	16	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	300~999	11	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	More than 1,000	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenvironmental industry</b>	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	14	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioelectronics industry</b>	50~299	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioelectronics industry</b>	50~299	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	Less than 50	15	1	1	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenergy and bioresource industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenergy and bioresource industry</b>	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales below break-even - 1 year																																																	
<b>Biopharmaceutical industry</b>	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Biochemical industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Biochemical industry</b>	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Biofood industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenvironmental industry</b>	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioelectronics industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioprocess and equipment industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
<input type="checkbox"/> Sales below break-even - 2~3 years																																																	
<b>Biopharmaceutical industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	50~299	6	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	



		Total	Domestic																																																				
			Sub Total												Business Entities												Research Institutes																												
			1~299								300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																								
			Tota	Bas	Expe	Prot	Pro	Com	Tota	Bas	Expe	Prot	Pro	Com	Tota	Bas	Expe	Prot	Pro	Com	Tota	Bas	Expe	Prot	Pro	Com	Tota	Bas	Expe	Prot	Pro	Com	Tota	Bas	Expe	Prot	Pro	Com																	
Number of companies		958	69	42	10	6	9	2	5	3	1	-	1	-	0	-	-	-	-	-	1	-	-	-	-	1	19	12	3	1	3	-	9	5	1	2	1	-	31	20	5	3	2	1	4	2	-	-	2	-					
Bioelectronics industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Bioprocess and equipment industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Bioassay, bioinformatics and R&D service industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<input type="checkbox"/> Sales below break-even - 10 or more years																																																							
Bio pharmaceutical industry	Less than 50	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	50~299	9	1	1	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	300~999	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Biochemical industry	Less than 50	7	1	1	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Biofood industry	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	50~299	5	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioenvironmental industry	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioelectronics industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioprocess and equipment industry	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioassay, bioinformatics and R&D service industry	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<input type="checkbox"/> Sales below break-even - Unknown																																																							
Biofood industry	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 1 year																																																							
Bio pharmaceutical industry	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Biofood industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioenvironmental industry	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioprocess and equipment industry	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 2~3 years																																																							
Bio pharmaceutical industry	Less than 50	5	6	0	3	3	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	50~299	4	3	3	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biochemical industry	Less than 50	6	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	More than 1,000	1	1	0	0	1	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Biofood industry	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioelectronics industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioprocess and equipment industry	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bioassay, bioinformatics and R&D service industry	Less than 50	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<input type="checkbox"/> Sales above break-even - 4~5 years																																																							
Bio pharmaceutical industry	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		Total	Domestic																																																				
			Business Entities																Research Institutes																																				
			Sub Total								1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes																				
			Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial	Total	Basic	Experimental	Prototype	Product	Commercial											
<b>Number of companies</b>		958	69	42	10	6	9	2	5	3	1	-	1	-	0	-	-	-	-	-	1	-	-	-	-	1	19	12	3	1	3	-	9	5	1	2	1	-	31	20	5	3	2	1	4	2	-	-	2	-					
<b>Biochemical industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-						
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Biofood industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioprocess and equipment industry</b>	Less than 50	3	3	2	1	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	2	1	1	-	-	-	1	1	-	-	-	-	-	-					
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<input type="checkbox"/> Sales above break-even - 6~9 years																																																							
<b>Biopharmaceutical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	7	5	0	3	0	2	0	1	-	1	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	2	-	-	-	-	2	-	-				
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Biochemical industry</b>	Less than 50	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	More than 1,000	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Biofood industry</b>	Less than 50	14	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioelectronics industry</b>	Less than 50	2	28	28	0	0	0	0	2	2	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	10	10	-	-	-	-	5	5	-	-	-	-	10	10	-	-	-	-	1	1	-	-	-	-
<b>Bioprocess and equipment industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Bioenergy and bioresource industry</b>	Less than 50	2	1	1	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	1	-	-	-	-	0	-	-	-	-	-	-	-	-	-			
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	3	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<input type="checkbox"/> Sales above break-even - 10 or more years																																																							
<b>Biopharmaceutical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	33	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	300~999	17	2	1	1	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	2	1	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-		
	More than 1,000	9	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-			
<b>Biochemical industry</b>	Less than 50	20	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	13	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
<b>Biofood industry</b>	Less than 50	14	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	50~299	12	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-				
	More than 1,000	2	0	0	0	0	0	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-</																											

		Total	Domestic																																															
			Business Entities																Research Institutes																															
			Sub Total								1~299				300~999				1,000 or more				Government-invested				Private				Universities				Medical Institutes															
			Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com	Total	Basic	Exper	Prot	Proct	Com												
<b>Number of companies</b>		958	69	42	10	6	9	2	5	3	1	-	1	-	0	-	-	-	-	1	-	-	-	-	1	19	12	3	1	3	-	9	5	1	2	1	-	31	20	5	3	2	1	4	2	-	-	2	-	
<b>Bioenvironmental industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioelectronics industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	7	1	0	0	0	1	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales above break-even - Unknown																																																		
<b>Bioenvironmental industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<input type="checkbox"/> Sales - Unknown																																																		
<b>Biopharmaceutical industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Unknown	8	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biochemical industry</b>	Less than 50	7	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	3	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	More than 1,000	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Biofood industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenvironmental industry</b>	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioprocess and equipment industry</b>	Less than 50	5	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	300~999	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioenergy and bioresource industry</b>	Less than 50	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Unknown	2	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
<b>Bioassay, bioinformatics and R&amp;D service industry</b>	Less than 50	4	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	50~299	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		
	Unknown	1	0	0	0	0	0	0	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-		















## &lt; Table 5 &gt; Size of Sales and Import in Bioindustry

< Table 5-1 > Size of Domestic Sales and Export by Category among  
Classification Scheme of Bioindustry (III-6)

(Unit : million Won)

Industry No.	Industry Name	Category No.	Category Name	Domestic Sales	Export	Total
1	Biopharmaceutical industry	1010	Antibiotics	36,122	78,410	114,532
		1020	Anticancer medications	12,479	81,859	94,338
		1030	Vaccines	303,304	202,313	505,617
		1040	Hormones	78,427	78,532	156,959
		1050	Immunotherapeutics	87,969	324,728	412,697
		1060	Hemotherapeutics	432,068	89,655	521,723
		1070	Growth factors	29,981	12,137	42,117
		1080	New therapeutics	59,071	3,687	62,758
		1090	Diagnostic kits	20,571	125,803	146,374
		1100	Animal medications	81,454	43,919	125,373
		1000	Other biopharmaceuticals	436,126	98,937	535,063
		Subtotal				1,577,572
2	Biochemical industry	2010	Biopolymers	23,560	21,921	45,481
		2020	Industrial enzymes and reagents	2,270	10,342	12,612
		2030	Enzymes and reagents for research	28,916	33,260	62,176
		2040	Biosmetics and home & personal care chemicals	301,948	26,865	328,813
		2050	Biological agrochemicals and fertilizers	25,991	20	26,011
		2000	Other biochemicals	25,541	4,766	30,307
		Subtotal				408,226
3	Biofood industry	3010	Functional health foods	239,145	29,748	268,893
		3020	Amino acids	27,171	61,536	88,707
		3030	Food additives	191,472	232,123	423,595
		3040	Fermented foods	81,863	0	81,863
		3050	Feed additives	690,514	1,281,878	1,972,392
		3000	Other biofoods	31,160	5,346	36,506
		Subtotal				1,261,325
4	Bioenvironmental industry	4010	Microbial treatment agents	16,291	18	16,309
		4020	Microbe-immobilized materials and equipments	1,500	0	1,500
		4030	Bioenvironmental agents and systems	5,895	0	5,895
		4040	Measuring apparatus for environmental pollution(service for pollution assessment)	3,734	0	3,734
		4000	Other bioenvironmental productions and services	76	0	76
		Subtotal				27,496

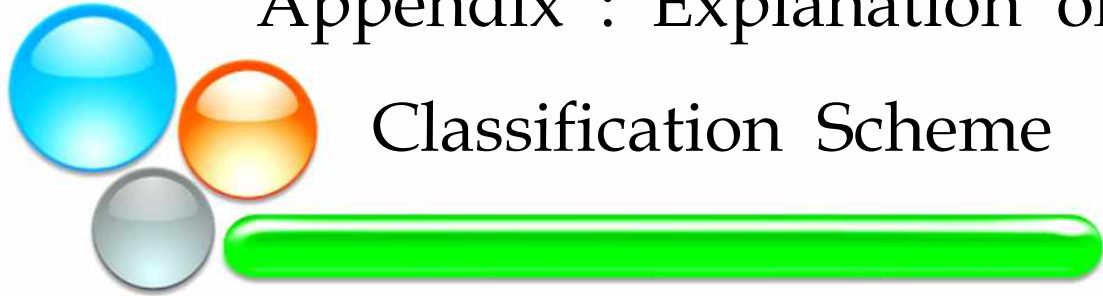
Industry No.	Industry Name	Category No.	Category Name	Domestic Sales	Export	Total
5	Bioelectronics industry	5010	DNA chips	7,628	580	8,208
		5020	Protein chips	152	2	154
		5030	Cell chips	0	0	0
		5040	Biosensors	16,137	97,574	113,711
		5050	BioMEMS	0	0	0
		5000	Other bioelectronics	70	1,684	1,754
		Subtotal				23,987
6	Bioprocess and equipment industry	6010	Bioreactors	2,010	388	2,398
		6020	Biomedical and diagnostic apparatuses	12,940	9,756	22,696
		6030	Bioprocess and analysis equipments	21,468	19,201	40,669
		6040	Plant and process design	14,000	0	14,000
		6000	Other bioprocess and equipments	26,273	15,911	42,184
		Subtotal				76,691
7	Bioenergy and bioresource industry	7010	Biofuel	424,261	0	424,261
		7020	Artificial seeds and seedlings	110,783	29,250	140,033
		7030	Experimental animals	4,000	0	4,000
		7040	Transgenic animals and plants	771	0	771
		7000	Other bioenergy and bioresources	1,580	902	2,482
		Subtotal				541,395
8	Bioassay, bioinformatics and R&D service industry	8010	Bioinformatics services	231	0	231
		8020	Gene analysis services	28,353	26,852	55,205
		8030	Protein analysis services	1,870	152	2,022
		8040	R&D services	18,598	6,721	25,319
		8050	Biosafety and efficacy evaluation services	73,813	3,809	77,622
		8060	Diagnosis and preservation services	28,917	0	28,917
		8000	Other bioassays, bioinformatics services	170	0	170
		Subtotal				151,952
Total				4,068,644	3,060,585	7,129,229

< Table 5-2 > Size of Import by Category among  
Classification Scheme of Bioindustry (III-7) (Unit : million Won)

Industry No.	Industry Name	Category No.	Category Name	Import
1	Biopharmaceutical industry	1010	Antibiotics	13,608
		1020	Anticancer medications	282,914
		1030	Vaccines	342,628
		1040	Hormones	119,752
		1050	Immunotherapeutics	80,526
		1060	Hemotherapeutics	146,928
		1070	Growth factors	0
		1080	New therapeutics	34,871
		1090	Diagnostic kits	58,208
		1100	Animal medications	5,167
		1000	Other biopharmaceuticals	157,319
Subtotal			1,241,922	
2	Biochemical industry	2010	Biopolymers	0
		2020	Industrial enzymes and reagents	18,139
		2030	Enzymes and reagents for research	14,598
		2040	Biocosmetics and home & personal care chemicals	3,066
		2050	Biological agrochemicals and fertilizers	702
		2000	Other biochemicals	32,221
		Subtotal		
3	Biofood industry	3010	Functional health foods	4,390
		3020	Amino acids	10,690
		3030	Food additives	11,174
		3040	Fermented foods	0
		3050	Feed additives	13,451
		3000	Other biofoods	19,942
		Subtotal		
4	Bioenvironmental industry	4010	Microbial treatment agents	0
		4020	Microbe-immobilized materials and equipments	0
		4030	Bioenvironmental agents and systems	0
		4040	Measuring apparatus for environmental pollution(service for pollution assessment)	230
		4000	Other bioenvironmental productions and services	0
		Subtotal		

Industry No.	Industry Name	Category No.	Category Name	Import
5	Bioelectronics industry	5010	DNA chips	248
		5020	Protein chips	0
		5030	Cell chips	0
		5040	Biosensors	0
		5050	BioMEMS	0
		5000	Other bioelectronics	0
		Subtotal		
6	Bioprocess and equipment industry	6010	Bioreactors	0
		6020	Biomedical and diagnostic apparatuses	1,912
		6030	Bioprocess and analysis equipments	186,401
		6040	Plant and process design	0
		6000	Other bioprocess and equipments	1,499
		Subtotal		
7	Bioenergy and bioresource industry	7010	Biofuel	118
		7020	Artificial seeds and seedlings	12,779
		7030	Experimental animals	0
		7040	Transgenic animals and plants	0
		7000	Other bioenergy and bioresources	0
		Subtotal		
8	Bioassay, bioinformatics and R&D service industry	8010	Bioinformatics services	0
		8020	Gene analysis services	0
		8030	Protein analysis services	0
		8040	R&D services	1,310
		8050	Biosafety and efficacy evaluation services	0
		8060	Diagnosis and preservation services	0
		8000	Other bioassays, bioinformatics services	0
		Subtotal		
Total				1,574,793





Appendix : Explanation on  
Classification Scheme

# 1. Bioindustry

## 1. Biopharmaceutical industry

Field of study concerning biopharmaceuticals, medical drugs or medical equipment produced using biotechnology in the R&D or production process to diagnosis, prevent and cure diverse diseases of human or animals. It is an industry that produces the following products.

### 1010 Antibiotics

Base material or related medicine that inhibits or kills the growth and proliferation of microorganisms

Exception 1110) Animal medications

### 1020 Anticancer medications

Base material or medicine that is used in cure for malignant tumor

### 1030 Vaccines

Antigen used to automatically increase immunity of a person or animal in the prevention of infectious diseases (Substance that prevents or cures diseases selectively by artificially stimulating the immune system)

### 1040 Hormones

Base material and related medicine that is made of hormones, its variants or analogs to cure special diseases using physiological characteristics of hormones

## 1050 Immunotherapeutics

Base material and related medicine that is used to adjust bioimmune activities such as protein substances

## 1060 Hemotherapeutics

Serum protein products which were separated from blood or biotechnologically manufactured materials and medical products, which are used to treat pathologic conditions of patients (symptoms caused by deficiency in serum protein, etc.)

## 1070 Growth factors

Polypeptides which facilitate cell division, growth or differentiation, and their modified substances or analogues (including their mimicking agents or peptides which have only the active fraction)

## 1080 New therapeutics(ex. gene therapeutics, cell therapy, cloned organs, etc.)

New therapeutic agents which have different way of treatment compared to existing agents (Gene therapeutics, cell therapy products, cloned organs and therapeutic antibodies are included in this category at present.)

## &lt;Reference&gt;

Gene therapeutics - Agents of normal genes which are transduced in patients to treat diseases caused by genetic abnormalities

Cell therapyproducts - Medical products of living autologous, allogenic or xenogenic cells which are processed to be modified their biological characteristics by in vitro proliferation, selection or other methods

Cloned organs - Artificial organ substitutes which are not mechanical attachments or implants but organs produced by cell culture

Therapeutic antibodies- Antibodies of major immunologic mechanisms which are produced in vitro to protect human body from foreign pathogenic organisms

### 1090 Diagnostic kits

Kits and reagents which are used to diagnose the actual condition of diseases

**Exception** Reagents used in research are classified as '2030) Enzymes and reagents for research'

### 1100 Animal medications

Therapeutic products which are used to diagnose, treat and prevent diseases of animals (including probiotics)

**Exception** 3050) Feed additives

### 1000 Other biopharmaceuticals

Other biomedical products which are not classified above (including ingredients and intermediates which are not classified above)

**Exception** 3020) Amino acids

## 2. Biochemical industry

Industrial activities which produce compounds or substitutes of existing chemical products using bio-purification technology or biotechnology in R&D or manufacturing process [excluding products which are used mainly in medical purpose]

### 2010 Biopolymers

Materials (structural constituents), biocompatible polymers and biodegradable resins (functional packaging materials) which are made from proteins, nucleic acids or polysaccharides

**Exception** 1090) New therapeutics

#### 2020 Industrial enzymes and reagents

Enzymes which are extracted from industrially valuable organisms or produced by biotechnology, and other industrial reagents

#### 2030 Enzymes and reagents for research

Reagents, buffer solutions, polymerases, reagent kits, DNA vectors and gene expression systems

#### 2040 Biocosmetics and home & personal care chemicals

Household items such as a soap, detergents and functional cosmetics

#### 2050 Biological agrochemicals and fertilizers

Microbial agents which are used to exterminate or control weeds, pests or microorganisms which inhibit growth of crops, and microbial agents which enrich nutrients in soil to enhance growth of crops

**Exception** For agricultural pesticides and fertilizers produced by a bioprocess using non-microbial or non-biological agents, refer to '2000) Other biochemicals'.

#### 2000 Other biochemicals

Other biochemicals which are not classified above (including macromolecular monomers, solvents and others)

### 3. Biofood industry

Industrial activities which produce foods, beverages, animal foods and animal/vegetable fat and oil using bio-purification technology or biotechnology in R&D or manufacturing process [excluding products which

are used mainly in medical purpose]

### 3010 Functional health foods

which functionally useful ingredients for human body and biotechnology are used in its manufacturing (limited to foods which Commissioner of Korea Food and Drug Administration admitted that they have functionality according to 「The Law for Functional Health Foods」 )

### 3020 Amino acids

Aminoacids used in drugs, foods and feed additives

### 3030 Food additives

Substances which are added in foods such as seasonings, food preservatives, nucleotides, peptides and lipids (including starch, organic acids and functional sugar, etc.)

Exception

3010) Functional health foods  
3020) Amino acids

### 3040 Fermented foods

Products which went through fermentation process such as fermented sauces, alcoholic beverages, pickled vegetables and fermented livestock foods

Exception

3010) Functional health foods

### 3050 Feed additives

Various kinds of feed additives, nutrients and feedstuffs for animal raising or fish farming

**Exception**

For animal drugs including probiotics, refer to '1100 animal drugs'.

## 3000 Other biofoods

Other biofoods which were not classified above (including ingredients and intermediates which were not classified above)

**4. Bioenvironmental industry**

Industrial activities which produce substances or systems for environmental cleanup, environmental remediation and reducing/preventing environmental pollution using bioderivatives or biotechnology in R&D or manufacturing process, or industrial activities which build up pollution diagnosis and assessment services or facilities using these products, providing following products or services

## 4010 Microbial treatment agents

Microorganism agents for the purpose of environmental cleanup (waste/wastewater treatment, etc.), reducing/preventing environmental pollution (biodesulfurization, biocracking, biocollection, biopulping, etc.) and environmental remediation, including construction and installation services associated with selling such products

## 4020 Microbe-immobilized materials and equipments

Immobilized materials and equipments for the purpose of environmental cleanup (waste/wastewater treatment, foul smell/VOC treatment, etc.) such as a microorganism-utilizing filter, including construction and installation services associated with selling such products

## 4030 Bioenvironmental agents and systems

Materials, equipments and systems for the purpose of

waste/wastewater treatment, foul smell/VOC treatment, environmental remediation and resource recycling, including construction and installation services associated with selling such products

Exception

4010) Microbial treatment agents

4020) Microbe-immobilized materials and equipments

4040 Measuring apparatus for environmental pollution(service for pollution assessment)

Equipments which measure water quality, soil pollution level and air pollution level (including construction and installation services associated with selling such products), and pollution source diagnosis and pollution level measuring services on demand of customers

Exception

5040) Biosensors

4000 Other bioenvironmental productions and services

Other bioenvironmental products which were not classified above (including ingredients and intermediates which were not classified above) and associates services

## 5. Bioelectronics industry

Industrial activities which produce components/materials of medical or analytical purpose using nano/electronic technology, bio information or biotechnology in R&D or manufacturing process, producing following products

5010 DNA chips

Detecting devices which fix DNAs

5020 Protein chips

Detecting devices which fix proteins



### 5030 Cell chips

Detecting devices which fix cells and devices which analyze cellular phenomena

### 5040 Biosensors

Detecting devices which utilize various kinds of biofunctions

### 5050 BioMEMS

Micro electromechanical systems(MEMS) for the purpose of medical or R&D use such as biotechnology, health examination or drug administration

### 5000 Other bioelectronics

Other bioelectronic components/materials which are not classified above

Example

Biocomputers, neurochips, carbohydrate chips

## 6. Bioprocess and equipment industry

Industrial activities which produce devices, equipments and plants for the purpose of using bioderivatives or biotechnologies in R&D or manufacturing process, providing following products or services [including biomedical devices and diagnostic devices]

### 6010 Bioreactors

Devices which produce valuable substances using biological reactions

Example

Fermentation bath, cell incubators, enzyme reaction

incubators

#### 6020 Biomedical and diagnostic apparatuses

Devices which examine and diagnose physical or physiologic functions for medical purpose

Exception

1080) Newtherapeutics, diagnostic reagents and kits

2010) Biopolymers

5040) Biosensors, BioMEMS

#### 6030 Bioprocess and analysis equipments

Experimental and R&D devices such as separation/purification devices, synthesis/cloning devices, sequence analyzing devices, and other interpretation/analysis devices

#### 6040 Plant and process design

System constructing and plant designing services using bioprocess technology and devices, equipments

#### 6000 Other bioprocess and equipments

Bioprocess devices and experimental devices which are not classified above (including ingredients and components which are not classified above)

### 7. Bioenergy and bioresource industry

Industrial activities which develop energy by utilizing organisms or biotechnology in R&D or manufacturing process, and industrial activities which dig out and produce organisms which have novel functions and then cultivate or raise them

#### 7010 Biofuel

Alternative fuel materials which are produced under conversion process from biomass

#### 7020 Artificial seeds and seedlings

Seeds, improved seeds, mushroom strains and energy crops for forestry or agricultural use

#### 7030 Experimental animals

Experimental animals including transgenic animals such as insects, mice and rats

#### 7040 Transgenic animals and plants

Transgenic animals and plants

**Exception** 7020) Artificial seeds and seedlings  
7030) Experimental animals

#### 7000 Other bioenergy and bioresources

Other bioenergy (biogas) and organisms (including microbial strains and cell strains)

**Exception** For developmental services, refer to subsections of "8. Bioassay, bioinformatics and R&D service industry"

### 8. Bioassay, bioinformatics and R&D service industry

Industrial activities of biotechnology which conduct R&D by proxy or provide analysis/assessment consulting services and associated bioinformations, providing services described below [Activities manufacturing class 1~7 products on consignment of other companies are referred to as production activities of relevant products]

#### 8010 Bioinformatics services

Services which provide customers with solutions based on bioinformatics and predictions

**Example** Bioinformatics database services, statistical analysis of bioexperimental data, oligomer designing, antibody designing and cell strain designing

#### 8020 Gene analysis services

Services which utilize genetic analysis

**Example** Genetic sequence analysis, parentage test, GMO diagnosis, microorganism identification, DNA genotyping, SNP analysis

#### 8030 Protein analysis services

Services which utilize protein analysis

**Example** Protein sequence/structure analysis, protein expression pattern analysis

#### 8040 R&D services(ex. drug development services, etc.)

Activities which conduct R&D essential for product development by proxy using biotechnology. Services and technical consulting excluding providing bioinformations (In sales survey of a company, sales which come from technology transfer in biotechnological field correspond to this category)

**Example** New drug development

#### 8050 Biosafety and efficacy evaluation services

Preclinical study or clinical study services

#### 8060 Diagnosis and preservation services

Disease diagnosis services and cell line preservation services using biotechnology

**Example** Cord blood preservation service

**Exception** 8010) Bioinformatics services  
8020) Gene analysis services  
8030) Disease diagnosis services which utilize one of protein analysis services

#### 8000 Other bioassays, bioinformatics services

Other bioassays, bioinformatics services which are not classified above

**Example** Services which provide information on standardization (GMP, FDA certification, IQ, OQ, PQ), technology and management consulting services

## 2. Biotechnology

### A. Genetic engineering

Technology which changes the genetic characteristics of target organisms by gene manipulation or transplantation

#### A1. Gene manipulation

Technology which directly deal with genes such as gene identification, modification, separation, recombination, synthesis, amplification and transfer

##### Corresponding List

- A101. Genetic material development
- A102. Gene separation
- A103. Gene cloning
- A104. Gene transformation
- A105. Gene screening
- A106. Genetic mutation
- A107. Gene targeting
- A108. DNA synthesis
- A109. DNA amplification

#### A2. Gene expression and regulation

Technologies which modify the mode, degree or rate of expression of genetic information by intervening in replication, transcription and translation of genetic information

##### Corresponding List

- A201. Host cell development
- A202. Gene overexpression
- A203. Secretory expression
- A204. Gene replication and transcriptional regulation
- A205. Signal transduction analysis
- A206. Oncogenesis
- A207. Gene expression profile analysis
- A208. High throughput gene expression
- A209. RNA interference

### A3. Gene application

Technologies which develop new molecules, nuclei or individuals

#### Corresponding List

- A301. Transgenic animals
- A302. Transgenic plants
- A303. Transgenic microorganisms
- A304. Molecular evolution
- A305. Genome shuffling

### A4. Gene therapy

Technologies which are used in the whole therapeutic process from development of therapeutic genes to transferring them into human body and expression

#### Corresponding List

- A401. Ex vivo therapy
- A402. Gene therapy vector development and production
- A403. Evaluation of gene transfer and expression
- A404. Therapeutic gene development
- A405. Germline gene therapy
- A406. In vivo model for gene therapy
- A407. Oncolytic virus therapy
- A408. RNA interference
- A409. DNA vaccine

A0. Genetic engineering, n.e.s.

## B. Protein engineering

Technologies which analyze structure and function of proteins and design, create or apply specific proteins

### B1. Protein structure analysis

Technologies which analyze sequence, mass, planar structure and conformation of proteins

**Corresponding List**

- B101. Protein mass spectrometry
- B102. Protein sequence analysis
- B103. Protein 3D structure analysis
- B104. High throughput structural determination
- B105. Protein linkage maps
- B106. Protein-protein interaction mapping

**B2. Protein function analysis**

Technologies which analyze functions of proteins such as their stability, recognition and response

**Corresponding List**

- B201. Protein stability analysis
- B202. Protein folding analysis
- B203. Protein recognition mechanism analysis
- B204. Protein reaction analysis
- B205. Inhibitor screening and development
- B206. Protein linkage map analysis
- B207. Protein-protein interaction mapping

**B3. Complex protein engineering**

Technologies which are utilized in protein modification, manipulation of antibodies and receptors, and protein designing

**Corresponding List**

- B301. Antibody engineering
- B302. Protein modification
- B303. Receptor engineering
- B304. Protein design
- B305. Complex protein formation

**B4. Peptide engineering**

Technologies which are utilized in synthesis, purification, designing, analysis of structure and function of peptides

**Corresponding List**

- B401. Peptide synthesis and purification



- B402. Peptide design
- B403. Peptide structure and function analysis
- B404. Activated peptide utilization
- B405. Multidimensional peptide separation

## B5. Protein application

Technologies which develop or utilize enzymes or combinatorial biocatalysts using proteins

### Corresponding List

- B501. Novel enzyme screening
- B502. Artificial enzyme production and utilization
- B503. Protein refolding
- B504. Combinatorial biocatalysis
- B505. Enzyme therapy

## B0. Protein engineering, n.e.s.

## C. Other macromolecule engineering

Technologies which analyze structure and functions of biomacromolecules such as carbohydrate or lipid, and which develop valuable materials by modifying or utilizing these biomacromolecules

### C1. Lipid engineering

Technologies which artificially synthesize lipids or separate them from its natural state, analyze their structure and functions, and develop valuable materials such as functional lipids by physically or biochemically modifying or processing them

### Corresponding List

- C101. Functional lipid development

### C2. Carbohydrate engineering

Technologies which artificially synthesize carbohydrates or separate them from

its natural state, analyze their structure and functions, and develop valuable materials such as functional carbohydrates by physically or biochemically modifying or processing them

**Corresponding List**

- C201. Polysaccharide chemistry
- C202. Neoglycan technology
- C203. Functional carbohydrate development

C0. Other macromolecule engineering, n.e.s.

## D. Cell and tissue engineering

Technologies which are utilized to maintain, improve and recover organic functions by manufacturing and using new cells which can express valuable genetic characteristics or by producing artificial tissues or organs

D1. Stem cell therapy

Technologies which induce undifferentiated stem cells to differentiate into specific cells or tissues in appropriate *in vitro* condition and utilize them to treat injured tissues or organs

**Corresponding List**

- D101. Embryonic stem cell utilization
- D102. Adult stem cell utilization
- D103. Stem cell differentiation induction
- D104. Regenerative medicine

D2. Bioenvironment regulation

Technologies which create *in vitro* conditions physically and chemically similar to conditions of living bodies to maximize specific functions of cells or organs

**Corresponding List**

- D201. Biological and chemical bioenvironment
- D202. Physical, mechanical bioenvironment mimics
- D203. Cell and biomaterials interface

## D204. Hybrid tissue engineering

## D3. Functional biomaterial development

Technologies which develop structurally and chemically modified functional biocompatible materials which can induce specific activities by interaction with cells and tissues in organisms

## Corresponding List

- D301. New biomaterial development
- D302. Biocompatibility enhancing technology
- D303. Functional supporter development
- D304. Biocompatibility material development

## D4. Cell engineering

Comprehensive cellular technologies including technologies which create new cells such as hybrid cells or recombinant cells, and cell separating and culturing technologies

## Corresponding List

- D401. Cell assays
- D402. Cell microencapsulation
- D403. Cell manipulation
- D404. Nuclear transfer

## D5. Tissue engineering

Technologies which are utilized in maintaining, developing and recovering biofunctions by manufacturing artificial tissues or organs using cells, organs and biocompatible materials

## Corresponding List

- D501. Tissue assays
- D502. Tissue microencapsulation
- D503. Tissue manipulation
- D504. Tissue culture

## D0. Cell and tissue engineering, n.e.s.

## E. System biology and bioinformatics

Technologies which study on comprehensive characteristics of living organisms by analyzing and integrating their constituents and interactions, and technologies which obtain and utilize valuable information by processing and handling living organism-originated information

### E1. Gene sequence analysis

Technologies which analyze the whole genetic information of an individual by using DNA sequencer or other devices

#### Corresponding List

- E101. SNP(single nucleotide polymorphism) analysis
- E102. cDNA library construction
- E103. Gene-expression profile analysis
- E104. DNA chip development and application
- E105. High throughput screening
- E106. Full-length cDNA cloning
- E107. Whole genome sequence technology

### E2. Functional genomics

Technologies which investigate genetic functions to obtain information required for diagnosis and prognosis prediction of diseases and for developing medicines

#### Corresponding List

- E201. Proteome related technology
- E202. Genetic functional network analysis
- E203. Comparative genomics
- E204. Pharmacogenomics
- E205. Toxicogenomics
- E206. Gene targeting
- E207. Transcriptomics
- E208. Genotyping
- E209. Haplotype profiling
- E210. Genome-wide gene trapping
- E211. Inverse genomics

### E3. Proteomics

Technologies which investigate structure and function of specific proteins and interaction between proteins to understand cellular behavior and gene expression

#### Corresponding List

- E301. Protein display
- E302. Protein informatics
- E303. Cellular proteomics
- E304. Disease-related expression profiling
- E305. Pharmacoproteomics
- E306. Protein chip development and application

### E4. Bioinformatics

Technologies which obtain and utilize valuable information by analyzing and processing bioinformation of organisms using computer

#### Corresponding List

- E401. Biological database construction
- E402. Data mining system development
- E403. Biological system modeling and simulation
- E404. Base sequence analysis and design
- E405. Structure/function prediction
- E406. Biological network analysis

E0. System biology and bioinformatics, n.e.s.

## F. Metabolic engineering

Technologies which improve production of target metabolites or produce new metabolites by analyzing and modifying the metabolism pathway or its regulatory system

F1. Metabolite production

Technologies which industrially produce primary metabolites essential for cell growth (nucleic acids, aminoacids, vitamins, etc.) and secondary metabolites which are biosynthesized after cell growth (antibiotics, dyes, etc.)

**Corresponding List**

- F101. Primary metabolite production (amino acid, organic acid, alcohol, etc.)
- F102. Secondary metabolite production(antibiotics, etc.)
- F103. Production of other bioproducts (nucleic acid, lipid, protein, carbohydrate, etc.)

## F2. Applications of metabolic engineering

Technologies which are utilized in improving production of target metabolites, producing new metabolites or biological degradation of non-organic materials by analyzing, modifying and redesigning the metabolic pathways and their regulatory systems

**Corresponding List**

- F201. Enhanced production of existing metabolites
- F202. Production of novel metabolites
- F203. Optimizing the substrate utilization
- F204. Designing pathways for degradation of xenobiotics
- F205. Engineering of metabolic pathways and cellular system for improving mid and downstream bioprocesses

## F3. Understanding the metabolism and metabolic pathway

Technologies which analyze and informationize metabolic flux, metabolic regulatory system and metabolic networks

**Corresponding List**

- F301. Metabolic flux analysis
- F302. Metabolic flux regulation analysis
- F303. Metabolic network analysis
- F304. Metabolic profiling
- F305. Isotopomer analysis

## F0. Metabolic engineering, n.e.s.

**Corresponding List**

- F001. Integration of genome, transcriptome, proteome, metabolome and fluxome  
 F002. In silico metabolic engineering

**G. Bioprocess**

Processing technologies such as culturing, biotransformation, recovery and purification which utilize organisms or bioderivatives for production of valuable materials or products

**G1. Fermentation engineering**

Microbial culturing technologies which are utilized to maximize the production of valuable materials

**Corresponding List**

- G101. Strain improvement  
 G102. High cell density culture  
 G103. Recombinant microorganism culture engineering  
 G104. Algae cell culture engineering  
 G105. Cell immobilization

**G2. Cell culture engineering**

Technologies utilized in optimal culturing of cell strains derived from animals, plants and insects

**Corresponding List**

- G201. Plant cell culture engineering  
 G202. Animal cell culture engineering  
 G203. Cell line development  
 G204. Plant tissue culture engineering  
 G205. Insect cell culture  
 G206. Media optimization

**G3. Biotransformation**

Technologies which convert precursor materials to other valuable materials by utilizing biocatalysts

**Corresponding List**

- G301. Enzyme reaction engineering
- G302. Enzyme stabilization
- G303. Enzyme immobilization
- G304. Chirotechnology

**G4. Bioseparation engineering**

Technologies which are utilized to optimally recover and purify valuable materials produced by bioprocesses

**Corresponding List**

- G401. Filtration
- G402. Centrifugation
- G403. Extraction
- G404. Adsorption
- G405. Chromatography
- G406. Membrane separation
- G407. Precipitation / crystallization
- G408. Freeze drying
- G409. Electrophoresis
- G410. Cell separation

**G5. Industrialization**

Technologies which design, analyze, optimize and manage manufacturing processes to produce living organisms or bioderivatives in industrial scale

**Corresponding List**

- G501. Scaleup technology
- G502. Bioreactor design and fabrication
- G503. Process design
- G504. Process control and optimization
- G505. Sterilization
- G506. Cost analysis
- G507. Process validation
- G508. Quality assurance / control
- G509. cGMP(current Good Manufacturing Practices)
- G510. GLP(Good Laboratory Practice)



## G0. Bioprocess, n.e.s.

- Corresponding List**
- G001. Bioleaching
  - G002. Cryopreservation

## H. Bioresource production and utilization

Technologies which produce and preserve bioresources such as animals, plants and microorganisms efficiently, and produce valuable products by separating and processing materials obtained from these bioresources

### H1. Plant resource utilization technology

Technologies associated with genetic resource preserving, genetic modification, molecular breeding, cultivation, pest control, and processing and storage of agricultural products, for efficient production of plant resources

- Corresponding List**
- H101. Nuclear fusion
  - H102. Cultivation and breeding
  - H103. Transgenic plant development and molecular breeding
  - H104. Plant transformation analysis and detection
  - H105. Plant cell differentiation
  - H106. Plant gene resources analysis and preservation
  - H107. Disease and parasite protection
  - H108. Farm product quality control and storage

### H2. Animal resource utilization technology

Technologies which produce products which assist preservation, breeding, growth and efficient production of animal resources, or technologies which produce valuable products by utilizing byproducts of animal resource production

- Corresponding List**
- H201. Nuclear fusion
  - H202. Animal resource utilization
  - H203. Animal breeding, development and proliferation
  - H204. Transgenic animal development

- H205. Animal disease control
- H206. Experimental animal development and production
- H207. Experimental animal management and utilization
- H208. Animal feed production
- H209. Animal byproduct processing technology
- H210. Animal cell cloning technology

### H3. Microbial resource utilization technology

Technologies which separate, identify and manage valuable microorganic resources or technologies which produce valuable materials by using these resources

#### Corresponding List

- H301. Nuclear fusion
- H302. Screening and Identification of microbial resource
- H303. isolation
- H304. Probiotic development and utilization

### H4. Insect resource utilization technology

Technologies which produce valuable materials by preserving or utilizing insect resources such as insect bodies, insect cells or insect-associated microorganisms

#### Corresponding List

- H401. Functional insect and its material utilization
- H402. Utilization of insect organ and insect cell line
- H403. Preservation of insect resource and search for its application
- H404. Utilization of insect based microorganism

### H5. Marine/fresh water organism technology

Technologies which are utilized in producing valuable materials or environmental conservation by preserving, separating, breeding and utilizing bioresources associated with marine lives or limnobios

#### Corresponding List

- H501. Aquatic animal breeding and development
- H502. Aquatic farming
- H503. Excellent individual preservation

- H504. Aquatic microorganism utilization
- H505. Aquatic plant breeding and utilization
- H506. Aquatic organism resources screening
- H507. Aquatic environment preservation

## H6. Food engineering

Technologies which produce and manage foods or food materials by discovering, assessing, processing and packaging bioresources which can be utilized as general foods or functional health foods.

### Corresponding List

- H601. Food processing and packaging
- H602. Functional food material production
- H603. Food pollutant detection and management
- H604. Fermentation foods and enzyme utilization
- H605. Food quality and nutrition evaluation
- H606. Food additives development

## H7. Biomaterializing technology

Technologies which produce valuable materials or assess their functions by discovering, assessing, separating, purifying, biocatalyzing and biomimicking biomaterials derived from bioresources

### Corresponding List

- H701. Metabolism enhancing biomaterial screening
- H702. Biomaterial production and utilization
- H703. Biomaterial functionality evaluation
- H704. Biomaterial separation and purification
- H705. Biomimetry
- H706. Molecular high throughput screening

## H8. Biodiversity conservation

Technologies which preserve and manage genetic, species and ecosystemic diversity

### Corresponding List

- H801. Genetic diversity preservation and management
- H802. Species diversity preservation and management

H803. Ecosystem diversity preservation and management

H804. Cryopreservation

H0. Bioresource production and utilization, n.e.s.

**Corresponding List**

H001. Bioproduct engineering

H002. Life support system for closed environment

## I. Environmental biotechnology and bioenergy technology

Biotechnologies which are applied to environmental area and bioenergy area such as measuring, processing and remedying pollution

I1. Clean technology

Technologies of production and management which utilize eco-friendly alternative materials and processes which can reduce energy or resource consumption or discharge of reduce environmental pollutants

**Corresponding List**

I101. Process-related clean technology

I102. Biological agrochemicals development

I103. Biodegradable material production

I104. Bio-based solvent technology

I2. Environmental pollution control and management technology

Management and reducing technologies which can reduce discharge of environmental pollutants to natural environments such as water, air and earth, or can restore polluted natural environment

**Corresponding List**

I201. Air pollution control and treatment

I202. Water pollution control and treatment

I203. Soil pollution control and remediation

I204. Waste treatment

I205. Environmental pollutants measurement and analysis

I206. Environmental assessment and control

I207. Ecosystem restoration

### I3. Bioenergy technology

Technologies which produce and utilize energy-related products including electricity, fuel (liquid, solid and gaseous), heat, chemicals and other materials by using renewable resources such as biomass

#### Corresponding List

- I301. Bioethanol production using starch biomass
- I302. Bioethanol production using lignocellulosic biomass
- I303. Biodiesel production
- I304. Biogas production
- I305. Biogas utilization
- I306. Biohydrogen production
- I307. Biobutanol production

### I0. Environmental biotechnology and bioenergy technology, n.e.s.

### J. Nanobiotechnology

Technologies which control and apply biomolecules by fusing nanotechnology and biotechnology in nano scale

#### J1. Nano-biodevice fabrication

Technologies which compose and produce biodevices by controlling organisms or bioderivatives in nano scale

#### Corresponding List

- J101. Nano-DNA chip fabrication
- J102. Nano-protein chip fabrication
- J103. Nano chip production and application
- J104. Nano-bioelectronic device fabrication
- J105. Nano-biosensor system
- J106. Nano-bioactuator fabrication
- J107. Nano-biosignal analysis

#### J2. Nanobiomaterial technology

Technologies which produce medical and industrial materials by controlling,

designing and processing organisms or bioderivatives in nano scale to utilize their biocontrol functions

**Corresponding List**

- J201. Biomaterial self-assembly
- J202. Biomaterial production for nanobiochip
- J203. Hybrid nanomaterial manufacturing
- J204. Bio-nanoparticle manufacturing
- J205. Bio-nanomaterial thin film fabrication

### J3. Nano drug delivery system

Technologies and systems which regulate drug releasing rate by controlling particles in nano scale or improve drug delivery to target area

**Corresponding List**

- J301. Nanomaterial for drug delivery
- J302. Nanostructure manipulation and property analysis
- J303. Nano-carrier manufacturing
- J304. Molecular target discovery

### J4. BioNEMS(Nanoelectromechanical systems), nano-LOC(lab-on-a-chip)

Technologies which produce biochips by utilizing microprocessing techniques in nano scale, and technologies which design, fabricate and produce biochips which materialize various kinds of laboratory procedures such as combination, reaction, separation and analysis

**Corresponding List**

- J401. Nano-fluidic
- J402. Nano-processing
- J403. Nano-lithography
- J404. Surface, interface control
- J405. Nanoscale particle manipulation
- J406. Nanoflow visualization & diagnosis

### J0. Nanobiotechnology, n.e.s.

## K. Bioelectronics engineering

Technologies which construct, produce and utilize biodevices on the basis of detecting functions of organisms or bioderivatives

### K1. Biosensor fabrication

Technologies which design, construct and produce devices which detect and quantify specific materials by artificially materializing detecting functions of organisms or bioderivatives

#### Corresponding List

- K101. Biomaterial immobilization
- K102. Sensor array fabrication
- K103. Biomolecule recognition analysis
- K104. Sensor system design
- K105. Signal detection and transducing
- K106. Remote transmission

### K2. Bioelectronic device fabrication

Technologies which design, construct and produce devices which detect specific materials and have data processing and storing functions by artificially materializing electron delivery and storage functions of organisms or bioderivatives

#### Corresponding List

- K201. Biofilm fabrication
- K202. Device fabrication
- K203. Biomemory fabrication
- K204. Biocomputing

### K3. Biochip fabrication

Technologies which fabricate chips which analyze functions of genes, proteins and cells by immobilization of organisms or bioderivatives on solid board with high density

#### Corresponding List

- K301. DNA chip fabrication and application

- K302. Protein chip fabrication and application
- K303. Cell chip fabrication and application
- K304. High throughput screening
- K305. Array fabrication
- K306. Biodata mining
- K307. Instrument manufacturing for biochip

#### K4. Microfluidics

Technologies which investigate the fluidic phenomenon in microstructures related to collecting, treating, separating and transferring materials in biochips and lab-on-a-chip

##### Corresponding List

- K401. Plastic microfabrication
- K402. Microfluidic transport
- K403. Low Reynolds number flow
- K404. Multiscale flow simulation
- K405. Microflow driving & manipulation
- K406. Micro/nanoscale particle manipulation
- K407. Microflow visualization & diagnosis

K0. Bioelectronics, n.e.s.

#### L. Biosafety and efficacy evaluation

Technologies which evaluate potential risks or biologic efficacy of biotechnologies and biotechnological products

##### L1. Safety evaluation

Technologies related to evaluation methods and tools of risks of biotechnologies and biotechnological products

##### Corresponding List

- L101. Medicine, cosmetics safety evaluation
- L102. Food and food additives safety evaluation
- L103. Chemical material safety evaluation
- L104. Biological agrochemicals safety evaluation
- L105. Microbiological safety evaluation



L106. GMO safety evaluation

L107. Clinical trial

L108. Toxicity evaluation

## L2. Safety management

Management technologies which reduce or block potential risks of biotechnologies and biotechnological products

### Corresponding List

L201. Safety management

L202. HACCP(hazard analysis critical control points)

L203. Safety management of GMO

## L3. Environmental assessment

Technologies related to establishment and evaluation of methods for minimizing or avoiding influence on environment and technologies related to evaluation of influence on natural/life environment, social/economic environment and culture before initiating works which have potential influence on environment

### Corresponding List

L301. Environmental assessment of natural disaster

L302. Environmental assessment of chemicals

L303. Environmental assessment of radioactive materials

L304. Environmental assessment of synthetic resins and petroleum products

L305. Environmental assessment of magnetism

L306. Evaluation and management of GMO

L307. Biodegradability evaluation

## L4. Biohazard management

Technologies which prevent, manage and restore disasters which are caused by leakage of toxic materials, pathogens and biotechnological organisms or man-made changes on ecosystem to cause serious influence on mankind and ecosystem

**Corresponding List**

- L401. Safety management of chemicals
- L402. Safety management of radioactive materials
- L403. Biohazard management caused by natural disaster
- L404. Biological remediation restoration using microorganisms
- L405. Biohazard management caused by bio-weapons

## L5. Efficacy evaluation

Technologies which evaluate efficacy of materials which enhance or inhibit activities of human body, organisms or bioderivatives

**Corresponding List**

- L501. *In vitro* assay
- L502. *In vivo* assay
- L503. Pharmacokinetic evaluation
- L504. Preclinical trial
- L505. Clinical trial I
- L506. Clinical trial II
- L507. Clinical trial III
- L508. Clinical trial IV

## L0. Biosafety and efficacy evaluation, n.e.s.

**M. Other biotechnology**

## M1. Combinational biology

Technologies which secure molecular diversity from genetic information on the basis of genetic recombination and select potential candidate materials of specific activities, and secure their genetic information

**Corresponding List**

- M101. Shape library construction
- M102. Hybrid polyketide antibiotics development

## M2. Drug delivery

Technologies which minimize adverse reactions of drugs and maximize effects and efficacy of drugs by regulating drug release rate or facilitating drug

delivery to target area

**Corresponding List**

- M201. Controlled release formulation
- M202. Biomaterials for drug delivery
- M203. Structure manipulation and property analysis
- M204. Carrier development
- M205. Molecular target discovery

### M3. Immunotherapy

Technologies which treat diseases using in vivo immune system by producing, modifying and activating materials and cells related to in vivo immunity

**Corresponding List**

- M301. Immunomodulator
- M302. Immunotherapeutics
- M303. Targeted immunotherapy

### M0. Biotechnology, n.e.s.

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