Stock Code: 4174

OBI Pharma, Inc.

Annual Report 2018

Printed on April 30, 2019

Taiwan Stock Exchange Market Observation Post System:http://mops.twse.com.tw

Table of Content

I Letter to Shareholders

Dear Shareholders,

After cultivation and deployment in these years, OBI has been positioned as a company focus on the research and development of diversified new anti-cancer drugs, and has been sparing no efforts to march towards such objective; all major projects have achieved important progress in the past year; apart from the development of active immunity anti-cancer drugs taking Globo H as effect target and passive immunity monoclonal antibody (mAb), research and development projects of various new drugs taking tumor carbohydrate antigen SSEA-A as effect target have also been carried out actively; meanwhile, OBI has stepped into the new fields such as Antibody Drug Conjugate (ADC), Bi-Specific Antibody and micromolecule chemotherapeutic prodrug etc.

It's worth mentioning that, the passive immunity monoclonal antibody OBI-888 taking Globo H as effect target self-developed by OBI has obtained the qualification as the orphan drug for pancreatic cancer treatment from US Food and Drug Administration (FDA), and now it is under phase I clinical trial in US; and the first-in-class micromolecule chemotherapy prodrug OBI-3424 taking the AKR1C3 enzyme inside tumor as effect target has also obtained the qualification as two orphan drugs for hepatocellular carcinoma (HCC) and acute lymphoblastic leukemia (ALL) treatment, and phase I clinical trial has also been carried out.

OBI has cooperated with Academia Sinica and published a paper in “Proceedings of the National Academy of Sciences” (PNAS) on February 11 this year, verifying the key roles played by the Globo Series carbohydrate molecules on tumor surface in the growing and survival of cancer cells, it can trigger the apoptosis of cancer cells by inhibiting or removing carbohydrate molecules on tumor surface such as Globo H or SSEA-4 etc. This paper provides important theoretical basis to OBI for development of new anti-cancer drugs taking Globo Series as the effect target.

Besides, OBI also displayed by poster the results of pre-clinical research on the first-in-class monoclonal antibody new drug OBI-888 taking Globo H as the target and the Antibody Drug Conjugate (ADC) new drug OBI-999 taking Globo H as the target, which are self-developed by OBI, in the annual meeting of American Association of Cancer Research (AACR) for the first time last year, including functional mechanism, anti-neoplastic effect, drug metabolism and pharmacokinetics features etc., demonstrating the potential of OBI-888 and OBI-999 in cancer treatment.

The followings are the reports on important operating strategies and results of the company, as well as the progress and demonstration of corporate governance.

I. 2018 BUSINESS RESULTS

[R&D ACHIEVEMENTS IN MAJOR PRODUCTS]

1. Adagloxad Simolenin (namely OBI-822).

Adagloxad simolenin is the active immunity new anti-cancer drug as the the Globo carbohydrate molecules on tumor surface as the effect target, its global phase III clinical trial has been approved by competent drug administration authorities in US, Taiwan, Hong, Australia, Ukraine and Russia etc., it has started recruiting patients and some testees have registered for the trial.

Application needs to be otherwise proposed to China Mainland by supplementing documents, and clinical trial application has been proposed to Korea and several member countries in Europe, and we will submit relevant materials when they are ready.

This clinical trial still has unmet medical needs and takes patients with triple negative breast cancer (TNBC) of high recurrence risk after operation as the testee for the project; it uses the immunohistochemistry (IHC) approved by US FDA to screen the patients with certain Globo H performance on tumor surface to carry out the clinical trial.

2. OBI-833 new generation Globo H active immunity anti-cancer drug

OBI-833-001 (OBI-833/OBI-821) has completed the phase I clinical safety assessment to ensure the safety, and has determined the dosage for injection to lung cancer patients for cohort expansion trial, it is expected to completed the target of receiving testees in 2019.

3. OBI-888 Globo H passive immunity monoclonal antibody

OBI-888 is the first-in-class monoclonal antibody taking tumor carbohydrate antigen Globo H as the effect target, after conjugation with Globo H, it can trigger ADCC and CDC humoral immunity functional mechanism to achieve the anti-cancer purpose. In animal trail, after OBI-888 treatment, we can see killer T cells gathering in tumor, verifying that its anti-cancer functional mechanism also includes cellular immunity. The OBI-888 independently researched and developed by OBI is currently under phase I human clinical trial in M.D. Anderson Cancer Center of University of Texas, taking patients with locally advanced or metastatic solid tumor as testees; it is expected to complete dose escalation phase and enter into cohort expansion phase in 2019.

4. OBI-999 Globo H Antibody Drug Conjugate

OBI-999 is the new drug based on the antibody drug conjugate (ADC) of OBI-888 monoclonal antibody, currently, according to the results of completed pharmacological and toxicological tests, OBI-999 has excellent tumor shrinkage effect and safety. It is expected that OBI will submit the OBI-999 clinical trial application to US FDA this year.

5. OBI-3424 micromolecule chemotherapy prodrug

OBI-3424 is a prodrug-type first-in-class micromolecule new drug introduced from US, it will selectively function at various cancers with excessive performance of AKR1C3 aldo-keto reductase; in July and September 2018, it has been granted the qualification of orphan drug for treating hepatocellular carcinoma (HCC) and acute lymphoblastic leukemia (ALL) by US FDA respectively. This product is currently under clinical trial in M.D. Anderson Cancer Center of University of Texas and in James Cancer Hospital and Solove Research Institute of Comprehensive Cancer Center in Ohio State University, it is expected to complete dose escalation phase and enter into cohort expansion phase this year.

6. Pre-clinical research on new anti-cancer drugs taking tumor carbohydrate antigen SSEA-4 as the effect target

Product development in this part includes active immunity anti-cancer drug OBI-866, the phase of animal trial has verified that it will trigger the generation of specific antibody inside mice body, currently it has completed manufacturing process development and under pharmaceutical production and animal toxicological test; and OBI-898 is the passive immunotherapy monoclonal antibody taking SSEA4 as the target, currently it is under pre-clinical trial; and antibody drug conjugate OBI-998 is the conjugate conjugating with SSEA4 antibody by linkers

through chemical bonding, it is the micromolecule drug of cytotoxicity characteristic, currently it has completed the verification of pharmaceutical effect concept in animal model.

7. OBI-858 new clostridium botulinum toxin preparation

PharmaCore has been appointed to carry out finished drugs production for use in clinical trial, it is expected to propose clinical trial application to Taiwan Food and Drug Administration this year.

[OPERATING STRATEGY]

(1) Diversified new anti-neoplastic drugs

OBI focuses on the fields of unmet medical needs, and hopes to develop into the leader in anti-neoplastic immunotherapy; it not only steps into passive immunity monoclonal antibody (mAb) from active immunity anti-cancer vaccine, but also into emerging fields such as Antibody Drug Conjugate (ADC), Bi-Specific Antibody and micromolecule chemotherapy prodrug etc. And the selection of effect targets also becomes more diversified, apart from tumor carbohydrate antigen Globo H and SSEA-4, which have been researched and developed by OBI for a long time, the first-in-class micromolecule chemotherapy prodrug OBI-3424 taking AKR1C3 enzyme inside the tumor as the effect target has also entered into phase I clinical trial in US, OBI has developed into a company with all-around research and development of new anti-cancer drugs.

(2) Focus on basic scientific research

OBI published a paper in “Proceedings of the National Academy of Sciences” (PNAS) in February this year, and displayed by poster the results of pre-clinical research on the first-in-class monoclonal antibody new drug OBI-888 taking Globo H as the target and the Antibody Drug Conjugate (ADC) new drug OBI-999 taking Globo H as the target in the annual meeting of “American Association of Cancer Research” (AACR) in March, including functional mechanism, anti-neoplastic effect, drug metabolism and pharmacokinetics features etc., demonstrating the potential of OBI-888 and OBI-999 in cancer treatment; it also indicated that, apart from focusing on clinical development, OBI personnel also engage in scientific research diligently, developing theoretical basis with solid product lines.

(3) Continue to strengthen international layout

In respond to the globalization of market and competition, OBI continued to recruit senior management and professional R&D talents to join the management team over the past year, and recruit international tumor-associated medical and scientific experts, so as to strengthen the consultant team of scientific and medical advisory committee. Besides, OBI also has expanded to Australia and set local subsidiaries there in 2018, making the best use of local clinical resources and investment tax credit to carry out clinical development plan. Over the past year, OBI participated in the Asian Investment Conference held by Credit Suisse and the Asia Pacific Healthcare Forum 2018 held by Goldman Sachs; and participated in the “2018 North American International Convention” in San Diego and important BIO events in Europe in June; in January this year, OBI was invited to give brief report to international legal person in J.P. Morgan Healthcare Conference for the first time, indicating the efforts made by OBI in improving

international visibility, establishing international investor relations and improving international popularity.

(4) Strengthen intellectual property management:

The layout of intellectual property is the important vitals for the development of new drug company, the Company always take overall protection of intellectual property as the important operating strategy; the performance in this aspect may also be certified by the 2017 assessment by the examination team of Taiwan Intellectual Property Management System (TIPS), Industrial Development Bureau, Ministry of Economic Affairs, which rated the performance of OBI in intellectual property protection and management as Grade A. Besides, OBI will also strengthen the protection of business secret at the same time, and spare no efforts to promote information security system to reinforce relevant protective measures and security alert system, so as to improve risk resilience. As at April 2019, OBI has acquired 24 domestic and foreign trademark certificates, totally 70 domestic and foreign patents.

[Corporate governance]

In order to pursue steady company development and enhance market confidence, OBI continued to accept the 2018 corporate governance assessment held by Corporate Governance Center of Taiwan Stock Exchange; among over six hundred listed companies under assessment, OBI ranked top 6%~20%; this is the second consecutive year for OBI to rank in such class interval, and we will continue to make progress, aiming at the top class interval in the future.

In the aspect of regulatory compliance, the Company still adheres to the integrity operation and continue to strengthen regulatory compliance, hoping to achieve information transparency, expand participation and effective risk management, taking the improvement of corporate governance and corporate culture and quality as the objective.

[2018 FINANCIAL REPORT]

The Company always adopts conservative and prudent principles in comprehensive planning the employment of working capital in financial operations, the cash was employed in the fixed term deposit of extremely low risk and capable of generating fixed income, so as to meet the future operation needs and avoid the financial loss might be caused by fluctuations in market sentiment. The operating income of the Company in 2018 was NT$13,339 thousand, increase when compared with the last year, mainly due to the recognition of sales royalties of Dificid in Taiwan, recognition of license fee income from subsidiaries AP Biosciences, Inc., as well as raw materials sales income etc. The net non-operating income in 2018 was NT$171,881, mainly due to the profit on exchange generated from the appreciation of USD time deposit in USD-to-TWD exchange.

Unit: NTD thousands;%

Item \ Year			2018	2017
inancial revenue and expenditure	Operating income		13,339	376
	Operating expenses		1,435,736	1,190,018
	Non-operating revenue (expenditure)		171,881	(187,815)
	Aggregate loss in this period		1,251,780	1,400,095
Financial revenue and expenditure	Return on assets (%)		(25.22%)	(23.94%)
	Return on equity (%)		(26.21%)	(24.59%)
	Ratio in paid-up capital (%)	Operating loss	(82.06%)	(69.10%)
		Pretax net loss	(72.18%)	(80.01%)
	Net profit ratio (%)		(9,367.22%)	(366,871.28%)
	Net loss per share (NTD)		(7.06)	(8.06)

II. 2019 BUSINESS PLAN SUMMARY AND DEVELOPMENT STRATEGY

In order to accelerate product research and development and commercialization process, and build OBI into an international biotechnology company, the Company will continue to recruit senior scientific research personnel related to cancer immunology around the world, and focus on the research and development of immuno-oncology first-in-class new drugs; besides, the Company will continue to expand the formation of Scientific Advisory Board (SAB), absorbing knowledge and experience from heavyweight scholars and experts in all fields to optimize the R&D and clinical development strategies of OBI in new anti-cancer drugs.

III. IMPACT OF EXTERNAL COMPETITIVE ENVIRONMENT, REGULATORY ENVIRONMENT AND OVERALL ENVIRONMENT

In recent years, China encroaches upon the field of research and development of new biotechnological drugs ambitiously, not only becoming the second largest drug market worldwide next to US, its reformation and improvement in drug administration regulations, as well as reinforcement in internationally compatible ambition are impressive to various countries. Especially, China Food and Drug Administration (CFDA) officially became the member of International Conference on Harmonization (ICH) in 2017, and changed its name into National Medical Product Administration (NMPA) in 2018, so as to keep in line with advanced countries gradually in terms of examination and verification system for medical and pharmaceutical products, it not only dramatically expand the scale of Center for Drug Evaluation (CDE), but also speed up examination and approval to encourage the research and development of new drugs by policy; indicating that China will not only become the biotech pharmaceutical market full of opportunities, but also the competitor cannot be ignored.

Meanwhile, Hong Kong and Singapore also devotes to reinforcing the energy in biotechnology and pharmaceutical industry; since Hong Kong Stock Exchange opened its window for biotechnology companies without revenue to become listed, several companies engaged in tumor immunity new drugs and taking China as the major operating target had become listed successively, and had raised certain funds from the capital market. The qualitative change in China market is not only a new challenge but also the business opportunity to OBI, which specially focuses on the research and development of first-in-class new anti-cancer drugs; OBI is now actively seeking for partners with close philosophy and complementary resource and

technology to establish close cooperative relationship, so as to reduce research and development risk and maximize the product value.

OBI will continue to make efforts in the aspects of talent cultivation, intellectual property layout, regulatory compliance, and corporate governance, and reinforce the development of international cooperation plan, hoping to, with the support of all shareholders and efforts of all employees, march towards the objective of becoming the world's leading biotechnological drug company in the fields of carbohydrate immunotherapy and diversified cancer treatment.

OBI Pharma, Inc.

Chairman: Michael N. Chang

II Company Profile

i. Establishment Date

(i) Establishment date: April 29, 2002

(ii) Address and telephone number of parent company, branch company and plant:

1. Company address and telephone number:
   19F, No. 3, Park Street, Nangang Software Park, Nangang District, Taipei City 115 Tel.:(02)2655-8799
   7F, No. 369, Zhongxiao East Road, Section 7, Nangang District, Taipei City 115 Tel.:(02)2786-6589
2. Branch company address and telephone number: NA.
3. Plant address and telephone number: NA.

ii. Company history

2002	● In April, OBI Pharma, Inc. (hereinafter referred to as "OBI Pharma") was established by American merchant Optimer Pharmaceuticals, Inc. (Optimer Pharmaceuticals, Inc. locates at US San Diego, it is a NASDAQ listed company with stock code as OPTR, mainly researching and developing new drugs related to anti-infective diseases and cancers). ● OBI Pharma is the subsidiary 100% invested by American merchant Optimer Pharmaceuticals, Inc., upon the establishment, the authorized capital was NT$Forty Million, the paid-up capital was NT$Ten Million, and the founder and Chairman was Michael N. Chang.
2004	● Completed the statistical analysis of DIFICID™ (Fidaxomicin) CDI epidemiology in Taiwan . ● To expand operations, a capital increase of 12.6 million shares and technology investment of 20.4 million shares, or a total of 33 million shares with par value per share of NTD 10. Authorized capital was NTD 1,200,000,000, and paid-up capital was NTD 340,000,000 ● OBI Pharma coordinated with the manufacturing of DIFICID™ for a phase I/II clinical trial in Taiwan
2006	● Optimer Pharmaceuticals (NASDAQ:OPTR) initiates a DIFICID™ Phase III human trial (No. 003 clinical trial)
2007	● Parent company Optimer Pharmaceuticals became public listing in the National Association of Securities Dealers Automated Quotation (NASDAQ) ● OBI Pharma partnered with Academia Sinica on carbohydrate molecules synthesis and carbohydrate membrane array development
2008	● Taiwan's Center for Drug Evaluation granted OBI priority review for OBI-822 (formerly known as OPT-822) ● The research of Academia Sinica pointed out that the Globo series

	carbohydrates highly perform in cancer cells, and the paper was published in journal Proceedings of the National Academy of Sciences (PNAS)
2009	● Dr. Youe-Kong Shue appointed CEO. ● In order to expand operation, external cash capital increase was carried out to introduce strategic cooperative partners, there were two payment installments in total: the first installment was cash payment of 19.8 million shares, with NT$Ten per share. Apart from the parent company American merchant Optimer Pharmaceuticals, Inc., shareholders of the Company also include large groups, financial holdings and venture capitals etc. in Taiwan; the authorized capital was NT$One Billion Twenty Million, and the paid-up capital was NT$Five Hundred Thirty-Eight Million. ● OBI-822 licensing fully transferred to OBI from Optimer Pharmaceuticals.
2010	● OBI gained the exclusive right to develop OBI-833, a new generation cancer immunotherapy, and OBI-868, a novel cancer diagnosis technology, from Academia Sinica. ● OBI-822 Phase II/III Clinical Trial for metastatic breast cancer began in Taiwan. ● Taiwan Ministry of Economic Affairs approved OBI Pharma Inc. as the new biotechnological drug company.
2011	● OBI-822 Clinical Trial for metastatic breast cancer began in the US and Hong Kong. ● OBI received the Gold Award at the 2011 Taiwan Biomedical and Agricultural Industries Innovation and Excellence Ceremonies ● TFDA granted New Drug Priority Review and exemption requiring a Bridging Study Evaluation (BSE) for DIFICID™. ● OBI Pharma acquired the selling right of DIFICIDTM in Taiwan. ● Cooperated with Academia Sinica to carry out biopharmaceutical national plan of the country, researching and developing the application of carbohydrate membrane array in cancer detection. ● In order to expand operation, second installment was cash payment of 46.2 million shares, with NT$Ten per share. The authorized capital was NT$One Billion Five Hundred Million, and the paid-up capital was NT$One Billion.
2012	● In January, appointed Amy Huang to take the post of Chief Operating Officer of OBI Pharma. ● In January, appointed Dr. Yu Cheng-te to take the post of Chief R&D Officer of OBI Pharma. ● In March, in order to expand operation, issued totally 36 million new shares for cash capital increase, with NT$Ten per share, and every share was issued at premium of NT$Fifteen. The authorized capital was NT$One Billion Five Hundred Million, and the paid-up capital was NT$1,363,842,910. ● In April, since juridical person director of the Company, namely American merchant Optimer Pharmaceuticals, Inc. reassigned the director representative, all attending directors elected Director Tamon Tseng to take the post of Chairman of OBI Pharma. ● In May, approved by the Securities and Futures Bureau, Financial Supervisory Commission, the Executive Yuan to become the public company.

	● In June, Drug Controller General of India approved OBI-822 clinical trial license. ● In August, Korea Food and Drug Administration (KFDA) approved OBI-822 clinical trial license. ● In August, Taiwan Food and Drug Administration (TFDA) approved OBI-822, the active immunity anti-cancer drug treating metastatic advanced breast cancer to enter into phase III clinical trial. ● In September, Department of Health issued medicament license for the new antibiotic drug DIFICID® (Fidaxomicin), and approved it to come into Taiwan market. ● In October, the active immunity anti-cancer drug treating metastatic advanced breast cancer OBI-822 was appraised and elected by TFDA as one of the first five partnership projects in pharmaceutical research across the strait. ● In October, juridical person director American merchant Optimer Pharmaceuticals, Inc transferred share holding exceeding one second of the election shares, thus relieved its director identity. ● In November, Hong Kong subsidiary OBI Pharma Limited was established.
2013	● In February, Interim Meeting elected the fourth session directors and supervisors, and the Board of Directors elected Michael N. Chang to take the post of Chairman. ● In March, OBI Pharma (Shanghai) Limited was established. ● In April, appointed Ms Amy Huang to take the post of General Manager of the Company. ● In April, established US subsidiary OBI PHARMA USA, INC. ● In June, elected Dr. Hsu Yo-gung to take the post of Vice Chairman of OBI Pharma. ● In order to expand operation, issued totally 9,493,671 new shares for cash capital increase in October, every share was issued at premium of NT$158. After capital increase, the paid-up capital was NT$1,489,959,170. ● In November, cooperated with Taipei Mackay Memorial Hospital to carry out clinical trial plan for ovarian cancer active immunity anti-cancer drug.
2014	● In April, OBI Pharma and Academia Sinica signed the exclusive license agreement on carbohydrate molecules synthetic technology. ● In July, completed the trial target of 342 patients in OBI-822 random double blind phase II/III breast cancer clinical trial. ● In August, DIFICID™ and Department of National Health Insurance completed health insurance payment agreement, starting from September, it was listed as the payment item in health insurance. ● In December, US FDA approved to carry out clinical trial for the new generation active immunity anti-cancer drug (OBI-833).
2015	● In March, officially listed in ROC Taipei Exchange. ● In March, issued totally 20,000,000 new shares for cash capital increase, every share was issued at premium of NT$310. After capital increase, the paid-up capital was NT$1,702,672,100. ● In July, received the notice groom Food and Drug Administration, Ministry of Health and Welfare, the new generation active immunity anti-cancer drug OBI-833 passed the human clinical trial examination (IND). ● In July, awarded the gold award of R&D Technology Award in "Taipei Biotechnology Award" held by Taipei City Government.

	● In October, announced to exclusively license the product development and selling right of DIFICID™ in Taiwan to American merchant Merck Sharp & Dohme.
2016	● In February, OBI Pharma reports topline results from OBI-822/821 Randomized Controlled Phase 2/3 Clinical Trial in Patients with Metastatic Breast Cancer ● In March, ASCO accepts Abstract for Oral Presentation on 2016 Annual Meeting ● In April, Expert Meeting held for OBI-822-001 Study in London ● In June, OBI-822-001 trial data presented at ASCO in Chicago. In the same month, announcement on abstract Study was given at the Investor Conference in Taipei. Annual Shareholders' Meeting was held in Taipei. OBI Pharma announces the re-appointment of Dr. Michael Chang as the Chairman of the Company. ● In August, Dr. Nathan Chen resigned as Chief Medical Officer due to personal reasons, and joins the company's Medical Advisory Board. OBI embarks on non-deal roadshow in the US for the first time. ● In September, OBI was invited to the 17th Annual Asian Technology Conference organized by Credit Suisse. ● In October, OBI sponsored an Adagloxad Simolenin Satellite Symposium at the 2016 ESMO Annual Meeting. ● In November, OBI-833 patent was approved for Taiwan and Australia. In the same month, OBI Pharma was awarded grade A for TIPS Management. ● In December, OBI Pharma announced the signing of a Non-Binding Letter of Intent for OBI Pharma, Inc., to issue new shares to AbProtix, Inc., in exchange for an up to 70% stake in AP Biosciences.
2017	● In January, OBI had an EOP2 meeting with the FDA. China FDA approved Clinical Trial Application for Adagloxad Simolenin Phase III Study. Later in the month, Ms. Joanna Meng retires as Chief Operating Officer. OBI Pharma appoints Mr. Max Chan as the new Chief Operating Officer. ● In January, Adagloxad Simolenin (OBI-822) was approved by China Food and Drug Administration (CFDA) on phase III clinical trial. ● In April, OBI-833 fulfilled the primary safety requirements of Phase I clinical trial for US and Taiwan. ● In June, OBI acquired TH-3424 and renames it OBI-3424. ● In September, appointed PharmaCore to build special product line for botulinum toxin new drug OBI-858, exclusively provided for medication in phase I and II clinical trial of OBI-858, in the future, medication in phase III clinical trial and production after launched into market will be planned. ● In October, OBI-888 product patent "antibody, hybridoma generating such antibody, pharmaceutical composition containing such antibody and their use" received the notice on patent approval issued by United States Patent Office. ● In October, in order to improve product competitiveness and new drug development capacity, it was planned to exchange shares with AbProtix, Inc., shareholder of AP Biosciences; after consultation between both parties, the Company issued 1,675,000 ordinary shares by capital increase for the transfer of 6,700,000 ordinary shares (accounting for 67% of outstanding shares) of AP Biosciences held by AbProtix, Inc. ● In December, announced the resolution to acquire AP Biosciences, Inc. by

	capital increase through issuing new shares, and the base date for stock swap was January 10, 2018.
2018	● In January, passive immunity monoclonal antibody OBI-888 of OBI passed the human clinical trial examination (IND) by US Food and Drug Administration (FDA)(IND) ● In March, in response to practical need of the Company, the title of Chief Operating Officer Max Chan was adjusted into Chief Financial Officer. ● In April, the new chemotherapy prodrug OBI-3424 was approved by US Food and Drug Administration (FDA) to carry out phase I/II human clinical trial. ● In July, OBI-3424 obtained the qualification as the orphan drug for hepatocellular carcinoma (HCC) treatment from US Food and Drug Administration (FDA). ● In July, the medical equipment clinical research application (IDE) of OBI-822 passed the examination and approval of US Food and Drug Administration (FDA) to be used for OBI-822 phase III human clinical trial. ● In August, product patent of OBI-3424 "DNA alkylating agent" was approved by IP Australia. ● In September, OBI-3424 obtained the qualification as the orphan drug for Acute Lymphoblastic Leukemia (ALL) treatment from US Food and Drug Administration (FDA). ● In September, OBI-822 (Adagloxad Simolenin) was approved by Taiwan Food and Drug Administration (TFDA) to carry out phase III human clinical trial. ● In October, product patent of OBI-822 "Compound and Component of Carbohydrate Vaccine and Its Use" was approved by Taiwan Patent Office. ● In October, OBI's subsidiaries OBI Australia announced that OBI-822 (Adagloxad Simolenin) passed the examination of phase III human clinical trail in Australia. ● In November, OBI-822 (Adagloxad Simolenin) was approved to carry out phase III human clinical trial in US. ● In November, the medical equipment clinical research application (IDE) of OBI-888 passed the examination by US Food and Drug Administration (FDA), and was approved to be used in Cohort Expansion Phase of OBI-888 phase I human clinical trial. ● In November, OBI-822 (Adagloxad Simolenin) was approved by Hong Kong Department of Health (DOH) to carry out phase III human clinical trial. ● In November, OBI-888 obtained the qualification as the "orphan drug" for pancreatic cancer treatment from US Food and Drug Administration (FDA).
2019	● In January ,The 37th J.P. Morgan HealthCare Conference Report was first invited to San Francisco. ● In February, OBI-822 (Adagloxad Simolenin) was approved by Ministry of Health of Ukraine to carry out phase III human clinical trial. ● In February, Published in the journal of the national academy of sciences (PNAS) in cooperation with academia sinica, the paper proves that the Globo series is closely related to the survival of cancer cells, which provides an important theoretical basis for haoding Globo series to target new anti-cancer drugs. ● In March, Poster at the annual meeting of the American association for cancer research (AACR): Obi-888 and obi-999 (a new single antibody drug and a new antibody small

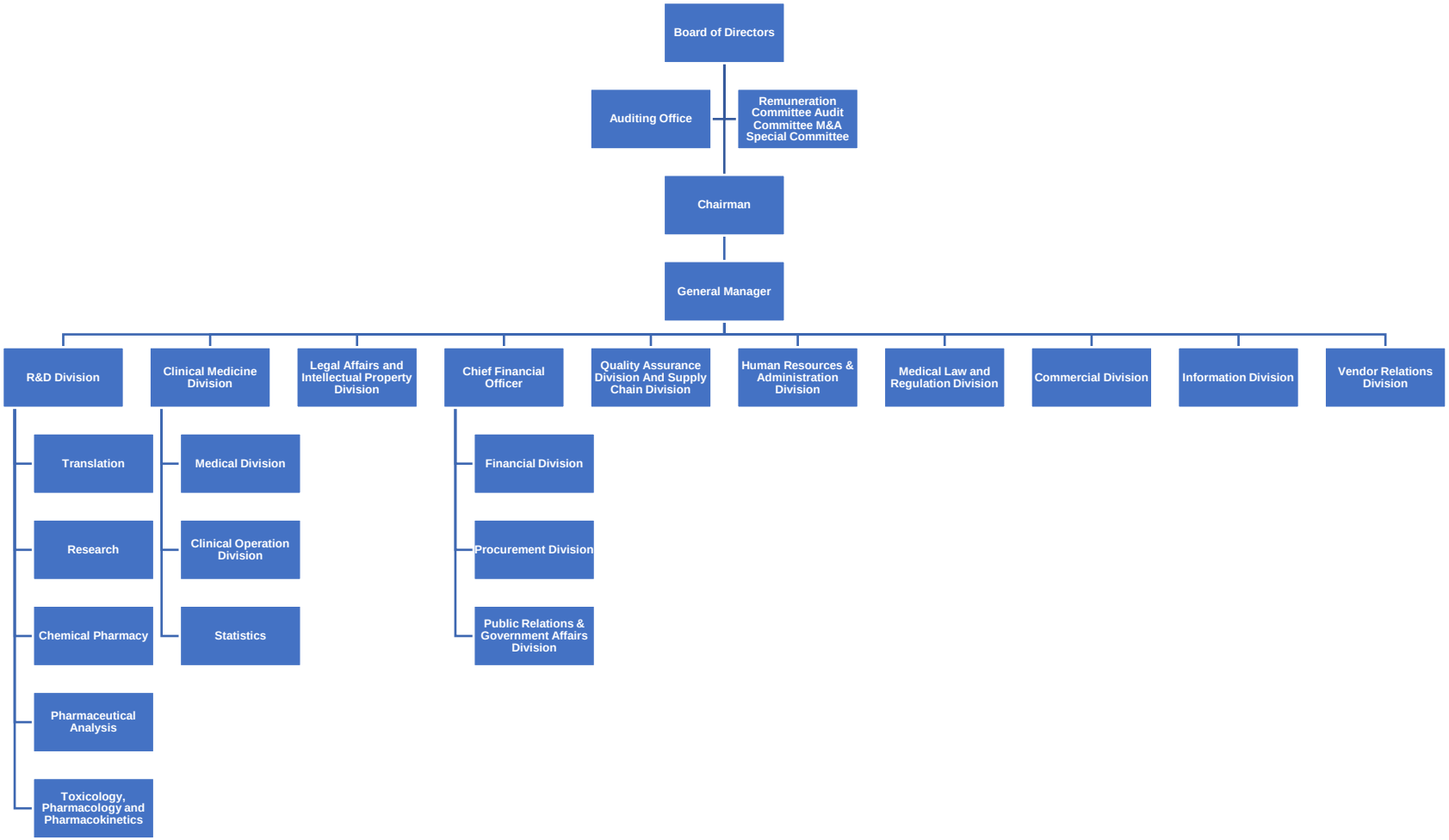
	molecule drug complex called ADC) are the first to be developed. Their mechanism of action, antineoplastic efficacy, drug metabolism and pharmacokinetic characteristics are also discussed. ● In April, OBI-822 (Adagloxad Simolenin) was approved by Ministry of Health of the Russian Federation to carry out phase III human clinical trial.

III. Corporate Governance Report

i Organization system

(i) Organizational chart

OBI Pharma, Inc.



(ii) Operating business of each major department:

Department		Major responsibility
Auditing Office		1. Supervise and urge each unit to formulate internal control system and execute it. 2. Prepare and execute annual audit plan. 3. Prepare audit report and regularly trace deficiency, review self-inspection operations and other matters shall be executed as required by law of each unit.
R&D Division	Translation	1. Plan and execute translational cancer mechanism study, and support clinical trial and medicament license application. 2. Execute translational medicine, translational pharmacology and toxicity test, and support clinical trial. 3. Plan R&D direction and new drug development plan. 4. Execute new drug R&D project management. 5. Patent layout of research achievements.
	Research	1. Plan and execute trials related to pre-clinical immunology and immunological pharmacology. 2. Plan and manage relevant studies on clinical trial specimens. 3. Execute product release immune activity test. 4. Support clinical license application and medicament license application. 5. Patent layout of research achievements.
	Chemical Pharmacy	1. Development and design of synthetic method and dosage form. 2. Process parameter and process optimization study. 3. Planning of manufacturing, process control and outsourcing cooperation project. 4. Product CMC data preparation and writing, so as to support clinical license application and medicament license application. 5. Patent layout of research achievements.
	Pharmaceutical Analysis	1. New drug characteristics analysis and analysis method development. 2. Creation of analysis method operation document and execution of effect experiment. 3. Product specification setting. 4. Investigational product quality control and stability tracing. 5. Patent layout of research achievements.
	Toxicology, Pharmacology and Pharmacokinetics	1. Plan and execute pre-clinical toxicology, pharmacology and pharmacokinetics tests. 2. Write pre-clinical test report, and support clinical trial license application and medicament license application. 3. Development of analytical methods for pharmacological animal model and drug metabolism. 4. Assist in management of new drug development project. 5. Patent layout of research achievements.
Clinical Medicine Division	Medical Division	1. Lead and write new drug clinical trial protocol, and confirm its feasibility. 2. Provide relevant information on medical science and drug side effects, and responsible for pre-clinical preparation and execution; during such period, interpret if the trial subject has the symptom of adverse reaction.

		3. Support the promotion of new drug business.
	Clinical Operation Division	1. Clinical trial planning and execution. 2. Study on the laws and regulations on new drug development and drug examination and approval. 3. Product plan project management.
	Statistics	1. Provide statistical specialty and planning for clinical development. 2. Lead statistical analysis and explain the analysis results. 3. Support the negotiation with Food and Drug Administration. 4. Support the publication of clinical results.
Legal Affairs and Intellectual Property Division		1. Review, revise and draft contracts and legal documents. 2. Legal system establishment, maintenance and process management. 3. Legal dispute case handling and consultation. 4. Intellectual property right management and maintenance. 5. Establishment and promotion of legal compliance system. 6. Control of legal risks related to company operation.
Chief Financial Officer	Financial Division	1. Financial management. 2. Accounting management. 3. Listing and stock affairs management. 4. Rental tax planning. 5. Budget management.
	Procurement Division	Materials and labor service procurement.
	Public Relations & Government Affairs Division	1. Preparation and publication of external speech strategy. 2. Media relations management, media interview, publication, advertising arrangement and execution. 3. Maintenance and contact window for relations with government, profession, those of the same industry, patients group and investors. 4. Design and comprehensive arrangement of external statement, media related contents, official documents and correspondence, planning and event creativity. 5. Planning and execution of corporate social responsibility activity.
Quality Assurance Division And Supply Chain Division		1. Ensure R&D and drug distribution are conforming to the Food and Drug Administration (FDA). 2. Current Good Manufacturing Practice (cGMP) 3. Responsible for production planning, technology transfer and provide supply to clinical use or marketing sales. 4. Ensure the Company's stable supply of clinical and future products both at home and abroad.
Human Resources & Administration Division		1. Comprehensive arrangement of company organization and human resources planning, employee development. 2. Remuneration rewarding system. 3. Organization optimization and improve employee's quality and core technology. 4. Organizational culture cultivation. 5. Human resources system optimization. 6. Strengthen employee relationship. 7. General affairs administration, and space utilization.

Medical Law and Regulation Division	1. Application for registration of domestic medicament license. 2. Provide company pharmaceutical affairs laws and regulations information. 3. Application and change registration of druggist license. 4. Clinical license application and medicament license application. ◦
Commercial Division	1. Responsible for short, medium and long term operating strategy planning, business marketing, and new drug market development. 2. Product commercialization management. 3. Product market trend assessment. 4. Technology transfer and product licensing. 5. Win over international partner.
Information Division	1. Follow the operation and development strategy to plan and develop the information blueprint and structure. 2. Formulate information budget plan, and control and monitor budget outlays. 3. Establish information policies, standards and procedures. 4. Develop information performance indicator, ensure the benefits of effective assessment information program in business improvement. 5. Plan and implement the Information Security Management System. 6. Design and implement information security solution, and protect the confidentiality, integrity and availability of information assets.
Vendor Relations Division	1. Work out and optimize various internal standard operation procedures of the company regarding vendor relations. 2. Execution and management of vendor relations maintenance. 3. Guide internal interdepartmental communication of the company regarding vendor relations. 4. Assist in management of grading vendor relations.

ii Information on board of directors, supervisor, General Manager, vice presidents, directors, and the department heads

(i) Board of directors and supervisors

1. Board of directors and supervisor:

April 30, 2019 Unit: thousand shares; %

Title	Name	Gender	Nationality or place of registration	Date of first appointment	Date of appointment	Term of office	Shareholding upon appointment		Current shareholding		Current shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background)	Concurrent title in the Company or other companies currently	Other head, director or supervisor of relationship of spouse or within second-degree relatives or supervisor		
							Number of shares	(thousand shares)	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio			Title	Name	Relationship
Chairman	Yi Tai Investment Co., Ltd.	Not applicable	ROC	June 27, 2016	June 27, 2016	3 years	25,765	15.05	25,765	14.88	0	0	0	0	Not applicable	NA	NA	NA	NA
	Yi Tai Investment Co., Ltd. Representative: Michael N. Chang	Male	ROC	June 27, 2016	June 27, 2016	3 years	0	0	2,361	1.36	0	0	5,536	3.20	Postdoctoral Research, Massachusetts Institute of Technology Doctor of Organic Chemistry, Brandeis University Founder and Chairman of Optimer Pharmaceuticals, Inc.	Director of Amaran Biotechnology, Inc. Director of OBI Pharma USA, Inc. Director of Ansun Biopharma, Inc.	NA	NA	NA
Vice Chairman	Yi Tai Investment Co., Ltd. Representative: Tamon Tseng	Male	ROC	June 27, 2016	June 27, 2016	3 years	0	0	0	0	0	0	0	0	Master of Laws, University College London Supervisor of SinoPac Financial Holdings Co., Ltd	Special Assistant of Legal Affairs Office, Ruentex Industries Ltd. Juridical Person Director Representative of TaiMed Biologics Co., Ltd. Juridical Person Director Representative of Amaran Biotechnology, Inc. Juridical Person Director Representative of Mithra Biotechnology Inc. Juridical Person Director Representative of Run Hui Biotechnology Co., Ltd. Juridical Person Director Representative of Run Cheng Investment Holding Co., Ltd. Juridical Person Director Representative of Sunny Friend Environmental Technology Co., Ltd.	NA	NA	NA

Title	Name	Gender	Nationality or place of registration	Date of first appointment	Date of appointment	Term of office	Shareholding upon appointment		Current shareholding		Current shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background)	Concurrent title in the Company or other companies currently	Other head, director or supervisor of relationship of spouse or within second-degree relatives or supervisor		
							Number of shares	(thousand shares)	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio			Title	Name	Relationship
																Juridical Person Supervisor Representative of Yi Thai Investment Co., Ltd. Juridical Person Director Representative of Sheng Cheng Investment Co., Ltd. Juridical Person Director Representative of Ruentex Construction Co., Ltd. Chairman of Taiwan Transport Insurance Service Co., Ltd. Director of China Marine Surveyors & Sworn Measurers` Corp. Director of Juridical Person Mr. Yi Xunnuo Memorial Education Foundation Juridical Person Director Representative of Hao Ke Investment Holding Co., Ltd. Juridical Person Director Representative of Nan Shan Life Insurance Co., Ltd.				
Director	Sheng Cheng Investment Co., Ltd.	Not applicable	ROC	June 27, 2016	June 27, 2016	3 years	250	0.15	250	0.14	0	0	0	0	Not applicable	NA	NA	NA	NA
Director	Sheng Cheng Investment Co., Ltd. Representative: Lung-Yen Cho	Male	ROC	June 27, 2016	June 27, 2016	3 years	0	0	0	0	267	0.15	0	0	Accounting Department, National Taipei University Certified Public Accountant of Klynveld Peat Marwick Goerdeler Certified Public Accountant of Deloitte & Touche	Special Assistant to President, Hui Hong Investment Co., Ltd. Juridical Person Director Representative of TaiMed Biologics Co., Ltd. Juridical Person Director Representative of British Cayman Islands Ruenvex Biotech, Inc. Juridical Person Director	NA	NA	NA

Title	Name	Gender	Nationality or place of registration	Date of first appointment	Date of appointment	Term of office	Shareholding upon appointment		Current shareholding		Current shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background)	Concurrent title in the Company or other companies currently	Other head, director or supervisor of relationship of spouse or within second-degree relatives or supervisor		
							Number of shares	(thousand shares)	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio			Title	Name	Relationship
																Representative of Tai Fu Biotechnology Co., Ltd. Supervisor of Run Hui Biotechnology Co., Ltd. Juridical Person Director Representative of British Cayman Islands RenBio Holdings Limited Juridical Person Director Representative of American RenBio Inc. Juridical Person Director Representative of Nan Shan Life Insurance Co., Ltd. Juridical Person Director Representative of Run Cheng Investment Holding Co., Ltd.			
Director	Sheng Cheng Investment Co., Ltd. Representative: Frank Chen	Male	ROC	June 27, 2016	June 27, 2016	3 years	0	0	800	0.46	20	0.01	0	0	Master degree from Graduate Institute of Business Administration, National Taiwan University Deputy General Manager of Investment and Special Assistant to President, Management Division, Ruentex Group	Juridical Person Director Representative of TaiMed Biologics Co., Ltd. Juridical Person Director Representative of Taiwan Tai Fu Biotechnology Co., Ltd. Juridical Person Chairman Representative of Tanvex Biologics, Inc Chairman of TMB HK Services Limited Juridical Person Chairman Representative of TaiMed Biologics HK Limited Director of Juridical Person Mr. Yi Xunnuo Memorial Education Foundation Director of Yi ShuTien Medical Foundation Juridical Person Director Representative of Mithra Biotechnology Inc. Juridical Person Director Representative of Mass Solutions Technology	NA	NA	NA

Title	Name	Gender	Nationality or place of registration	Date of first appointment	Date of appointment	Term of office	Shareholding upon appointment		Current shareholding		Current shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background)	Concurrent title in the Company or other companies currently	Other head, director or supervisor of relationship of spouse or within second-degree relatives or supervisor		
							Number of shares	(thousand shares)	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio			Title	Name	Relationship
																Inc. Director representative of Amaran Biotechnology, Inc. Juridical Person Director Representative of Diamond Biotechnology Investment Co., Ltd. Juridical Person Director Representative of Diamond Capital Management Co., Ltd. Juridical Person Director Representative of Xin Yao Biotechnology Investment Co., Ltd. Juridical Person Director Representative of CHO Pharma Inc. Juridical Person Director Representative of Cotton Field Organic Co., Ltd. Partner of Delos Capital			
Independent Director	Jerry Fong	Male	ROC	July 23, 2014	June 27, 2016	3 years	0	0	0	0	0	0	0	0	Jurum Doctor of Cornell University Master of Laws of Pennsylvania State University President of Intellectual Property Institute, Director of Financial Law Research Center, College of Law, National Chengchi University	Adjunctive Professor, NCCU Graduate Institute of Technology, Innovation & Intellectual Property Management Independent Director, Remuneration and Audit Committee Member of ESC EliteGroup Co., Ltd. Independent Director, Remuneration and Audit Committee Member of Cayman merchant Eurocharm Holdings Co., Ltd. Independent Director, Remuneration and Audit Committee Member of Chien Kuo Construction Co., Ltd.	NA	NA	NA
Independent Director	Tony Chang	Male	ROC	July 23, 2014	June 27, 2016	3 years	0	0	0	0	0	0	0	0	Microbiology and Immunology Doctor of Temple University Distinguished Research Fellow of National Institutes of Health	Honorary Research Fellow of National Institutes of Health Distinguished Consultant	NA	NA	NA

Title	Name	Gender	Nationality or place of registration	Date of first appointment	Date of appointment	Term of office	Shareholding upon appointment		Current shareholding		Current shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background)	Concurrent title in the Company or other companies currently	Other head, director or supervisor of relationship of spouse or within second-degree relatives or supervisor		
							Number of shares	(thousand shares)	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio	Number of shares (thousand shares)	Shareholding ratio			Title	Name	Relationship
															Chairman of Feng Chia University Adjunctive Professor of Institute of Microbiology and Immunology, National Yang-Ming University	of Feng Chia University Honorary professor of Institute of Microbiology and Immunology, National Yang-Ming University			
Independent Director	Taychang Wang	Male	ROC	June 27, 2016	June 27, 2016	3 years	0	0	0	0	0	0	0	0	PhD in Finance graduated from Wharton School, Pennsylvania State University Distinguished Professor of National Taiwan University Associate Professor of Accounting Department, National Taiwan University	Professor of National Taiwan University Independent Director, Remuneration and Audit Committee Member of RUENTEX GROUP Independent Director, Remuneration and Audit Committee Member of TaiMed Biologics Inc.	NA	NA	NA

2. If director or supervisor is juridical person shareholder representative, the share proportion of such juridical person shareholder exceeds ten percent or list of shareholders of top ten share proportion:

(1) Major shareholders of juridical person shareholder

Base date: April 30, 2019

Name of juridical person shareholder	Major shareholders of juridical person shareholder	Shareholding ratio%
Yi Tai Investment Co., Ltd.	Ren Ying Industrial Co., Ltd.	85.10
	Ruentex Xing Co., Ltd.	14.90
Sheng Cheng Investment Co., Ltd.	Run Hua Dyeing Factory Co., Ltd.	48.98
	Ren Ying Industrial Co., Ltd.	23.81
	Ying Jia Investment Co., Ltd.	17.31
	Hui Hong Investment Co., Ltd.	9.90

(2) When major shareholders of juridical person shareholder are juridical person, major shareholders thereof

Base date: April 30, 2019

Name of juridical person	Major shareholders of juridical person	Shareholding ratio %
Run Hua Dyeing Factory Co., Ltd.	Ruentex Xing Co., Ltd.	19.55
	Ren Ying Industrial Co., Ltd.	19.14
	Changchun Investment Co., Ltd.	18.44
	Hui Hong Investment Co., Ltd.	17.96
	Yi Yanliang	13.70
	Wang Qifan	6.55
	Juridical Person Mr. Yi Xunnuo Memorial Education Foundation	4.40
	Yi Chong'en	0.26
Hui Hong Investment Co., Ltd	Run Hua Dyeing Factory Co., Ltd.	63.53
	Ruentex Xing Co., Ltd.	19.93
	Yi Tai Investment Co., Ltd.	16.54
Ren Ying Industrial Co., Ltd.	Yi Yanliang	92.86
	Wang Qifan	7.14
Ruentex Xing Co., Ltd.	Yi Yanliang	99.997
	Wang Qifan	0.003
Ying Jia Investment Co., Ltd	Changchun Investment Co., Ltd.	75.86
	Run Hua Dyeing Factory Co., Ltd.	24.14

3. Professional knowledge possessed by director and supervisor, and their independence

April 30, 2019

Condition / Name	Whether or not with over five years of work experience and the following professional qualifications			Independence conformance (notes 1)										Number of other public companies in which concurrently act as independent director
	Lecturer or above in the department of commercial affairs, legal affairs, financial affairs, accounting or those related company business in public and private colleges and universities	Judge, procurator, lawyer, accountant, or other professional and technical personnel having passed national examination and acquired certificate necessary for company business	Work experience in commercial affairs, legal affairs, financial affairs, accounting or necessary for company business	1	2	3	4	5	6	7	8	9	10	
Yi Tai Investment Co., Ltd. Representative: Michael N. Chang			✓	✓			✓	✓		✓	✓	✓		-
Yi Tai Investment Co., Ltd. Representative: Tamon Tseng			✓	✓		✓	✓		✓	✓	✓	✓		-
Sheng Cheng Investment Co., Ltd. Representative: Lung-Yen Cho		✓	✓	✓		✓	✓		✓	✓	✓	✓		-
Sheng Cheng Investment Co., Ltd. Representative: Frank Chen			✓	✓		✓	✓		✓	✓	✓	✓		-
Jerry Fong	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3
Tony Chang			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
Taychang Wang	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2

Notes 1: If each director or supervisor is conforming to the following conditions two years before appointment and during the term of office, please tick "✓" in the blank below the code of each condition

(1) Not the employee of the company or its affiliated enterprise.
(2) Not the director or supervisor of the company or its affiliated enterprise (except for the independent director set by the company or its parent company or subsidiary pursuant to this Act or local laws and decrees).
(3) Natural person shareholder holding over one percent of the total issued shares of the company or being the top ten shareholders not in the name of himself/herself and his/her spouse, minor children or other persons.
(4) Not the spouse, relatives within second degree or direct lineal relatives within third degree of the personnel listed in preceding three paragraphs.
(5) Not the director, supervisor or employee of the juridical person shareholder directly holding over five percent of total issued shares of the company; nor the director, supervisor or employee of the top five shareholding juridical person shareholder.
(6) Not the director, supervisor, manager or shareholder holding over five percent of shares of the specific company or institution having financial or business transactions with the company.
(7) Not the professional providing commercial, legal, financial or accounting etc. service or consultancy to the company or its affiliated enterprise; nor the entrepreneur, partner, director, supervisor, manager and its spouse of the sole proprietorship, partnership, company or institution. Except for the member of Remuneration Committee performing functions and powers according to Article 7 of "Measures for Establishment of Company Remuneration Committee upon Going Public or Transaction in Business Place of Securities Dealer and Exercising Functions and Powers"
(8) Not having spouse relationship or relatives relationship within second degree with other directors.
(9) Not one of the circumstances as prescribed in Article 30 of Company Act.
(10) The government, juridical person or its representative is not appointed pursuant to Article 27 of Company Act.

(ii) Information of General Manager, Deputy General Manager, Assistant General Manager, and head of each department and branch

April 30, 2019 Unit: thousand shares; %

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
General Manager	Amy Huang	Female	ROC	102.04	272	0.16	0	0	0	0	Department of Pharmacy, National Taiwan University Global Vice President and Director in China and Hong Kong Region, Global Vice President and Director in Taiwan Region, Dutch GlaxoSmithKline Pharmaceutical Factory Co., Ltd (GSK) General Manager, Marketing Director of SmithKline Beecham (SB) Product Registration and Marketing Manager of Sheng Qiang Industrial Co., Ltd.	Director of OBI Pharma Limited	NA	NA	NA
Chief Scientific Officer and Executive Vice President	Tony Yu	Male	ROC	January 2012	833	0.48	50	0.03	0	0	Doctor of Pharmacy of University of Michigan Doctor of Clinical Pharmacy of University of Florida General Manager of New Drug Business Department, Chief Scientific Officer, MICROBIO Co., Ltd.	Juridical Person Director Representative of AP Biosciences, Inc.	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
											President, Chief Scientific Officer, Director and Co-founder of Canyon Pharmaceuticals Inc. Deputy Director of Bristol Myers Squibb Institute Director and Chairman of Hong Kong YU Enterprises, Ltd.				
Chief Financial Officer	Max Chan	Male	ROC	January 2017	0	0	0	0	0	0	MBA from University of Illinois-Urbana-Champaign Master degree in finance, National Taiwan University Chief Financial Officer of JHL Biotech, Inc., a public company in Taiwan Chief Financial Officer of TaiGen Biotechnology, a listed company in Taiwan Chief Financial Officer of Himax Technologies, Inc., a listed company in US Financial Manager of Intel Capital Department of Overseas Investment, Investigation, Domestic Investment etc., China Development Industrial Bank	Supervisor of AP Biosciences, Inc.	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
Vice President, Quality Assurance	Shih, Yu-Nan	Male	ROC	April 2019	0	0	0	0	0	0	PhD in Chemistry, Cornell University Postdoctoral Research, University of Minnesota QA Deputy General Manager of ScinoPharm Taiwan, Ltd. Senior QA Deputy General Manager of EirGenix Inc.	NA	NA	NA	NA
Executive Vice President of R&D Division	Lai, Ming-Tien	Male	ROC	April 2019	0	0	0	0	0	0	Postdoctoral Research, Massachusetts Institute of Technology PhD in Bio-organic Chemistry, University of Minnesota Senior Chief Scientist, Merck Sharp & Dohme	NA	NA	NA	NA
Deputy General Manager of Statistics Division	Sophia Lee	Female	ROC	July 2016	0	0	0	0	0	0	Doctor of Biostatistics, Boston University, Massachusetts Director of Statistics of Biogen Senior Biostatistician of Center for Biostatistics in AIDS Research, Harvard School of Public Health Statistics	NA	NA	NA	NA
Vice President for Medical Affairs and Clinical	Tsai, Cheng-En	Male	ROC	July 2018	0	0	0	0	0	0	PhD in Molecular Genetics and Biology, University of Cambridge	NA	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
Research and Development											Deputy General Manager for Clinical Research and Development, TWi Biotechnology Deputy General Manager for Clinical Research and Development, TaiGen Biotechnology Senior Researcher of Center for Drug Evaluation, Taiwan Medical Advisor of Bristol-Myers Squibb Company Head of Pediatrics Department and Genetic Counseling Center, Hualien Tzu Chi Medical Center Physician-in-charge of Pediatrics Department, National Taiwan University Hospital				
Chief Legal Officer	Victoria Lin	Female	ROC	August 2018	0	0	0	0	0	0	Master of Laws, University of Cambridge Bachelor of Laws, National Taiwan University Chief Legal Officer in Taiwan, General Electric Group Chief Legal Officer of Legal Affairs and Intellectual Property Department, Yulon Group	Juridical Person Director Representative of AP Biosciences, Inc.	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
Vice President of Research, R&D Division	Jiann-Shiun Lai	Male	ROC	March, 2014	79	0.05	0	0	0	0	Doctor of Inheritance Institute, State University of New York at Stony Brook Biotechnology Pharmaceuticals and Livelihood Materials Consultant, Technology Division, Ministry of Economic Affairs Group Leader of Protein engineering Group, Biopharmaceutical Institute, Development Center for Biotechnology Researcher of Biomedical Institute, Academia Sinica Director of Corporation Taiwan Antibody Association	NA	NA	NA	NA
Director in chemical pharmacy, R&D Division	Edward Hsieh	Male	ROC	March, 2014	4	0	0	0	0	0	Doctor of Chemistry Institute, Simon Fraser University Examiner/Researcher of Center for Drug Evaluation Deputy General Manager of Ningbo Smart Pharmaceutical Co., Ltd. Researcher of Industrial Technology Research Institute	NA	NA	NA	NA
Business Information	Pedro Chen	Male	ROC	March 2016	0	0	0	0	0	0	Graduated from Department of	NA	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
Director, Commercial Division											Pharmacy, China Medical University Head of Infectious Disease Unit, Taiwan GlaxoSmithKline Pharmaceutical Factory				
Director, Public Relations & Government Affairs	Sharon Lee	Female	ROC	March, 2016	26	0.01	15	0.01	0	0	MSc Public Health Research, Tulane University Media Director of Show Chwan Health Care System Secretary General of Cross-Strait Health Care and Leisure Activities Association Director of Life and Comprehensive News Center, Min Sheng Daily Deputy Editor-in-Chief of Europe Journal	Lecturer of The Graduate Institute of Journalism, National Taiwan University	NA	NA	NA
Director of Supply Chain Division	Tyro Shyu	Male	ROC	August 2017	0	0	0	0	0	0	Master of Chemical Engineering, Syracuse University Bachelor of Chemical Engineering, National Taiwan University Director of Biotechnology Service Division, Pfizer	NA	NA	NA	NA
Senior Manager,	Neo Chien	Male	ROC	March, 2011	0	0	0	0	0	0	Master of Business	NA	NA	NA	NA

Title	Name	Gender	Nationality	Date of appointment (duty assumption)	Shareholding		Shareholding of spouse, minor children		Shareholding in the name of other person		Major experience (education background) (notes 2)	Concurrent title in other companies currently	Manager of spouse relationship or relationship within second-degree relatives		
					Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio			Title	Name	Number of shares
Auditing Office											Administration, National Chengchi University Bachelor of Department of Economics, National Chung Hsing University Deputy General Manager of Auditing Department, Start Travel Co., Ltd. Deputy General Manager, Auditing Office, Partyworld KTV Co., Ltd. Auditing Department of Deloitte & Touche				
Accounting Manager of Financial Division	Colin Kao	Male	ROC	October 2017	0	0	0	0	0	0	Master of Accounting, National Chengchi University Accountant in Taiwan and Britain Accounting Director of Far Eastern International Leasing Corp. Accounting Director of KHS Assistant Manager of Deloitte & Touche	NA	NA	NA	NA

(iii) Remuneration of Director, Supervisor, General Manager and Deputy General Manager

1. Remuneration paid to the Director in the last year (2018)

Unit: NT$thousand

Title	Name	Director remuneration								Proportion of total amount of A, B, C and D in net profit after tax (%)		Relevant remuneration received by part-time employee								Proportion of total amount of A, B, C, D, E, F and G in net profit after tax (%)		Whether or not received remuneration from reinvestment enterprise other than the subsidiary
		Remuneration (A)		Retirement pension (B)		Reward in surplus distribution (C)		Business execution costs (D)				Salary, bonus and special disbursement etc. (E)		Retirement pension (F)		Employee remuneration (G)						
																The Company		All companies in financial report				
		The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	Cash amount	Stock amount	Cash amount	Stock amount	All companies in financial report	The Company	
Chairman	Yi Tai Investment Co., Ltd. Representative: Michael N. Chang	2,508	2,508	-	-	-	-	35	35	(0.21)	(0.20)	-	-	-	-	-	-	-	-	(0.21)	(0.20)	NA
Vice Chairman	Yi Tai Investment Co., Ltd. Representative: Tamon Tseng	-	-	-	-	-	-	40	40	-	-	-	-	-	-	-	-	-	-	-	-	NA
Director	Sheng Cheng Investment Co., Ltd. Representative: Lung-Yen Cho	-	-	-	-	-	-	40	40	-	-	-	-	-	-	-	-	-	-	-	-	NA
Director	Sheng Cheng Investment Co., Ltd. Representative: Frank Chen	-	-	-	-	-	-	40	40	-	-	-	-	-	-	-	-	-	-	-	-	NA
Independent Director	Tony Chang	600	600	-	-	-	-	80	80	(0.06)	(0.05)	-	-	-	-	-	-	-	-	(0.06)	(0.05)	NA

Independent Director	Jerry Fong	600	600	-	-	-	-	40	40	(0.05)	(0.05)	-	-	-	-	-	-	-	-	(0.05)	(0.05)	NA
Independent Director	Taychang Wang	600	600	-	-	-	-	80	80	(0.06)	(0.05)	-	-	-	-	-	-	-	-	(0.06)	(0.05)	NA
Apart from those disclosed in the above table, the remuneration received by company directors for providing service to all companies in financial report in recent years (such as taking a post as an adviser other than an employee etc.): N.A.																					

2. Remuneration of supervisor in the last year (2018): not applicable

3. Remuneration paid to General Manager and Vice President in the last year (2018):

Unit: NT$thousand

Title	Name	Salary (A)		Retirement pension (B)		Bonus and special disbursement etc. (C)		Amount of employee remuneration (D)				Proportion of total amount of A, B, C and D in net profit after tax (%)		Whether or not received remuneration from reinvestment enterprise other than the subsidiary
		The Company	All companies in financial report	The Company	All companies in financial report	The Company	All companies in financial report	The Company		All companies in financial report		The Company	All companies in financial report	
								Cash amount	Stock amount	Cash amount	Stock amount			
General Manager	Amy Huang	37,657	37,657	0	0	62,974	62,974	0	0	0	0	(8.23)	(8.05)	NA
Vice Chairman	Max Chan													
Chief Scientific Officer and Executive Vice President	Tony Yu													
Vice President, Quality Assurance	Richard Tseng													
Vice President, Statistics and Biometrics	Sophia Lee													
Vice President of Research, R&D Division	Jiann-Shiun Lai													
Vice President for Medical Affairs and Clinical Research and Development	Tsai, Cheng-En													
Chief Legal Officer	Victoria Lin													
Medical Division (Resigned)	Cristina Chang													

Notes: including the acquisition of employee stock option certificate, and salary expense (non-cash charges) recognized in "Share-based Payment" according to IFRS 2

Remuneration Numerical Range Table

Numerical range of remuneration paid to each General Manager and Deputy General Manager of the Company(Notes)	Name of General Manager and Deputy General Manager	
	The Company	All companies in financial report
Below NT$2,000,000	Victoria Lin、Cristina Chang	Victoria Lin、Cristina Chang
NT$2,000,000 (inclusive) ~ NT$5,000,000 (exclusive)	Tsai, Cheng-En	Tsai, Cheng-En
NT$5,000,000 (inclusive) ~ NT$10,000,000 (exclusive)	Sophia Lee	Sophia Lee
NT$10,000,000 (inclusive) ~ NT$15,000,000 (exclusive)	Tony Yu, Richard Tseng, Jiann-Shiun Lai	Tony Yu, Richard Tseng, Jiann-Shiun Lai
NT$15,000,000 (inclusive) ~ NT$30,000,000 (exclusive)	Amy Huang, Max Chan	Amy Huang, Max Chan
NT$30,000,000 (inclusive) ~ NT$50,000,000 (exclusive)	NA	NA
NT$50,000,000 (inclusive) ~ NT$100,000,000 (exclusive)	NA	NA
Above NT$100,000,000	NA	NA
Total	9 persons	9 persons

Notes: including the acquisition of employee stock option certificate, and salary expense (non-cash charges) recognized in "Share-based Payment" according to IFRS 2

(iv) Name of manager distributed with employee bonus and distribution circumstance: NA

(v) Make respective comparison analysis on the proportion of total remuneration paid to the directors, supervisors, General Managers, Deputy General Managers of the Company in the last two years by the Company and all companies in consolidated statement in the net profit after tax of individual and consolidated financial report, and describe the policy, standard and combination of remuneration payment, procedures of determining remuneration and its relevance to operation performance and future risk:

The standard or structure and system of the Company in paying remuneration to the director, General Manager and Deputy General Manager will be adjusted according to the future risk factors, and it shall not guide director and General Manager to engage in the action increasing company risk for the pursuit of remuneration, so as to avoid losses of the Company after paying remuneration. Relevant earnings distributions are explicitly stipulated in the Articles of Incorporation, and the payment of director and supervisor remuneration shall be handled pursuant to the provisions of Company Act. Remuneration of General Manager includes salary, bonus and employee bonus etc., and it will be handled according to relevant remuneration system of the Company, the remuneration paid to the directors and supervisors by the Company gives consideration to their participation degree and contribution value in company operation.

Unit: NT$ thousand

Annual remuneration / Company type	2017		2018	
	Total remuneration paid to director, General Manager and Deputy General Manager of the Company	Proportion of net profit after tax(%)	Total remuneration paid to director, General Manager and Deputy General Manager of the Company	Proportion of net profit after tax(%)
The Company	123,244	(8.93)	103,494	(8.47)
All companies in consolidated statement	123,244	(8.93)	103,494	(8.28)

Notes: Total remuneration includes the acquisition of employee stock option certificate, and salary expense recognized in "Share-based Payment" according to IFRS 2

iii Corporate governance operation situation

(i) Board of Directors operation situation

8 (A) Board of Directors meetings were convened in 2018, attending situations of directors are as follows:

Title	Name	Actual attendance times (B)	Delegated attendance Times	Actual attendance rate (%) [B/A]	Notes
Chairman	Yi Tai Investment Co., Ltd. Representative: Michael N. Chang	7	1	86	
Vice Chairman	Yi Tai Investment Co., Ltd. Representative: Tamon Tseng	8	0	100	
Director	Sheng Cheng Investment Co., Ltd. Representative: Lung-Yen Cho	8	0	100	
Director	Sheng Cheng Investment Co., Ltd. Representative: Frank Chen	8	0	100	
Independent Director	Jerry Fong	5	3	63	
Independent Director	Tony Chang	8	0	100	
Independent Director	Taychang Wang	8	0	100	

Other matters should be recorded:

1. For matters specified in 3 of Article 14 of Securities Exchange Act, and other resolutions of Board of Directors which independent director opposes or reserves opinion and with record or written statement, the date of Board of Directors, stage, proposal content, opinions of all independent directors, and the Company's handling of independent directors' opinion shall be specified

Date of the meeting: (Stage)	Proposal contents	Opinion of independent director and handling situation of the Company
January 19, 2018 (The 10th meeting of the fifth session)	Revise internal control system of the Company.	Approved and passed by all independent directors.
March 9, 2018 (The 11th meeting of the fifth session)	Revise internal control system of the Company.	
April 20, 2018 (The 12th meeting of the fifth session)	The Company plans to participate in the cash capital increase of the subsidiary, AP Biosciences, Inc.	
May 11, 2018 (The 13th meeting of the fifth session)	Long-term fund-raising is planned and will be handled by private placement through capital increase in ordinary shares or capital increase in ordinary shares by the issuance of global depository receipts. The Company changes the certified public accountants according to internal adjustment of the accounting firm.	
November 9, 2018 (The 16th meeting of the fifth session)	Amendments to the “Regulations Governing the Acquisition and Disposal of Assets” of the Company.	

	November 30, 2018 (The 17th meeting of the fifth session)	The Company plans to carry out cash capital increase.		
	March 8, 2019 (The 18th meeting of the fifth session)	Determine the base date for decrease of capital by canceling the treasury shares of the Company. The Company changes the certified public accountants according to internal adjustment of the accounting firm. Amendments to the "Regulations Governing the Acquisition and Disposal of Assets" of the Company. Revise internal control system of the Company.		
	April 19, 2019 (The 19th meeting of the fifth session)	Amendments to the "Procedures of Granting of Loans" of the Company. Amendments to the "Procedures of Making Endorsement and Guarantee" of the Company.		

2. For the director's avoidance of proposal with conflict of interest, the name of director, proposal content, reason for conflict of interest and participation in voting shall be specified：NA
3. The objective of strengthening the functions and powers of Board of Directors (such as setting Audit Committee, improving information transparency etc.) in the current and last year and assessment on execution situation:
   1. The Company has become OTC on March 23, 2015, all operations of Board of Directors shall be handled according to relevant laws and regulations. In order to strengthen corporate governance, the Company has established the M&A Special Committee with three independent directors on January 18, 2017.
   2. The Company sets three independent directors, namely Dr. Jerry Fong, Dr. Tony Chang and Dr. Taychang Wang respectively, who have abundant professional capabilities and experience in the fields of law and intellectual property, biomedical research and development, accounting and finance etc., and will provide good suggestions on relevant proposals of Board of Directors and company operations.
   3. All members of current Board of Directors of the Company have taken refresher courses related to corporate governance.
   4 In order to regularly review the efficiency of Board of Directors, the Company has formulated Board of Directors Performance Assessment Measures and its assessment method in 2016. Assessment on internal performance of Board of Directors of the Company in 2018 has completed before the end of 2018. Besides, assessment on external performance of Board of Directors once every three years was completed by Taiwan Corporate Governance Association on January 25, 2019, and the assessment results were reported to the Board of Directors meeting in the first quarter of 2019 and published at company website.
   5. PwC Taiwan is appointed for auditing and certifying the financial reports of the Company, all information disclosures as required by laws and decrees are completed accurately in due time, and dedicated person is designated to be responsible for collection and disclosure of company information. Spokesman system is established to ensure timely and proper disclosure of important information. Apart from the linkage to mops.twse.com.tw, the website of the Company will also timely update relevant activities, announcements and financial information for the sake of reference by shareholders and interested parties on financial business related information.

(ii) Operation situation of Audit Committee or supervisor's participation in Board of Directors:

1. Operation situation of Audit Committee: 7 (A) Audit Committee meetings were convened in 2018, attending situations of independent directors are as follows:

Title	Name	Actual attendance times (B)	Delegated attendance times	Actual attendance rate (%) (B/A) (notes)	Notes
Chairperson	Jerry Fong	5	2	71	
Committee member	Tony Chang	7	0	100	

Committee member	Taychang Wang	7	0	100	

Other matters should be recorded:

1. For matters listed in 5 of Article 14, Securities Exchange Act and other resolution matters not passed by Audit Committee but agreed by more than two third of all directors, the date of Board of Directors, stage, proposal content, resolution results of Audit Committee, and the Company's handling of Audit Committee's opinion shall be specified:

Date of the meeting: (Stage)	Proposal contents	Opinions of all independent directors and the company's handling of independent directors' opinion
January 19, 2018 (The 9th meeting of the second session)	Revise internal control system of the Company.	Approved and passed by all independent directors.
March 9, 2018 (The 10th meeting of the second session)	2017 financial report Revise internal control system of the Company.	
April 20, 2018 (The 11th meeting of the second session)	The Company plans to participate in the cash capital increase of the subsidiary, AP Biosciences, Inc.	
May 11, 2018 (The 12th meeting of the second session)	2018 financial report (the first quarter). The Company intends to carry out long-term fund-raising plan. The Company changes the certified public accountants according to internal adjustment of the accounting firm.	
August 10, 2018 (The 13th meeting of the second session)	2018 financial report (the second quarter)	
November 9, 2018 (The 14th meeting of the second session)	2018 financial report (the third quarter) Amendments to the “Regulations Governing the Acquisition and Disposal of Assets” of the Company.	
November 30, 2018 (The 15th meeting of the second session)	The Company plans to carry out cash capital increase.	
March 8, 2019 (The 16th meeting of the second session)	2018 financial report. Determine the base date for decrease of capital by canceling the treasury shares of the Company. The Company changes the certified public accountants according to internal adjustment of the accounting firm. Amendments to the “Regulations Governing the Acquisition and Disposal of Assets” of the Company. Revise internal control system of the Company.	
April 19, 2019 (The 17th meeting of the second session)	Amendments to the “Procedures of Granting of Loans” of the Company. Amendments to the “Procedures of Making Endorsement and Guarantee” of the Company.	

2. For the independent director's avoidance of proposal with conflict of interest, the name of independent director, proposal content, and reason for conflict of interest and participation in voting shall be specified: NA
3. Communication circumstances (shall include the major matters, method and result etc. of communication regarding financial and business situations of the company) between independent director and internal audit supervisor and accountant.

Date	Communication method	Communication object	Communication matter	Communication result
2018.03.09	Audit	Internal audit	Internal audit supervisor's progress report	Noted

	Committee	supervisor	according to annual audit plan.	
		Accountant	PwC Taiwan's report on the completion stage of auditing 2017 closing statements and consolidated financial reports and the communication matters with governance units.	Noted
	Board of Directors	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Internal audit supervisor	Acknowledgment of 2017 "Internal Control System Statement" of the Company.	Noted
		Accountant	PwC Taiwan's report on the completion stage of auditing 2017 closing statements and consolidated financial reports and the communication matters with governance units.	Noted
2018.05.11	Audit Committee	Accountant	PwC Taiwan's report on the completion stage of auditing financial statements in the first quarter of 2018 and the communication matters with governance units.	Noted
	Board of Directors	Accountant	PwC Taiwan's report on the completion stage of auditing financial statements in the first quarter of 2018 and the communication matters with governance units.	Noted
2018.08.10	Audit Committee	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Accountant	PwC Taiwan's report on the completion stage of auditing financial statements in the second quarter of 2018 and the communication matters with governance units.	Noted
	Board of Directors	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Accountant	PwC Taiwan's report on the completion stage of auditing financial statements in the second quarter of 2018 and the communication matters with governance units.	Noted
2018.11.09	Audit Committee	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Internal audit supervisor	Auditing Department plans to propose the 2019 audit plan of the Company.	Execute after passing the resolution of Board of Directors
		Accountant	PwC Taiwan's report on the completion stage of auditing financial statements in the third quarter of 2018 and the communication matters with governance units.	Noted
	Board of Directors	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Internal audit supervisor	Auditing Department plans to propose the 2019 audit plan of the Company.	Noted
		Accountant	PwC Taiwan's report on the completion	Noted

			stage of auditing financial statements in the third quarter of 2018 and the communication matters with governance units.	
2019.03.08	Audit Committee	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Accountant	PwC Taiwan's report on the completion stage of auditing 2018 closing statements and consolidated financial reports and the communication matters with governance units.	Noted
	Board of Directors	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
		Internal audit supervisor	2018 "Internal Control System Statement" acknowledgment.	Noted
		Accountant	PwC Taiwan's report on the completion stage of auditing 2018 closing statements and consolidated financial reports and the communication matters with governance units.	Noted
2019.04.19	Audit Committee	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted
	Board of Directors	Internal audit supervisor	Internal audit supervisor's progress report according to annual audit plan.	Noted

2. Operation situation of supervisor's participation in Board of Directors: Not applicable.

(iii) Operation situation of corporate governance and its difference from Listed Company Governance Best Practice Principles and the reason therefor:

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
1. Whether the Company has formulated and disclosed the Corporate Governance Best Practice Principles according to the "Listed Company Governance Best Practice Principles"?	✓		Currently the Company has formulated the Corporate Governance Best Practice Principles and disclosed it at the company website, besides, the Company has established Rules of Procedure for Shareholders' Meetings, Regulations Governing Procedure for Board of Directors Meetings, Procedures for Election of Directors, internal control system and all kinds of administrative measures and systems etc., so as to promote the operation of corporate governance based on that.	There is no significant difference yet.
2. Company equity structure and shareholders' rights and interests (1) Whether the Company has	✓		(1) The Company has set spokesman and acting spokesman to handle issues such as shareholders'	There is no significant difference yet.

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
formulated internal operation procedures to handle shareholders' suggestion, doubt, dispute and litigation matters, and implement it according to such procedures?			suggestion or dispute etc., if otherwise involved in legal issues, it will be transferred to Legal Department for handling.	
(2) Whether the Company has mastered the major shareholders of actual controlling company and the final controller list of major shareholders?	✓		(2) The Company has mastered the register of shareholders provided by stock affairs agency.	
(3) Whether the Company has established and executed the risk control and firewall mechanism with affiliated enterprises.	✓		(3) The Company has formulated relevant administrative measures, and will make amendment in due time in respond to the business necessity and according to the company operation and development in the future.	
(4) Whether the Company has formulated internal regulation to prohibit insider of the Company from utilizing undisclosed information for the securities transaction?	✓		(4) The Company has formulated the "Procedures for Handling Material Inside Information" to explicitly prohibit insider of the Company from utilizing undisclosed information for the securities transaction.	
3. Board of Directors' composition and responsibility				There is no significant difference yet.
(1) Whether the Board of Directors has	✓		(1) The "Procedures for Election of Directors" and "Corporate Governance Best Practice Principles" of the Company explicitly stipulate the diversity policy	

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
formulated diversified policy for the member composition and implemented it?			for composition of Board of Directors members and disclose it at company website and mops.twse.com.tw, directors of the Company have different professional backgrounds, and members of the fifth session Board of Directors possess knowledge, skills and accomplishments necessary for duty execution. Finance Law Industry Management International Michael N. Chang: V V V Tamon Tseng: V V V Lung-Yen Cho: V V V Frank Chen: V V V Jerry Fong: V V V V Tony Chang: V V V Taychang Wang: V V V	
(2) Apart from setting Remuneration Committee and Audit Committee pursuant to law, whether the Company is willing to set other functional committees?	✓		(2) Apart from setting Remuneration Committee and Audit Committee pursuant to law, the Company also set M&A Special Committee and organization regulations in 2016, and the M&A Special Committee comprising of three independent directors was established on January 18, 2017. Other corporate governance operations of the Company are handled by each department respectively according to its function and power, in the future, other committee may be set after further assessment if necessary.	
(3) Whether the Company has formulated Board of Directors Performance Assessment Measures and its assessment method, and regularly carries out performance assessment every year?	✓		(3) In order to regularly review the efficiency of Board of Directors and improve the degree of corporate governance, the Company has formulated the "Board of Directors Performance Assessment Measures" and its assessment method in 2016, and executes Board of Directors performance assessment at least once a year. Assessment on internal performance of Board of Directors in 2018 has been completed before the end of 2018. The scope of this assessment includes individual board member and Board of Directors. One is self-assessment of board members, assessment on six major aspects (including master of company objective and task, cognition of director duties, degree of participation in company operation, internal relationship operation and communication, director's profession and continuing education, internal control etc.) containing 25 items in the form of questionnaire, and all performances are good. The other is Board of Directors performance assessment, assessment on five major aspects (including degree of	

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
			participation in company operation, improvement of the quality of Board of Directors resolution, composition and structure of Board of Directors, director's election and appointment and continuing education, internal control etc.) containing 48 items in the form of questionnaire, and all performances are good. The Company will review the items with poor scores for improvement in the coming year. Besides, for the assessment on external performance of Board of Directors, which is conducted once every three years, on January 25, 2019, external institution, namely Taiwan Corporate Governance Association was appointed to carry out assessment on the efficiency of Board of Directors from December 1, 2017 to November 30, 2018, such institution assigned five assessment experts for assessment; and such institution and executing experts remained independent and had no business contact with the Company. Assessment on efficiency of Board of Directors carried out by such institution include eight major aspects, namely composition of Board of Directors, guidance, authorization, supervision, communication, internal control and risk management, self-discipline of Board of Directors and other (Board of Directors Meeting, support system etc.) respectively, 38 index contents in total. The assessment was carried out by means of questionnaire and company's self-assessment, such institution reviewed relevant documents needed to be examined and provided by the Company in writing, and on January 25, 2019, five assessment experts were assigned to the Company to carry out on-site interview and assessment, interviewing the Chairman, General Manager, independent director and director etc. of the Company, assisting the Company to make improvement by interacting and sharing the assessment process. Assessment report on efficiency of Board of Directors was proposed on February 21, 2019, and the Company has published the assessment report on efficiency of Board of Directors, overall assessment and suggestions of such institution, as well as future improvement plan of the Company at company website on March 8, 2019.	
(4) Whether the Company has regularly assessed the independence of certified public accountant?	✓		(4) Audit Committee of the Company conducts self-assessment on the independence of affiliated certified public accountants ever year, per assessment, certified public accountants of the Company do not take the post of director or independent director, interested party of the Company, nor are shareholders of the Company, nor receive payment from the Company, so the independence of certified public accountants is of no doubt.	
4. Whether or not the	✓		The Company has specific promotion plan for fulfilling	There is no

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
listed company sets corporate governance dedicated (part-time) unit or person to be responsible for corporate governance related affairs (including but not limited to provide directors and supervisors necessary materials for business execution, handle matters related to Board of Directors Meeting and Shareholders' Meeting pursuant to law, handle company registration and change registration, and prepare minute books for Board of Directors Meeting and Shareholders' Meeting etc.)?			corporate governance, and has formulated Corporate Governance Best Practice Principles and disclose it in the company website; meanwhile, the Company continues to update the latest amended regulations related to corporate governance; currently the Financial Division of the company is responsible for handling affairs related to corporate governance, and the execution situation is good so far.	significant difference yet.
5. Whether the Company has established communication channels with the interested parties (including but not limited to shareholders, employees, customers and suppliers etc.), and set interested party zone in the company website, and appropriately responded to the important corporate social responsibility issues concerned by interested parties?	✓		The Company has set spokesman and acting spokesman mechanism, and regularly disclose financial information for interested party to rapidly understand the operation situation of the Company to safeguard its rights and interests.	There is no significant difference yet.
6. Whether the Company has	✓		The Company has appointed MasterLink Securities Corporation to handle stock affairs.	There is no significant

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
appointed professional stock affairs agency to handle the affairs of Shareholders' Meeting?				difference yet.
7. Information disclosure (1) Whether the Company has set website to disclose financial business and corporate governance information? (2) Whether the Company has adopted other information disclosure methods (such as setting English website, designating dedicated person to be responsible for the collection and disclosure of company information, implementing spokesman system, and setting company website in the course of investor conference presentation etc.)?	✓ ✓		(1) The website of the Company has disclosed information related to company profile and financial business. (2) The Company has designated dedicated person to be responsible for disclosing significant company information, and timely input it in the announcement at mops.twse.com.tw; besides, the Company has set spokesman and acting spokesman system and publicly plays the live video of investor conference presentation at the company website.	There is no significant difference yet.
8. Whether the Company has other important information contributing to the understand of operation situation of corporate governance (including but not	✓		(1) Safeguard and care about employee rights and interests: The Company complies with the Labor Standards Act, Labor Safety and Health Act and relevant regulations, spares no efforts to safeguard the legal rights and interests of employees, and regularly and irregularly holds all kinds of educational training to build a good relationship of mutual trust and interdependence with the employees. (2) Investor relations:	There is no significant difference yet.

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
limited to employee rights and interests, employee caring, investor relations, supplier relations, rights of interested party, further education of director and supervisor, execution situation of risk management policy and risk measurement standard, execution situation customer policy, the situation in which the Company buys liability insurance for the director and supervisor etc.)?			In order to maintain shareholders' rights and interests and for the convenience of public investors to understand the situation of company operation, the Company disclose relevant information at mops.twse.com.tw as required. (3) Supplier relations: Through long-term intercourse with major suppliers, the Company has built a good relationship of mutual trust and has a cordial working relationship with them. (4) Rights of interested party: Apart from setting designated spokesman and acting spokesman, the Company also sets stock affairs unit to handle relevant issues and suggestion matters of the shareholders and interested party of the Company; if involving in legal issues, then the Company has appointed law consultant or legal personnel for handling, so as to safeguard the rights and interests of interested party. (5) Further education of director and supervisor: The Company irregularly provides directors and managers the legal information shall be paid attention to and the information of professional knowledge further education courses held by relevant units, and details on the manners and situations of further education for directors of the Company are as shown in the next page. (6) Execution situation of risk management policy and risk measurement standard: The Company emphasizes the risk management policy of "Prevention speaks louder than everything", apart from formulating rigorous internal control system pursuant to law, and regularly and irregularly examining the execution situation and proposing report through internal audit, the Company also takes reasonable hedging measures in the aspect of financial affairs and exchange rate etc. to reduce risks, and reviews the financial structure at any time to avoid excessive financial risks. (7) Execution situation customer policy: The products of the Company are currently at the stage of research and development and have no operating income, in the future, when the products come into the market for sale, dedicated personnel will provide relevant services to the correspondents. (8) The situation in which the Company buys liability insurance for the director and supervisor: Starting from June 14, 2012, the Company buys liability insurance for the directors and supervisors, and the insurance is renewed every year.	
9. Please describe the improvement of corporate governance evaluation result released by corporate governance center of Taiwan Stock Exchange Corporation in the last year, and propose the prioritized strengthening matters and measures for the unimproved matters. The Company has been listed in corporate governance assessment (the 3rd session) for the first time in 2016, in the				

Assessment item	Operation situation			Difference from Listed Company Governance Best Practice Principles and the reason therefor
	Yes	No	Description abstract	
	future, for the items failed in assessment, the Company will review the feasibility in current year and future strategy every year, therefore, the Company will achieve a balance between the development of competent authority policy and the development of company mainbody every year, promote the implementation plan for the items can be improved at current stage, and set the year and objective of improvement for the items cannot be improved at current stage.			

Main manners and situations of further education for directors of the Company in 2018 are as follows:

- In Board of Directors Meeting, the management team will make brief report on business and other relevant information for directors.
- Courses related to corporate governance etc. will be arranged for directors in Board of Directors Meeting.
- Each director may participate in relevant refresher courses voluntarily as needed.

Name	Date	Host unit	Course name	Hours
Michael N. Chang	21 November,2018	Securities & Futures Institute	development tendency of enterprise mergers and acquisitions and practical case Study	3
	21 November, 2018	Securities & Futures Institute	The discussion on the influence of Sino-US trade dispute on Chinese enterprises	3
Tamon Tseng	16 October, 2018	Taiwan Insurance Institute	Related decrees analysis on Anti-Money Laundering and Terrorist Financing combating	2
	18 October, 2018	Taiwan Academy of Banking and Finance	Derivative financial Commodity regulations and risks	1
	02 November, 2018	Taiwan Corporate Governance Association	compensation committee operation practices	3
Lung-Yen Cho	02 November, 2018	Taiwan Corporate Governance Association	compensation committee operation practices	3
	05 November, 2018	Taiwan Corporate Governance Association	Trade secret protection and Non-Competition	3
	05 November, 2018	Taiwan Corporate Governance Association	How does the director perform his duty?	3
Frank Chen	10 August, 2018	Taiwan Corporate Governance Association	The Latest correction trends of corporation law and analysis	3
	02 November,2018	Taiwan Corporate Governance Association	compensation committee operation practices	3
	05 November, 2018	Taiwan Corporate Governance Association	Trade secret protection and Non-Competition	3
	05 November, 2018	Taiwan Corporate Governance Association	How does the director perform his duty?	3
Jerry Fong	05 March, 2018	Taiwan Stock Exchange	100 percent of Electronic voting and Company value enhancement forum	6
Tony Chang	09 November, 2018	The Institute of Internal Auditors - Taiwan	The case analysis of Trade secret protection and Non-Competition	6
Taychang Wang	10 August, 2018	Taiwan Corporate Governance Association	The Latest correction trends of corporation law and analysis	3
	02 November, 2018	Taiwan Corporate Governance Association	compensation committee operation practices	3
	09 November, 2018	The Institute of Internal Auditors - Taiwan	The case analysis of Trade secret protection and Non-Competition	6

(iv) If the Company has set Remuneration Committee, its composition, responsibility and operation situation shall be disclosed:

1. Information of Remuneration Committee members

Identity type	Condition / Name	Whether or not with over five years of work experience and following professional qualifications			Independence conformance (notes 1)								Number of other public companies in which concurrently act as Remuneration Committee member	Notes (notes 2)
		Lecturer or above in the department of commercial affairs, legal affairs, financial affairs, accounting or those related company business in public and private colleges and universities	Judge, procurator, lawyer, accountant, or other professional and technical personnel having passed national examination and acquired certificate necessary for company business	Work experience in commercial affairs, legal affairs, financial affairs, accounting or necessary for company business	1	2	3	4	5	6	7	8		
Independent Director	Jerry Fong	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	3	Conforming
Independent Director	Tony Chang			✓	✓	✓	✓	✓	✓	✓	✓	✓	-	Conforming
Independent Director	Taychang Wang	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2	Conforming

Notes 1:If each member is conforming to the following conditions two years before appointment and during the term of office, please tick "✓" in the blank below the code of each condition.

(1) Not the employee of the company or its affiliated enterprise.

(2) Not the director or supervisor of the company or its affiliated enterprise. Except for the independent director set by the company or its parent company or subsidiary pursuant to this Act or local laws and decrees.

(3) Natural person shareholder holding over one percent of the total issued shares of the company or being the top ten shareholders not in the name of himself/herself and his/her spouse, minor children or other persons.

(4) Not the spouse, relatives within second degree or direct lineal relatives within third degree of the personnel listed in preceding three paragraphs.

(5) Not the director, supervisor or employee of the juridical person shareholder directly holding over five percent of total issued shares of the company; nor the director, supervisor or employee of the top five shareholding juridical person shareholder.

(6) Not the director, supervisor, manager or shareholder holding over five percent of shares of the specific company or institution having financial or business transactions with the company.

(7) Not the professional providing commercial, legal, financial or accounting etc. service or consultancy to the company or its affiliated enterprise; nor the entrepreneur, partner, director, supervisor, manager and its spouse of the sole proprietorship, partnership, company or institution.

(8) Not one of the circumstances as prescribed in Article 30 of Company Act.

Notes 2：If the identity type of the member is director, please describe whether it is conforming to the provisions of Paragraph 5, Article 6 of "Measures for Establishment of Company Remuneration Committee upon Going Public or Transaction in Business Place of Securities Dealer and Exercising Functions and Powers".

2. Information of operation situation of Audit Committee

(1) There are three members in the Remuneration Committee of the Company.

(2) Term of office of members in this session: from June 27, 2016 to June 26, 2019, Remuneration Committee has convened seven meetings (A) in 2018, and members' qualifications and attending situations are as follows:

Title	Name	Actual attendance times B	Delegated attendance times	Actual attendance rate (%) [B/A]	Notes
Convenor	Tony Chang	7	0	100	
Committee member	Jerry Fong	4	3	57	
Committee member	Taychang Wang	7	0	100	

Other matters should be recorded:

1. If Board of Directors refuses to adopt or revises the suggestion of Remuneration Committee, the date of board meeting, stage, proposal contents, result of board resolution and handling of Remuneration Committee's opinion (if the remuneration passed by Board of Directors is superior to the suggestion of Remuneration Committee, the difference therebetween and reason therefor shall be specified) shall be specified: NA.
2. For the resolution of Remuneration Committee, if a member opposes or has a qualified opinion and with record or written statement, the date of Remuneration Committee meeting, stage, proposal contents, and opinions of all members and handling of members' opinion shall be specified: NA.

(v) Situation of performing social responsibility: the system adopted by the Company for environmental protection, community participation, social contribution, social service, social benefit, consumers' rights and interests, human rights, safety and health, and other social responsibility activities, and the performance situation thereof:

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
1 Implement the promotion of corporate governance				There is no significant difference yet
(1) Whether the Company has formulated corporate social responsibility policy or system, and has reviewed the situation of implementation effect?	✓		(1) The Company has formulated the Code of Corporate Social Responsibility and practice the corporate social responsibility according to such Code, and amend relevant policies based on the company development and actual demand.	
(2) Whether the Company has held social responsibility educational training regularly?	✓		(2) Through internal meeting, the Company continuously propagates the corporate operation philosophy and social responsibility, such as resources recovery and energy saving and carbon reduction etc., hoping to establish employees' consensus for compliance.	
(3) Whether the Company has set dedicated (part-time) unit to promote corporate social responsibility, and whether the Board of Directors has authorized senior management echelon to handle and report the handling situation to Board of Directors?	✓		(3) For the promotion of corporate social responsibility, the Company currently has appointed Public Relations & Government Affairs Division and Personnel Administration Division to be in charge, and the Chief Operating Officer will coordinate with each division and office to work together according to the activity or policy requirement and report to the Board of Directors.	
(4) Whether the Company has formulated reasonable	✓		(4) The Company has formulated relevant measures for the rules and remuneration of	

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
remuneration policy, has combined the employee performance appraisal with corporate social responsibility policy, and has established explicit and effective rewards and punishment system?			colleagues, and employee stock subscription; and explicitly standardize remuneration and rewards and punishment standards, allowing colleagues to share the achievements in the growth of company operation, so as to fulfill social responsibility.	
2 Sustainable development environment				The Company belongs to biotechnology industry and has no production operation, and continues to reduce the environmental impact caused by the laboratory and office, in respect of the measures taken for sustainable environment, there is no significant difference between the regulations.
(1) Whether the Company has been devoting to improve the utilization efficiency of all kinds of resources, and using renewable materials having lower impact on environmental load?	✓		(1) The Company belongs to biotechnology research and development industry and mainly based on laboratory, thus does not use resources having greater impact on environmental load. The Company cherishes resources; continuously carries out the concept and action of energy saving; encourages waste classification and recycling, paper reduction; and calls on colleagues to turn off lights when leaving, reduce copying, voluntarily bring green cup, and reducing the consumption of bottled water and paper cup; implementing the energy saving in the actions of daily life; as for improving utilization efficiency of resources, the Company implements measures such as resources types classification and recycling etc., so as to achieve the purpose of waste reduction and resources recovery.	
(2) Whether the Company has established appropriate environmental management system according to its industrial characteristics?	✓		(2) The industry of the Company engages in biotechnology research and development, for the operation requirement of industrial characteristics, the Company has set safety and health management group, and has formulated laboratory waste management measures to execute waste cleaning and recovery, and complies with environmental protection regulations of competent authority.	
(3) Whether the Company is aware of the impact of climate change on operation activity, and executes greenhouse gas inventory, and formulates company strategy for energy saving and carbon reduction and greenhouse gas reduction?	✓		(3) The industry of the Company engages in biotechnology research and development, currently it does not engage in the circumstance of manufacturing production etc. causing greenhouse gas emission. Apart from causing natural disaster directly impacting the operation activity, the climate change may also cause indirect impacts such as rising price or supply interruption of raw materials etc., therefore, the Company actively pays attention to the issues of energy saving and carbon reduction and greenhouse reduction, controls the temperature of air-conditioner in summer, pursues energy saving and carbon reduction in the office, save water and electricity consumption, and adjusts the temperature of air-conditioner; by reducing the operation	

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
			energy consumption in life, office and laboratory, improving manufacturing method, process and production management, taking measures to mitigate pollution incident, and effective utilization of energy; so as to achieve the purpose of energy saving and carbon reduction.	
3 Maintain social benefit (1) Whether the Company has formulated relevant management policies and procedures according to relevant laws and regulations and International Covenants on Human Rights?	✓		(1) The Company has formulated "Employee Manual" pursuant to Labor Standards Act and relevant laws and decrees. i. Hold employees' friendship activity etc. irregularly, which is good for the physical and mental development of employees. ii. Regularly hold employee health examination. iiii Formulate association establishment measures, encourage employees to spontaneously establish art and literature, and leisure associations to hold activities regularly, initiate employees to enjoy the work, stay healthy and exercise the mind and body to improve the cohesion. iv. The Company convenes labor-management conference every quarter, safeguarding the legal rights and interests of employees and non-discrimination of employment policy pursuant to labor laws and regulations, and allocate retirement pension. Besides, the Company has set Employee Welfare Committee to handle all kinds of welfare affairs through the operation of welfare committee elected by employees.	Conforming to the Code of Corporate Social Responsibility of Listed Company.
(2) Whether the Company has established employee complaint mechanism and channel, and has handled them properly?	✓		(2) Complaint channels of employees include human resources unit, unit supervisor and General Manager etc., all complaints have been mediated and handled properly, so far, there has no significant complaint case. If a employees have any opinion on the company management and system, they can communicate with their supervisors to express the opinion, and the supervisors will handle immediately; in case of any whistle-blowing or complaint circumstance, under the precondition of sufficiently safeguarding the rights and interests and privacy of the concerned party, relevant supervisors will carry out interview and investigation, and reply the concerned party the handling situation and opinion in due time, allowing it to feel being fully respected and the effective	

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
			workplace management.	
(3) Whether the Company has provided employees a safe and healthy working environment, and has implemented safety and health education to the employees regularly?	✓		(3) The Company attaches importance to the safety and health of employees, and holds employee and laboratory safety and health education and fire prevention drilling more than two times a year, so as to implement hazard control assessment on operating environment, and provide appropriate and sufficient protective tools and first aid facilities such as watering, firefighting and medical aid upon emergencies. Devoting to establish safe employee working environment and protect personal safety and prevent occupational disaster.	
(4) Whether the Company has established employee regular communication mechanism, and informs the employee in a reasonable manner the operation change might cause significant impact?	✓		(4) The Company attached importance to regular communication with employees, communication mechanisms include announcement and meeting etc., so as to inform employees the operation change of significant impact. The Company convenes employee meeting regularly every month, apart from communicating important company decisions and activities, the Company also sets different subjects to ask experts to give a speech according to the demand of employees, such as tax affairs counseling, CPR training etc.; besides, such meeting will encourage employees to freely make a statement and propose a suggestion on all kinds of internal affairs, so as to achieve the purpose of two-way communication.	
(5) Whether the Company has set effective occupational ability development training plan for the employees?	✓		(5) The Company cares about the development of colleagues, and has formulated complete training plan according to individual demand, hoping that colleagues can use their talents to obtain knowledge-ability and skills for promotion through further education.	
(6) Whether the Company has formulated relevant policies protecting consumers' rights and interests and complaint procedures for the research and development, procurement, production, operation and service processes etc.?	✓		(6) Major products of the Company are currently at the stage of research and development and have no operating income, after the sales of product in the future, the Company will provide relevant services to the correspondents.	
(7) For the marketing and marking of product and service, whether the Company has complied with relevant laws and regulations and international standards?	✓		(7) The product marketing and marking of the Company are conforming to relevant regulations.	
(8) Before the intercourse	✓		(8) Before the intercourse with the suppliers, the	

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
between the Company and suppliers, whether the Company has assessed whether the suppliers have any record impacting the environment and society in the past?			Company has collected information to fully understand and assess the suppliers before listing them as the cooperative intercourse objects.	
(9) Whether contract between the Company and major suppliers contains the clause that, if the suppliers involve in violating their corporate social responsibility policy and have significant impact on the environment and society, the Company may terminate or cancel the contract at any time?	✓		(9) Before cooperation, the Company has fully informed each supplier that: it shall comply with the integrity policy of the Company, provide reasonable quotation, best quality and service, and both parties shall work together to improve corporate social responsibility.	
4 Strengthen information disclosure (1) Whether the Company has disclosed relevant corporate social responsibility information of relevance and reliability at its website and mops.twse.com.tw etc.?	✓		(1) The Company regularly discloses the execution situation of social responsibility at the public prospectus and Shareholders' Meeting annual report; if promoting public benefit activities of relevant corporate social responsibility, the Company will also discloses it immediately through activity news or activity propaganda etc. (2) The Company has prepared corporate social responsibility report and disclosed in at the company website; in the future, the Company will still fulfill the corporate social responsibility, actively promote corporate governance and sustainable development environment, safeguard social benefits, and disclose and prepare the execution situation of corporate social responsibility.	There is no significant difference yet.
5 If the Company has formulated its own code of corporate social responsibility pursuant to "Code of Corporate Social Responsibility of Listed Company", please describe its operation and the difference circumstance therebetween: the Company has formulated the Code of Corporate Social Responsibility, and practice the corporate social responsibility according to such Code, the practice execution is consistent with its spirit, and there is no significant difference.				
6 Other important information good for understanding the operation situation of corporate social responsibility: (1) Environmental protection: the Company executes environmental protection pursuant to relevant laws and decrees to fulfill the responsibility as an environmentally friendly citizen. (2) Social benefits: apart from devoting to the business operation, the Company also donates the research or charitable organization as the case may be. (3) Human rights and employees rights and interests: 1. The Company maintains a good working environment according to laws and decrees such as "Gender Equality in Employment Act" and "Gender harassment Prevention Act" etc., so as to safeguard the employees' right to work. 2. In order to improve employee quality and working skill and strengthen the work efficiency and quality, the Company has formulated "Management Measures on Education and Training", hoping to train excellent professional talents and further improve operation performance and effectively develop the utilization of				

Assessment item	Operation situation			Difference from the Code of Corporate Social Responsibility of Listed Company and the reason
	Yes	No	Description abstract	
human resources. 3. The Company convenes a meeting irregularly to provide an official communication channel, allowing employees of each level to coordinate with each other mutually and allowing personnel of each department to fully express their opinions. (4) Safety and health: 1. The Company always attached importance to the management of employee occupational safety and health, and urges supervisor of each department to pay attention to control the risks of occupational safety and health and improve performance. 2. The Company has formulated relevant laboratory operation standards to standardize basic steps for employee to operate the equipment, and irregularly holds in-service labor safety and health educational training to ensure a safe working environment.				
7 If the product or corporate social responsibility report of the Company has passed the verification standards of relevant certification authority, it shall be described: Relevant certification institution hasn't been appointed by the Company to investigate and verify the corporate social responsibility report, it is one of the directions in future planning.				

(vi) Situation of performing integrity operation and measures adopted:

Assessment item	Operation situation			Difference from Listed Company Integrity Operation Rules and the reason therefor
	Yes	No	Description abstract	
1. Formulate integrity operation policy and scheme				There is no significant difference yet.
(1) Whether the Company has explicitly formulated the policy and practice of integrity operation in the regulations and external documents, and whether Board of Directors and management echelon promise to actively implement the operation policy?	✓		(1) The Company has formulated the Code of Integrity Operation and Codes of Ethical Conduct as the complying basis of internal operation of the company. Integrity and transparency are the important core values in the operation of the Company, the Company establishes corporate governance and risk control mechanisms based on that to pursue sustainable development of the Company.	
(2) Whether the Company has formulated the schemes to prevent dishonest behaviors, and explicitly stipulates operation procedure, behavioral guideline, violation punishment and complaints system and implements them in each scheme?	✓		(2) Directors, supervisors, managers, employees or those of substantial control ability of the Company are strictly prohibited from directly or indirectly providing, promising, asking for or receiving any unjustified interests, or conducting other dishonest behaviors violating integrity, illegal or violating fiduciary duties.	
(3) Whether the Company has taken preventive measures for the operating activities prescribed in each subparagraph of	✓		(3) The Company has formulated Employee Code of Conduct to sincerely treat customers, investors, colleagues, suppliers and every business contact object with self-discipline and in the principle of integrity and honesty, and strictly prohibits	

Assessment item	Operation situation			Difference from Listed Company Integrity Operation Rules and the reason therefor
	Yes	No	Description abstract	
Paragraph 2, Article 7 of "Listed Company Integrity Operation Rules" or other operating activities of higher risks of dishonest behavior within the business scope?			employees to accept any improper gift and entertainment.	
2. Implement integrity operation				There is no significant difference yet.
(1) Whether the Company has assessed the integrity record of contacting objects, and explicitly stipulated integrity clauses in the contract signed between the Company and trading objects?	✓		(1) Personnel of every level of the Company are of high self-discipline and have never involved in other illegal affairs or purposes in the commercial activity; for those who have the record of dishonest behaviors, the Company will degrade them, stop their powers, or remove them from the list of qualified suppliers.	
(2) Whether the Company has set dedicated (part-time) unit subordinated to Board of Directors to promote corporate integrity operation, and regularly reports to Board of Directors on the execution situation thereof?	✓		(2) Legal Affairs and Intellectual Property Division of the Company is the dedicated unit in charge of integrity operation, responsible for regularly reporting to Board of Directors on the supervision and execution of integrity operation every half year.	
(3) Whether the Company has formulated policy to prevent conflict of interest and provided proper statement channel, and implements them?	✓		(3) Board of Directors of the Company adheres to high self-discipline, for the proposal listed by Board of Directors and those have interest relationship with the Board of Directors or its representing juridical person, such interested relationship shall be described in the current Board of Directors meeting, if such relationship is detrimental to corporate benefits, it shall not join in discussion and voting and shall evade upon discussion and voting, and shall not exercise voting right on behalf of other directors.	
(4) Whether the Company has established effective accounting system, internal control system for implementing integrity operation, and assigns internal audit unit to conduct auditing regularly or appoints accountants to execute the auditing?	✓		(4) To establish effective accounting and internal control system, the Company carries out computerized operation in which the management function can be connected through computers, besides, the Company executes abnormality management and assigns internal audit unit to conduct examination regularly or appoints accountants to execute the examination.	
(5) Whether the Company	✓		(5) The Company propagates and holds	

Assessment item	Operation situation			Difference from Listed Company Integrity Operation Rules and the reason therefor
	Yes	No	Description abstract	
holds internal and external educational training on integrity operation regularly?			internal and external educational training on integrity operation from time to time.	
3. Operation situation of company reporting system				There is no significant difference yet.
(1) Whether the Company has formulated specific reporting and rewarding system and established convenient reporting channel, and assigned appropriate dedicated handling personnel for the object being reported?	✓		The Company discloses company profile at the company website and announces real time information at the mops.twse.com.tw as required by laws and decrees.	
(2) Whether the Company has formulated investigation standard operation procedures and relevant confidentiality mechanism for accepting reporting matters?	✓			
(3) Whether the Company has taken measures to protect whistleblower from improper treatment due to the reporting?	✓			
4. Strengthen information disclosure Strengthen information disclosure				There is no significant difference yet.
(1) Whether the Company has disclosed the contents of Code of Integrity Operation formulated and the promotion effect thereof at the company website and mops.twse.com.tw?	✓		The Company discloses company profile at the company website and announces real time information at the mops.twse.com.tw as required by laws and decrees.	
5. If the Company has formulated its own Code of Integrity Operation according to the "Listed Company Integrity Operation Rules", please describe its operation and the difference circumstance therebetween: the Code of Integrity Operation of the Company is conforming to the regulations of "Listed Company Integrity Operation Rules", and there is no difference.				
6. Other important information good for understanding the operation situation of integrity operation of the company (such as the Company reviews and amends the Code of Integrity Operation formulated etc.): the Company has formulated the Code of Integrity Operation for the first time in 2014, and amends it according to laws and decrees and corporate practice.				

(vii) If the Company has formulated the Code of Corporate Governance and relevant regulations, the inquiry method thereof shall be disclosed:

The Company has formulated the Code of Corporate Governance and disclosed it in

the company website, and also has formulated operation procedures such as "Code of Integrity Operation", "Codes of Ethical Conduct", "Code of Corporate Social Responsibility", "Rules of Procedure for Shareholders' Meetings", "Specification of Procedure for Board of Directors", "Procedures for Election of Directors", "Interested Party Specific Company and Group Enterprise Transaction Operation Procedure", "Measures for Supervision and Management of Subsidiary" and "Internal Control System" etc., operating and executing corporate governance related specifications according to the spirit of corporate governance, in the future, the Company will amend the management measures according to relevant laws and decrees as the case may be, so as to strengthen the corporate governance.

(viii) Other important information sufficient enough to enhance the operation situation of corporate governance shall be disclosed all together: please refer to "Paragraph vii of Operation situation of corporate governance and its difference from Listed Company Governance Best Practice Principles and the reason therefor".

(ix) Execution situation of internal control system

1. Internal Control System Statement: please refer to the next page.
2. If the accountant is appointed to specifically examine the internal control system, the accountant examination report shall be disclosed: NA.

OBI Pharma, Inc.
Internal Control System Statement

Date: March 8, 2019

For the 2018 internal control system of the Company, based on the result of self-assessment, it is hereby made the statement as follows:

i The Company acknowledges that the establishment, implementation and maintenance of internal control system are the responsibilities of Board of Directors and managers of the Company, and the Company has established such system. Its purpose is to provide a reasonable guarantee for achieving the objectives such as operation effect and efficiency (including profit making, performance and safeguarding assets safety etc.), report reliability, promptness, transparency and the compliance of relevant regulations and relevant laws and decrees etc.

ii The internal control system has its own inherent limitation, no matter how perfect its design is, an effective internal control system can only provide reasonable guarantee for achieving three objectives mentioned above; and due to the change of environment and circumstance, the effectiveness of internal control system might be changed accordingly. But the internal control system of the Company has set self-supervision mechanism, once the deficiency has been identified and confirmed, the Company will take correction action immediately.

iii The Company stipulates the determination items of internal control system effectiveness according to the "Guidelines on Public Company to Establish Internal Control System" (hereinafter referred to as "Guidelines"), so as to determine whether the design and execution of internal control system are effective. The determination items of internal control system adopted in such "Guidelines" are the processes of management control, dividing internal control system into five elements: 1. Environment control; 2. Risk assessment; 3. Operation control; 4. Information and communication, and 5. Supervision operation. Each element further includes several items. Please refer to the provisions of "Guidelines" for the preceding items.

iv The Company has adopted the determination items of internal control system mentioned above to assess the effectiveness of the design and execution of internal control system.

v Based on the assessment result in preceding paragraph, the Company thinks that the internal control system of the Company on December 31, 2018 (including supervision and management of subsidiary), including that the design and execution of internal control system related to understanding the operation effect and achievement degree of efficiency objective; reliable, prompt and transparent report; and compliance of relevant regulations and relevant laws and decrees etc. are effective, and it can reasonably guarantee the achievement of above objectives.

vi This Statement will become major contents of the annual report and public prospectus of the Company, and will be disclosed externally. If the preceding disclosed contents have any false, concealing or illegal circumstance, it will involve

in the legal responsibilities as prescribed in Article 20, Article 32, Article 171 and Article 174 etc. of Securities Exchange Act.

vii This Statement is passed by Board of Directors of the Company on March 8, 2019, among 7 attending directors, no one holds opposing opinion and all agree upon the contents of this Statement, it is hereby declared as well.

OBI Pharma, Inc.

Chairman: Michael N. Chang (Signature/Seal)

General Manager: Amy Huang (Signature/Seal)

(x) In the last year and as at the publication date of annual report, whether the Company and its internal personnel is punished according to law, whether the Company punishes its internal personnel for violating the provisions of internal control system, major deficiencies and improvement situation: NA.

(xi) In the last year and as at the publication date of annual report, important resolution of Shareholders' Meeting and Board of Directors Meeting:

1. Important resolution of Shareholders' Meeting and Board of Directors Meeting:

Shareholders' Meeting / Board of Directors Meeting	Date	Important resolution and execution situation
Board of Directors	The 10th Session the 5th Board of Directors Meeting January 19,2018	1. Passed the amendments of Partial copywriting of information circulation of this company 2. Passed the proposal of Employee converted ordinary shares with stock option certificates 3. Passed the first issuing roster proposal of Employee stock option certificates of 2018.
Board of Directors	The 11th Session the 5th Board of Directors Meeting March 09, 2018	1. Passed the proposal of 2017 actual budget lists of this company 2. Passing the proposal of 2017 loss appropriation of this company 3. Passing the 2018 operational Plan of this company 4. Passing the proposal of 2018 budget of this company 5. Passed the amendments of Partial copywriting of intellectual property management method of this company 6. Passed the amendments of Partial copywriting of Purchases and payables cycle of this company 7. Passed the amendments of Partial copywriting of delegation of authorization list of this company 8. Adopted that this company will be introduced into 16th of International financial reporting standards, put forward the initial evaluation of its possible influence and create introduced team and draw up imported plan and schedule. 9. Adopted that this company will hold the post of Corporate directors of AP Biosciences , Inc . and designated representative 10. Passed the proposal of 2017 the date, place and agenda of shareholders regular meeting 11. Passed the proposal of 2017 internal control system statement 12. Passed the review of 2018 salary adjustment of this company and managers' salary adjustment proposal. 13. Passed the proposal of personnel promotion of this company 14. Passed the proposal of personnel changes of this company
Board of Directors	The 12th Session the 5th Board of Directors Meeting April 20, 2018	1. Adopted that this company will participate in Cash capital increase of AP Biosciences , Inc . 2. passed the proposal of general Manager appointment and salary and benefits of AP Biosciences , Inc . 3. Passed the proposal of Research and development section chief appointment and salary and benefits of AP Biosciences , Inc .
Board of Directors	The 13th Session the 5th Board of Directors Meeting May 11,2018	1. passed the proposal of planning and handling long-term fund raising cases, conducted the cash capital increase issue of common stock by using private placement or took participate in the issuance of overseas depositary receipts 2. Adopted that this company cooperates with the internal adjustment of the accounting firm for changing certified accountant 3. Passed the supplements of 2018 the date, place and agenda of shareholders regular meeting 4. Adopted that this company will conduct clinical practice in Australia and apply for subsidy from Australian Government for research, and plan to set up wholly-owned subsidiary in Australia 5. Passed the personnel proposal after amendment
Shareholders' Meeting	2018 General Meeting, June 27, 2018	Admitted matters: 1. 2017 actual budget lists Resolution: After the chairman consulted all the presenting shareholders, the original

Shareholders' Meeting / Board of Directors Meeting	Date	Important resolution and execution situation
		proposal shall be voted without objection According to statistics of presenting shareholders , total voting rights of are108,649,598, After the voting (including electronic voting), approval 104,927,275, against 107,494, invalid 0, Abstention/non-voting 3,614,829; The number of votes in favor are accounted for 96.57% of the total voting power, which are over the legal amount, the case was passed 2. 2017 loss appropriation proposal Resolution: After the chairman consulted all the presenting shareholders, the original proposal shall be voted without objection According to statistics of presenting shareholders , total voting rights are108,649,598, After the voting (including electronic voting), approval 105,027,259, against 110,509, invalid 0, Abstention/non-voting 3,511,830; The number of votes in favor are accounted for 96.66% of the total voting power, which are over the legal amount, the case was passed Discussion Points 1. handling long-term fund raising cases, conducted the cash capital increase issue of common stock by using private placement or took participate in the issuance of overseas depositary receipts Resolution: After the chairman consulted all the presenting shareholders, the original proposal shall be voted without objection According to statistics of presenting shareholders , total voting rights are108,649,598, After the voting (including electronic voting), approval 103,727,846, against 1,410,057, invalid 0, Abstention/non-voting 3,511,695; The number of votes in favor are accounted for 95.47% of the total voting power, which are over the legal amount, the case was passed
Board of Directors	The 14th Session the 5th Board of Directors Meeting June 27, 2018	1. Passed the proposal of appoint Director of AP Biosciences (australia) ,Inc . 2. Passed D&O Insurance Proposal of Responsibilities of directors, supervisors and key staff 3. Passed the personnel proposal of the Company.
Board of Directors	The 15th Session the 5th Board of Directors Meeting August 10, 2018	1. Passed the personnel proposal of the Company.
Board of Directors	The 16th Session the 5th Board of Directors Meeting November 9, 2018	1. Passed the Partial copywriting of Procedures for acquiring or disposing of assets of this company 2. Passed the amendments of 2019 Audit Plan of this company 3. Passed the proposal of 2019 Budget 4. Adopted that this company will appoint representative to hold the post of Director of AP Biosciences , Inc . 5. Passed the proposal of 2019 compensation committee work plan 6. Passed the proposal of the principle of year-end bonus for managers of 2018
Board of Directors	The 17th Session the 5th Board of Directors Meeting November 30, 2018	1. Passed the proposal of Cash capital increase of this company after amendment 2. Passed the full business plan of 2018
Board of Directors	The 18th Session the 5th Board of Directors Meeting March 08 , 2019	1. Passed the proposal of 2018 actual budget lists of this company 2. Passing the proposal of 2018 loss appropriation of this company 3. Passed the base date of capital reduction for the write-off of Treasury shares 4. Adopted that this company cooperates with the internal adjustment of the accounting firm for changing certified accountant 5. Passed the amendment of partial copywriting of articles of association of this company 6. Passed the partial copywriting of articles of Guidelines for the acquisition or disposal of assets of this company after amendment 7. Passed the partial copywriting of rules of procedure of the board of directors after amendment. 8. Passed the proposal of 2019 operation plan of this company 9. Passed the re-election the seven seats of 6th Director (including 3 independent director) 10. Passed list of Director (including Independent Director) candidates nominated by board of directors 11. Passed the limit proposal of relieve Non-Competition for new directors.

Shareholders' Meeting / Board of Directors Meeting	Date	Important resolution and execution situation
		12. By accepting the nomination period, the number of places to be selected and the premises of acceptances for candidates for directors (including independent directors) . 13. Passed the proposal of 2019 the date, place and agenda of shareholders regular meeting 14. Passed the admit proposal of internal control system statement of 2018. 15. Adopted that this company will appoint representative to hold the post of Director of AP Biosciences , Inc . 16. Passed the review of 2019 salary adjustment of this company and managers' salary adjustment proposal. 17. Passed the personnel proposal of vice-general manager of quality control and supply chain 18. Passed the personnel proposal of vice-general manager of research and development of this company. 19. Passed the personnel proposal of this company. 20. Passed the proposal of vice general Manager added appointment and salary and benefits of AP Biosciences , Inc . 21. Passed the proposal of research and development Director YU, CHUNG-CHE appointment of AP Biosciences , Inc . 22. Passed the adjustment proposal of general Manager HO, CHENG-HUNG appointment of AP Biosciences , Inc .
Board of Directors	The 19th Session the 5th Board of Directors Meeting April 19, 2019	1. Passed the amendments of Partial copywriting of Loan funds and other operating procedures of this company 2. Passed the amendments of Partial copywriting of Procedures of endorsement guarantee operation of this company 3. Passed the amendments of Partial copywriting of Approval authority list of this company 4. Passed the amendments and supplement of Partial copywriting of articles of association of this company 5. Passed the supplement of the 2019 subject of Shareholder regular meeting 6. Passed the proposal of employee Stock subscription list for cash increase staff of this company.

2. Review on the execution of resolutions of General Meeting:

The 2018 General Meeting of OBI was held in Taipei on June 27, 2017. The resolutions of attending shareholders and executions are reviewed as follows:

Report items:

1. 2017 business report.
   All attending shareholders are noted.
2. 2017 Audit Committee review report.
   All attending shareholders are noted.
3. Implementation of sound business plans.
   All attending shareholders are noted.
4. Amendments to the "Code of Integrity Operation" of the Company.
   All attending shareholders are noted.
5. Amendments to the "Integrity Operation Procedures and Code of Conduct" of the Company.
   All attending shareholders are noted.

Items for acknowledgment:

[The first case] Adoption of the 2017 settlement statements.

Resolution: Per consultation among all attending shareholders as requested by the chairman, voting has been carried out according to the contents of original proposal without objection.

According to statistics, after the voting of totally 108,649,598 voting rights of attending shareholders (including electronic voting), 104,927,275 rights approve, 107,494rights object, 0 rights are invalid, and 3,614,829 rights abstain/fail; the approving rights are accounting for 96.57% of total voting rights, which exceeds the statutory amount, and this case has been passed as proposed.

[The second case] Adoption of the Proposal for 2017 Deficit Compensation.

Resolution: Per consultation among all attending shareholders as requested by the chairman, voting has been carried out according to the contents of original proposal without objection.

According to statistics, after the voting of totally 108,649,598 voting rights of attending shareholders (including electronic voting), 105,027,259 rights approve, 110,509 rights object, 0 rights are invalid, and 3,511,830 rights abstain/fail; the approving rights are accounting for 96.66% of total voting rights, which exceeds the statutory amount, and this case has been passed as proposed.

Discussion items:

[The first case] Long-term fund-raising is planned and will be handled by private placement through capital increase in ordinary shares or capital increase in ordinary shares by the issuance of global depository receipts.

Resolution: Per consultation among all attending shareholders as requested by the chairman, voting has been carried out according to the contents of original proposal without objection.

According to statistics, after the voting of totally 108,649,598 voting rights of attending shareholders (including electronic voting), 103,727,846 rights approve, 1,410,057 rights object, 0 rights are invalid, and 3,511,695 rights abstain/fail; the approving rights are accounting for 95.47 % of total voting rights, which exceeds the statutory amount, and this case has been passed as proposed.

No extemporary motions have been passed in this Shareholders' Meeting. Please refer to the Minute Book of 2018 General Meeting for the voting of each proposal in Shareholders' Meeting.

(xii) In the last year and as at the publication date of annual report, if a director or supervisor has different opinion on the important resolution passed in the Board of

Directors Meeting and with record and written statement, major contents thereof: NA.

(xiii) In the last year and as at the publication date of annual report, summary of the resignation or dismissal of Chairman, General Manager, Accounting Director, Financial Director, Internal Audit Director and R&D Director etc.:

Title	Name	Date of appointment	Date of dismissal	Reason for resignation or dismissal
Chief Operating Officer	Max Chan	January 23, 2017	March 9, 2018	Title adjustment to Chief Operating Officer

iv Accountant's fees information

(i) Accountant's fees information:

Monetary unit: NT$thousand

Name of accounting firm	Name of accountant		Examination period	Notes
PwC Taiwan	Audrey Tseng	Chang, Ming-Hui	From January 1, 2018 to April 31, 2018	
PwC Taiwan	Lin, Yu-Kuan	Audrey Tseng	From April 1, 2018 to December 31, 2018	Internal adjustment of the firm

Monetary unit: NT$thousand

Numerical range of amounts \ Fees item		Audit fees	Non-audit fees	Total
1	Below NT$2,000 thousand	-	-	-
2	NT$2,000 thousand (inclusive) ~ NT$4,000 thousand	3,450	181	3,631
3	NT$4,000 thousand (inclusive) ~ NT$6,000 thousand	-	-	-
4	NT$6,000 thousand (inclusive) ~ NT$8,000 thousand	-	-	-
5	NT$8,000 thousand (inclusive) ~ NT$10,000 thousand	-	-	-
6	Above NT$10,000 thousand (inclusive)	-	-	-

(ii) If the non-audit fees paid to the certified public accountant and affiliated firm and enterprise of certified public account are more than one fourth of the audit

fees, the amounts of audit and non-audit fees and the non-audit service contents shall be disclosed:

Monetary unit: NT$thousand

Name of accounting firm	Accountant Name	Audit fees	Non-audit fees					Accountant Examination period	Notes
			System design	Business registration	Human Resources	Other (Notes 1)	Subtotal		
PwC Taiwan	Lin, Yu-Kuan Audrey Tseng	3,450	-	181	-	-	181	From January 1, 2018 to December 31, 2018	Non-audit fees see the notes below for details(notes)

Notes: Service contents and fees of non-audit fees are listed as follows:

1. NT$121 thousand for the exchange of new shares issued by AP Biosciences, Inc.
2. NT$60 thousand for applying for issuing new shares of employee's exercise of stock option.

(iii) In case of change of accounting firm and the audit fees paid in the year of change is reduced comparing with that in the year before change, amounts of audit fees before and after change and reasons shall be disclosed: NA.

(iv) f the audit fees is reduced by more than fifteen percent comparing with that in the last year, the reduced amount of audit fees, proportion and reason shall be disclosed: NA

v Information on change of accountant: Accounting firm changes certified public accountant according to internal rotation required buy relevant laws.

vi Whether the Chairman, General Manager, and managers responsible for financial and accounting affairs of the Company once worked in the affiliated firm or enterprise of the certified public accountant in the last year: NA.

vii In the last year and as at the publication date of annual report, stock right transfer and pledge of stock right in the directors, supervisors, managers and shareholders with shareholding ratio over ten percent.

(i) Stock right transfer and pledge of stock right in the directors, supervisors, managers and shareholders with shareholding ratio over ten percent:

Unit: Thousand shares

Title	Name	2018		2019 As at April 30	
		Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares	Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares
Chairman	Yi Tai Investment Co., Ltd. Representative: Michael N. Chang	0	1,000	0	0
Vice Chairman	Yi Tai Investment Co., Ltd. Representative: Tamon Tseng	0	0	0	0
Director	Sheng Cheng Investment Co., Ltd. Representative: Lung-Yen Cho	0	0	0	0
Director	Sheng Cheng Investment Co., Ltd. Representative: Frank Chen	0	0	0	0
Independent Director	Jerry Fong	0	0	0	0
Independent Director	Tony Chang	0	0	0	0
Independent Director	Taychang Wang	0	0	0	0
Substantial shareholder holding 10% or more	Yi Tai Investment Co., Ltd.	0	0	0	0
General Manager	Amy Huang	50	0	0	0
Chief Scientific Officer and Executive Vice President	Tony Yu	0	0	0	(583)
Vice President of Research, R&D Division	Lai, Ming-Tien (Notes 1)	0	0	0	0
Vice President of Quality Assurance and Supply Chain Division	Shih, Yu-Nan (Notes 2)	0	0	0	0
Chief Financial Officer	Max Chan (Notes 3)	0	0	0	0
QA Deputy General Manager	Richard Tseng (Notes 4)	(147)	0	0	0
Medical Division	Cristina Chang (Notes 5)	0	0	0	0

Title	Name	2018		2019 As at April 30	
		Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares	Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares
Deputy General Manager of Statistics Division	Sophia Lee	0	0	0	0
Vice President of Research, R&D Division	Jiann-Shiun Lai	0	0	0	0
Director of Human Resources & Administration Division	Rose Lo (Notes 6)	0	0	0	0
Director of Commercial Medicine Division	Jon Jin Liao (Notes 7)	0	0	0	0
Vice President of Clinical Research Medical Affairs	Tsai, Cheng-En (Notes 8)	0	0	0	0
Director in chemical pharmacy, R&D Division	Edward Hsieh	(17)	0	(12)	0
Business Information Director, Commercial Division	Pedro Chen	0	0	0	0
Director of Public Relations & Government Affairs Division	Sharon Lee	0	0	0	0
Director of Legal Affairs and Intellectual Property Division	Jay Chen (Notes 9)	(2)	0	0	0
Director of Legal Affairs Division	Victoria Lin (Notes 10)	4	0	(4)	0
Director of Supply Chain Division	Tyro Shyu	0	0	0	0

Title	Name	2018		2019 As at April 30	
		Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares	Increased (decreased) number of shareholding	Increased (decreased) number of pledged shares
Accounting Manager of Financial Division	Colin Kao	0	0	(25)	0

Notes 1: Such manager reports on duty on April 8, 2019.
Notes 2: Such manager reports on duty on April 1, 2019.
Notes 3: Such manager takes the post of Chief Operating Officer on January 23, 2017, and the title is changed into Chief Financial Officer on March 9, 2018.
Notes 4: Such manager retires on December 31, 2018.
Notes 5: Such manager leaves the Company on February 9, 2018.
Notes 6: Such manager leaves the Company on May 31, 2018.
Notes 7: Such manager leaves the Company on March 1, 2018.
Notes 8: Such manager reports on duty on July 2, 2019.
Notes 9: Such manager leaves the Company on August 31, 2018.
Notes 10: Such manager leaves the Company on August 1, 2018

(ii) Information that the counterpart in the director, supervisor, manager and substantial shareholder's stock right transfer is the interested party: NA.

(iii) Information that the counterpart in the director, supervisor, manager and substantial shareholder's pledge of stock right is the interested party: NA.

viii Information that the top ten shareholders in shareholding are of interested party, spouse or relatives within second degree relationship mutually:

April 29, 2019 Unit: thousand shares; %

Name	Individual shareholding		Shareholding of spouse, minor children		Total shareholding in the name of other person		If the top ten shareholders are of interested party, spouse or relatives within second degree relationship mutually, the name of or relationship between them.		notes
	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Number of shares	Shareholding ratio	Name	Relationship	
Yi Tai Investment Co., Ltd.	25,765	14.88	0	0	0	0	Hui Hong Investment Ruentex Industries Ltd.	Enterprise under the same Group	NA
Representative of Yi Tai Investment Co., Ltd.: Zhang Kunlong	0	0	0	0	0	0	NA	NA	NA
Hui Hong Investment Co., Ltd.	15,545	8.98	0	0	0	0	Yi Tai Investment Co., Ltd. Ruentex Industries Ltd.	Enterprise under the same Group	NA
Representative of Hui Hong Investment Co., Ltd.: Yin, Yen-Liang	0	0	0	0	0	0	NA	NA	NA
Ruentex Industries Ltd.	7,868	4.54	0	0	0	0	Yi Tai Investment Co., Ltd. Hui Hong Investment Co., Ltd.	Enterprise under the same Group	NA
Representative of Ruentex Industries Ltd.: Wang Qifan	0	0	0	0	0	0	NA	NA	NA
British Virgin Islands Alpha Corporate Holdings, Ltd.	4,936 (Notes)	2.85	0	0	0	0	NA	NA	NA
Representative of British Virgin Islands Alpha Corporate Holdings, Ltd..:Ken, Chung-Hsuan	27	0.02	0	0	0	0	NA	NA	NA

Hsu, Ching-Hsiang	3,474	2.01	0	0	0	0	NA	NA	NA
Michael N. Chang	2,361	1.36	0	0	0	0	NA	NA	NA
Norges Bank	2,343	1.35	0	0	0	0	NA	NA	NA
Special investment account in Bank in Liechtenstein under trustee custody of JP Morgan	2,090	1.21	0	0	0	0	NA	NA	NA
JPMorgan Chase Bank N.A. Taipei Branch in custody for Vanguard Total International Stock Index Fund a series of Vanguard Star Funds	2,012	1.16	0	0	0	0	NA	NA	NA
Special account for stock index fund in Van Gogh Gard emerging market under trustee custody of JP Morgan	1,907	1.10	0	0	0	0	NA	NA	NA

(Notes) It includes the number of shares held by British Virgin Islands merchant Alpha Corporate Holdings, Ltd. and the special investment account of British Virgin Islands merchant Alpha Holdings, Co., Ltd. under trustee custody of E.Sun Bank.

ix Number of shareholding of the Company; the director, supervisor, manager of the Company, and the enterprise under direct or indirect control of the Company in the same reinvestment enterprise, and the consolidated comprehensive shareholding ratio:

April 30, 2019 Unit: share; %

Reinvestment enterprise (Notes 1)	Investment of the Company		Investment of director, supervisor, managerial officer and enterprise under direct or indirect control		Comprehensive investment	
	Number of shares	Shareholding ratio	Number of shares		Number of shares	Shareholding ratio
OBI Pharma Limited	1,150,000	100%	0	0%	1,150,000	100%
OBI Pharma (Shanghai) Limited (Notes 2)	0	0%	0	100%	0	100%
OBI PHARMA USA, INC.	2,701,000	100%	0	0%	2,701,000	100%
AP Biosciences, Inc	8,040,000	67%	0	0%	8,040,000	67%
OBI PHARMA AUSTRALIA PTY LTD	650,100	100%	0	0%	650,100	100%
Ablogix Inc. (Notes 3)	0	0%	0	0%	0	0%

Notes 1: It is the investment of company by adopting Equity Method. The Company had completed the incorporation registration of Hong Kong OBI Pharma Limited, OBI Pharma (Shanghai) Limited, OBI PHARMA USA, INC. and OBI PHARMA AUSTRALIA PTY LTD in November 2012, March 2013, April 2013 and June 2018 respectively. The Company issued new shares to reinvest in AP Biosciences, Inc. by transferring the shares of Ablogix Inc. in January 2018.

Notes 2: Hong Kong OBI Pharma Limited has reinvested in OBI Pharma (Shanghai) Limited in capital and has no shares.

Notes 3: Ablogix Inc. has been dissolved in March 2018.

IV. Fundraising Situation

i Capital and stock

(i) Sources of share capital (in the last five years):

April 30, 2019 Unit: thousand shares; NT$thousand

Month & Year	Issue price	Authorized share capital		Paid-up share capital		Notes		
		Number of shares	Amount	Number of shares	Amount	Sources of share capital	Compensation of shares payment with property other than cash	Other
March 2014	Employee stock subscription: NT$10	150,000	1,500,000	149,189	1,491,892	193 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10301044610 Letter on March 14, 2014
July 2014	Employee stock subscription: NT$10	150,000	1,500,000	149,786	1,497,857	597 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10301128410 Letter on July 2, 2014
August 2014	Employee stock subscription: NT$10	150,000	1,500,000	149,876	1,498,762	90 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10301165080 Letter on August 12, 2014
October 2014	Employee stock subscription: NT$10	150,000	1,500,000	149,994	1,499,935	117 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10301211920 Letter on October 8, 2014
January 2015	Employee stock subscription: NT$10	300,000	3,000,000	150,267	1,502,672	273 thousand shares of employee subscription right have been	NA	Approved by Shou-Shang-Zi No. 10401006770 Letter on January 16, 2015

						executed		
March 2015	Cash capital increase: NT$310	300,000	3,000,000	170,267	1,702,672	Cash capital increase of 20,000 thousand shares	NA	Approved by Shou-Shang-Zi No. 10401056370 Letter on March 30, 2015
April 2015	Employee stock subscription: NT$10	300,000	3,000,000	170,656	1,706,564	389 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10401071630 Letter on April 27, 2015
July 2015	Employee stock subscription: NT$10	300,000	3,000,000	170,697	1,706,974	41 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10401172200 Letter on August 18, 2015
October 2015	Employee stock subscription: NT$10	300,000	3,000,000	170,720	1,707,120	23 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10401249070 Letter on November 27, 2015
January 2016	Employee stock subscription: NT$10 NT$247.40	300,000	3,000,000	170,970	1,709,702	250 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10501028350 Letter on February 15, 2016
April 2016	Employee stock subscription: NT$10 NT$214.42, NT$227.62, NT$247.40	300,000	3,000,000	171,200	1,711,995	230 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10501117520 Letter on June 2, 2016
July 2016	Employee stock subscription: NT$10 NT$214.42, NT$227.62, NT$247.40	300,000	3,000,000	171,465	1,714,645	265 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10501212150 Letter on August 29, 2016

October 2016	Employee stock subscription: NT$10 NT$214.42, NT$227.62, NT$247.40	300,000	3,000,000	171,584	1,715,838	119 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10501276980 Letter on November 30, 2016
January 2017	Employee stock subscription: NT$10 NT$214.42, NT$247.40	300,000	3,000,000	172,013	1,720,132	429 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10601039450 Letter on March 27, 2017
April 2017	Employee stock subscription: NT$214.42 NT$227.62, NT$247.40	300,000	3,000,000	172,061	1,720,610	48 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10601070650 Letter on June 2, 2017
July 2017	Employee stock subscription: NT$214.42, NT$247.40	300,000	3,000,000	172,116	1,721,156	54 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10601123450 Letter on August 29, 2017
October 2017	Employee stock subscription: NT$10	300,000	3,000,000	172,166	1,721,656	50 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10601151380 Letter on November 7, 2017
January 2018	Share exchange: NT$10	300,000	3,000,000	173,841	1,738,406	Issue 1,675 thousand new shares	NA	Approved by Shou-Shang-Zi No. 10701013600 Letter on February 7, 2018
January 2018	Employee stock subscription: NT$10	300,000	3,000,000	173,991	1,739,906	150 thousand shares of employee subscription right have been executed	NA	Approved by Shou-Shang-Zi No. 10701013620 Letter on February 9, 2018
March 2019	Treasury share capital decrease: NT$10	300,000	3,000,000	173,129	1,731,286	862 thousand treasury shares have	NA	Approved by Shou-Shang-Zi No. 10801033180 Letter on March 26, 2019

						been canceled		

April 29, 2019 Unit: share; %

Class of shares	Authorized share capital			Notes
	Outstanding shares	Unissued shares	Total	
Ordinary shares	173,128,674	126,871,326	300,000,000	OTC shares

(ii) Shareholder structure:

April 29, 2019 Unit: thousand shares

Shareholder structure / Quantity	Government institution	Financial institution	Other juridical person	Individual person	Foreign institution and foreigner	Total
Number of person	0	1	175	19,120	143	19,439
Number of shareholding	0	200	57,305	92,920	22,703	173,128
Shareholding ratio (%)	0	0.12	33.10	53.67	13.11	100

(iii) Dispersion of stock right

April 29, 2019 Unit: thousand shares

Classification of shareholding		Number of shareholders	Number of shareholding	Shareholding ratio (%)
1 to	999	4,280	318	0.184
1,000 to	5,000	12,312	23,798	13.746
5,001 to	10,000	1,425	10,974	6.339
10,001 to	15,000	476	6,064	3.503
15,001 to	20,000	282	5,090	2.940
20,001 to	30,000	214	5,429	3.136
30,001 to	50,000	207	8,159	4.712
50,001 to	100,000	123	8,965	5.178
100,001 to	200,000	60	8,446	4.879
200,001 to	400,000	29	8,105	4.681
400,001 to	600,000	6	3,116	1.800
600,001 to	800,000	3	2,296	1.326
800,001 to	1,000,000	2	1,711	0.988
1,000,001 above		20	80,657	46.588

Total	19,439	173,128	100.000

(ix) List of major shareholders:

Name, shareholding amount and proportion of the shareholders with over five percent share proportion or the top ten shareholders in share proportion

April 29, 2019; Unit: thousand shares; %

Share / Name of major shareholders	Number of shareholding	Shareholding ratio
Yi Tai Investment Co., Ltd.	25,765	14.88%
Hui Hong Investment Co., Ltd.	15,545	8.98%
Ruentex Industries Ltd.	7,868	4.54%
British Virgin Islands merchant Alpha Corporate Holdings, Ltd.	4,936 (notes)	2.85%
Hsu, Ching-Hsiang	3,474	2.01%
Michael N. Chang	2,361	1.36%
Norges Bank	2,343	1.35%
Special investment account in Bank in Liechtenstein under trustee custody of JP Morgan	2,090	1.21%
JPMorgan Chase Bank N.A. Taipei Branch in custody for Vanguard Total International Stock Index Fund a series of Vanguard Star Funds	2,012	1.16%
Special account for stock index fund in Van Gogh Gard emerging market under trustee custody of JP Morgan	1,907	1.10%

(Notes) It includes the number of shares held by British Virgin Islands Alpha Corporate Ltd. and the special investment account of British Virgin Islands Alpha Co., Ltd. under trustee custody of E.Sun Bank.

(v) Market price, net value, earnings, dividend per share and relevant materials in the last two years:

Unit: NT$; thousand shares

Item / Year		2017	2018	As at April 30, 2019
Market price per share	Maximum	368	196.50	192
	Minimum	135	118	151.50
	Average	240.85	163.51	172.73
Net value per share	Before distribution	29.39	24.98	24.14
	After distribution	29.39	24.98	24.14
Earnings per share	Weighted-average shares	171,140	173,080	173,129
	Earnings per share	(8.06)	(7.06)	(1.23)

Item \ Year			2017	2018	As at April 30, 2019
Dividend per share	Cash dividend		Not applicable	Not applicable	Not applicable
	Stock grants	Not applicable	Not applicable	Not applicable	Not applicable
		Not applicable	Not applicable	Not applicable	Not applicable
	Accumulated unpaid dividends		Not applicable	Not applicable	Not applicable
Return on investment analysis	Price-to-earnings ratio		Not applicable	Not applicable	Not applicable
	Price-to-dividend ratio		Not applicable	Not applicable	Not applicable
	Cash dividend yield (%)		Not applicable	Not applicable	Not applicable

Notes: Financial information in 2017 and 2018 have been audited and certified by the accountant. In the table, net value per share and earnings per share as at April 30, 2019 in current year is the data of the first quarter in 2019 examined by the accountant.

(vi) Corporate dividend policy and execution condition:

1. Dividend policy stipulated in Articles of Incorporation of the Company:

If the annual general final accounts of the Company have surplus, taxes shall be withheld and accumulated losses shall be covered first, and then 10% will be allocated as statutory surplus reserve, as for the rest thereof, apart from dividend distribution, if there is still surplus, shareholder dividend will be distributed according to the resolution of Shareholders' Meeting. The operating business of the Company belongs to capital intensive industry, and currently the Company is at the stage of operating growth and shall reserve surplus in respond to the funds needed for operating growth and investment, in principle, the Company will adopt balance dividend policy, mutually matched with part stock dividend and part cash dividend, among them, in principle, the cash dividend shall not be lower than 10% of the total dividend issued. Provided the type and ratio of such surplus distribution shall be proposed to Board of Directors for drafting a proposal according to the actual profit and capital position of the current year, and then it shall be resolved in Shareholders' Meeting. In principle, the surplus distribution proposal planned by Board of Directors shall not be less than 10% of distributable surplus, and the cash dividend shall not be less than 10% of total dividend.

2. Situation of dividend distribution to shareholders planned to be (already) discussed in this year:

The Company had no surplus in 2018, and there was no surplus distribution, hence it was not applicable.

(vii) The impact of stock grants proposed by Shareholders' Meeting this time on company business performance and earnings per share: as passed in board

resolution on March 8, 2019, stock dividend is not distributed due to recovery of losses, hence it is not applicable.

(viii) Employee, director and supervisor remuneration:

1. Percentage or scope of remuneration of employee, director and supervisor stated in Articles of Association:
   If the Company has annual profit, it shall be allocated no less than two percent as employee remuneration and no more than two percent as director remuneration. But when the Company still has accumulated losses, it shall reserve the compensation amount in advance.
   Employee remuneration will be paid in stock or cash, which shall be resolved by the consent of more than half of attending directors in the board meeting attended by more than two third of directors, and reported to the Shareholders' Meeting.
   The object of issuing remuneration in stock or cash mentioned in preceding paragraph may include employees subordinated to the company and conforming to certain conditions, and the conditions and methods thereof will be stipulated by Board of Directors.
2. Estimation base of employee, director and supervisor remuneration in this estimation, the number of shares calculation base for employee remuneration in stock distribution, and accounting treatment when the actual distribution amount is different from and estimated amount:
   (1) Employee, director and supervisor remunerations are not estimated due to the losses in this period.
   (2) If the distribution amount resolved in Shareholders' Meeting is different from the estimated amount in financial statement, it will be deemed as estimated change and listed as distribution of current profits and losses.
3. Situation of remuneration distribution as passed by Board of Directors: the Company had no surplus available for distribution in 2018, hence it was not applicable.
4. For the actual distribution situation of employee, director and supervisor remuneration in last year (including distributed shares, amount and stock price), if it is different from the recognized employee, director and supervisor remuneration, the balance, reason and handling situation shall be specified: the Company had no surplus available for distribution in the last year, hence it was not applicable.

(ix) Situation of the Company in buying back the shares of the Company:

April 30, 2019

Buyback phase	First time (phase)
Buyback purpose	Transfer shares to employees
Buyback period	From February 25, 2016 to April 24, 2016
Buyback interval price	NT$348-933
Class and quantity of shares bought back	862,000 ordinary shares
Amount of shares bought back	NT$386,720,591
Quantity of shares eliminated and transferred	862,000 shares
Accumulated quantity of company shares held	0 share
Proportion of accumulated quantity of company shares held in total shares issued (%)	0.00%

ii Handling situation of corporate bonds: NA.

iii Handling situation of special shares: NA.

iv Handling situation of issuing global depository receipt: NA.

v Handling situation of employee stock option certificate

(i) Handling situation of employee stock option certificate:

April 30, 2019

Type of employee stock option certificate	First time (phase) employee stock option certificate	Second time (phase) employee stock option certificate
Effective registration date	Not applicable (Notes 1)	July 9, 2013
Issuing date	March 8, 2010	November 27, 2013
Duration	10 years	10 years
Number of issuing unit	7,996,000	4,140,000
Proportion of total shares issued for subscription in total issued shares	4.62%	2.39%
Period available for subscription	One year after the subscription right has been granted with employee stock option certificate	Two years after the subscription right has been granted with employee stock option certificate

Method of performance	Issue new shares for delivery	Issue new shares for delivery
Limited subscription period and proportion (%)	25% subscription right can be exercised after 1 year 50% subscription right can be exercised after 2 years 75% subscription right can be exercised after 3 years 100% subscription right can be exercised after 4 years Starting from the second year, the subscription right can be exercised in equal proportion on monthly basis ever year.	50% subscription right can be exercised after 2 years (namely starting from the third year) Within 24 months after 2 years, for every expiration of one month, the accumulated maximum exercisable subscription proportion will increase by 1/48 75% subscription right can be exercised after 3 years 100% subscription right can be exercised after 4 years (namely starting from the fifth year)
Executed number of shares obtained	5,968,081 shares	853,922 shares
Executed subscription amount	NT$59,680,810	NT$195,915,194
Unexecuted subscription quantity	2,027,919 shares (Notes 2)	3,286,078 shares (Notes 2)
Subscription price per share for those who have not executed the subscription	NT$10	NT$247.40; NT$214.42; NT$227.62 (Notes 3)
Proportion of unexecuted subscription quantity in total shares issued (%)	1.17%	1.90%
Impact on shareholders' rights and interests	The Company's issue of employee stock option certificate aims at attracting and retaining professional talents, and encouraging and improving employees' centripetal force and productivity, so as to jointly create company and shareholder benefits, it has positive impact on the shareholders' equity.	

Type of employee stock option certificate	Third time (phase) employee stock option certificate	Fourth time (phase) employee stock option certificate
Effective registration date	April 15, 2015	January 20, 2017
Issuing date	May 6, 2015	March 9, 2017

Duration	10 years	10 years
Number of issuing unit	4,679,000	5,000,000
Proportion of total shares issued for subscription in total issued shares	2.70%	2.89%
Period available for subscription	Two years after the subscription right has been granted with employee stock option certificate	Two years after the subscription right has been granted with employee stock option certificate
Method of performance	Issue new shares for delivery	Issue new shares for delivery
Limited subscription period and proportion (%)	50% subscription right can be exercised after 2 years (namely starting from the third year) Within 24 months after 2 years, for every expiration of one month, the accumulated maximum exercisable subscription proportion will increase by 1/48 75% subscription right can be exercised after 3 years 100% subscription right can be exercised after 4 years (namely starting from the fifth year)	50% subscription right can be exercised after 2 years (namely starting from the third year) Within 24 months after 2 years, for every expiration of one month, the accumulated maximum exercisable subscription proportion will increase by 1/48 75% subscription right can be exercised after 3 years 100% subscription right can be exercised after 4 years (namely starting from the fifth year)
Executed number of shares obtained	0 share	0 share
Executed subscription amount	NT$0	NT$0
Unexecuted subscription quantity	4,679,000 shares (Notes 2)	5,000,000 shares (Notes 2)
Subscription price per share for those who have not executed the subscription	NT$334; NT$283; NT$422; NT$727; NT$420 (Notes 3)	NT$326; NT$261; NT$191; NT$169; NT$170.50 (Notes 3)
Proportion of unexecuted subscription quantity in total shares issued (%)	2.70%	2.89%

Impact on shareholders' rights and interests	The Company's issue of employee stock option certificate aims at attracting and retaining professional talents, and encouraging and improving employees' centripetal force and productivity, so as to jointly create company and shareholder benefits, it has positive impact on the shareholders' equity.

Notes 1：The Company was not a public company when issuing employee stock option certificate, hence it was passed in the resolution of Board of Directors Meeting held on March 8, 2010 by the Company according to Article 167-2 of Company Act.

Notes 2：From the first time (phase) to fourth time (phase), the number of shares retrieved upon dimission and included in unexecuted employee stock option certificates are 1,570,419; 833,710; 1,671,718; and 1,043,000 shares respectively.

Notes 3：It is issued respectively per board resolution, hence the subscription price per share is otherwise determined pursuant to law

(ii) Name of managers acquiring employee stock option certificate and top ten employees acquiring subscription quantity in stock option certificate, acquisition and subscription situation:

Unit: thousand shares; NT$thousand

First time employee subscription right	Title	Name	Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
					Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued	Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued
Manager	Vice Chairman and Global Clinical and Legal Chief Planner (Resigned)	Youe-Kong Shue	6,180	3.57%	4,762	10	47,620	2.75%	1,418	10	14,180	0.82%
	General Manager	Amy Huang										
	Chief Scientific Officer & Executive Vice President	Tony Yu										
	Vice President, Quality Assurance(Resigned)	Richard Tseng										

First time employee subscription right	Title	Name	Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
					Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued	Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued
	Director of Clinical Medicine Division (Resigned)	Yuxin Lin										
	Senior R&D Director (Resigned)	Weicheng Liao										
	Director of Business Development Division (Resigned)	Minshuo Li										
	Vice President, Finance (Resigned)	CT Wang										
	Senior Manager, Audit Office	Neo Chien										
	Director of Human Resources Division (Resigned)	Peihua Bao										
Employee	Senior Manager	Suifen Zhang	1,064	0.61%	583	10	5,832	0.34%	481	10	4,808	0.28%
	Director of Financial Division (Resigned)	Xuemei Yao										
	Manager of Clinical Operation Division (Resigned)	Yuman Huang										
	Senior Admin Manager of R&D Division	Lina Ke										

First time employee subscription right	Title	Name	Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
					Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued	Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued
	Manager of R&D Division of American subsidiary (Resigned)	Zhengqi Wang										
	Manager of Pharmacy R&D Division (Resigned)	Jiaxin Xiao										
	Deputy Director of Product Planning Division (Resigned)	Huihua Wu										
	Senior Manager in immune antibody, R&D Division	Yiru Chen										
	Researcher of R&D Division (Resigned)	Jingyi Zhuang										
	Deputy Director, Clinical Operation (Resigned)	Jingrong Zhang										

Unit: thousand shares; NT$thousand

Second time employee subscription right	Title	Name	Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
					Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued	Subscription quantity	Subscription price (NT$)	Subscription amount	Proportion of subscription quantity in total shares issued
Manager	General Manager	Amy Huang	1,535	0.89%	133	214.42 ~	30,026	0.08%	1,402	214.42 ~	318,238	0.81%

	Chief Operating Officer (Resigned)	Joanna Meng				247.40				247.40		
	Chief Scientific Officer & Executive Vice President	Tony Yu										
	Vice President, Quality Assurance(Resigned)	Richard Tseng										
	Vice President of Research, R&D Division	Jiann-Shiun Lai										
	Director in chemical pharmacy, R&D Division	Edward Hsieh										
	Director, Clinical Operation (Resigned)	Maggie Yang										
	Vice President, Finance (Resigned)	CT Wang										
	Director, Human Resources & Administration(Resigned)	Rose Lo										
	Senior Manager of Audit Office	Neo Chien										
Employee	Chief Business Officer of American subsidiary	Kevin Poulos	1,470	0.85%	170	214.42 ~ 247.40	41,387	0.10%	1,300	214.42 ~ 247.40	310,553	0.75%

	Chief Operating Officer of American subsidiary	Mitch Che										
	Global Pharmaceutical & Legal Deputy General Manager of American subsidiary	David Hallinan										
	Deputy Director, Human Resources & Administration of American subsidiary	Dee Warren										
	Business Information Director, Commercial Division	Pedro Chen										
	Director of Investor Relations Department (Resigned)	Gus Adapon										
	Deputy Director of Information and Procurement Division (Resigned)	Junbo Zhang										
	Director, Public Relations & Government Affairs	Sharon Lee										

	Manager of R&D Division of American subsidiary (Resigned)	Zhengqi Wang										
	Senior Manager of Procurement Division	Irene Sun										

Unit: thousand shares; NT$thousand

Third time employee subscription right	Title	Name		Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
						Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)
Manager	Chief Medical Officer and Deputy General Manager for Clinical Drug Research and Development (Resigned)	Nathan Chen		2,265	1.31%	0	334 ~ 420	0	0%	2,265	334 ~ 420	807,852	1.31%
	Vice President, Translational Medicine, R&D Division (Resigned)	Phoebe Yu											
	General Manager	Amy Huang											
	Director, Commercial Medicine (Resigned)	Jon Jih Liao											
	Chief Scientific Officer & Executive Vice President	Tony Yu											
	Chief Operating Officer (Resigned)	Joanna Meng											
	Vice President, Quality Assurance(Resigned)	Richard Tseng											
	Vice President of Research, R&D Division	Jiann-Shiun Lai											

	Vice President, Finance (Resigned)	CT Wang											
	Director, Human Resources & Administration (Resigned)	Rose Lo											
	Director, R&D	Edward Hsieh											
	Director, Clinical Operation (Resigned)	Maggie Yang											
	Director, Commercial	Pedro Chen											
	Director of Investor Relations Department (Resigned)	Gus Adapon											
	Director, Public Relations & Government Affairs	Sharon Lee											
	Senior Manager of Audit Office	Neo Chien											
Employee	Chief Business Officer of American subsidiary	Kevin Poulos		1,094	0.63%	0	334 ~ 422	0	0%	1,094	334 ~ 422	413,190	0.63%
	Senior Business Development Director in Asia Pacific	Xiaofeng Yu											
	Chief Operating Officer of American subsidiary	Mitch Che											
	Global Pharmaceutical & Legal Deputy General Manager of American subsidiary	David Hallinan											
	Deputy Director of Clinical R&D Division	Lance Ou											
	Deputy Director of Information Division(Resigned)	Amos Yang											

	Director, Legal Affairs and Intellectual Property(Resigned)	Jay Chen											
	Pharmaceutical & Legal Deputy Director of American subsidiary	Patricia Ha											
	Deputy Director, Human Resources & Administration of American subsidiary	Warren Dee											
	Senior Manager of Clinical Project Group, Clinical Operation Division	Lisa Liang											

Unit: thousand shares; NT$thousand

Fourth time employee subscription right	Title	Name	Acquired subscription quantity	Proportion of acquired subscription quantity in total shares issued	Executed				Unexecuted			
					Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)	Subscription quantity	Subscription price (NT$)
Manager	Chief Financial Officer	Max Chan	1,813	1.05%	0	169 ~ 326	0	0%	1,813	169 ~ 326	531,331	1.05%
	Vice President, Statistic & Biometrics	Sophia Lee										
	General Manager	Amy Huang										
	Medical Division (Resigned)	Cristina Chang										
	Chief Scientific Officer and Executive Vice President	Tony Yu										
	Vice President, Quality Assurance(Resigned)	Richard Tseng										
	Vice President, Finance (Resigned)	CT Wang										
	Vice President of Research, R&D Division	Jiann-Shiun Lai										

	Director, Human Resources & Administration (Resigned)	Rose Lo										
	Director, R&D	Edward Hsieh										
	Director, Clinical Operation	Maggie Yang										
	Director of Investor Relations Department (Resigned)	Gus Adapon										
	Director, Commercial	Pedro Chen										
	Director, Public Relations & Government Affairs	Sharon Lee										
	Director, Commercial Medicine	Jon Jih Liao										
	Director, Legal Affairs and Intellectual Property(Resigned)	Jay Chen										
	Director of Supply Chain Division	Tyro Shyu										
	Accounting Manager of Financial Division	Colin Kao										
Employee	General Manager of AP Biosciences, Inc.	He Zhenghong	1,050	0.61%	0	170.50 ~ 326	0	0%	1,050	170.50 ~ 326	251,332	0.61%
	Chief Operating Officer of American subsidiary	Mitch Che										
	Chief Business Officer of American subsidiary	Kevin Poulos										
	Global Pharmaceutical & Legal Deputy General Manager of American subsidiary	David Hallinan										
	Director of R&D Division of AP Biosciences, Inc.	You Zhongzhe										

	Senior Business Development Director in Asia Pacific	Xiaofeng Yu										
	Pharmaceutical & Legal Deputy Director of American subsidiary	Patricia Ha										
	Deputy Director of Clinical R&D Division	Lance Ou										
	Deputy Director of Information Division(Resigned)	Amos Yang										
	Deputy Director, Human Resources & Administration of American subsidiary	Warren Dee										

vi Handling situation of restricted stock awards: NA.

vii Handling situation of acquiring or transferring shares of other company to issue new shares:

In order to strengthen the capacity in research and development of new antibody drugs, per board resolution on October 20, 2017, by issuing new shares, the Company will use 1,675,000 shares of OBI in exchange for 6,700,000 shares of AP Biosciences, Inc. (accounting for 67% of outstanding shares) held by its shareholder ABPROTIX INC., through cooperation with AP Biosciences, Inc., which owns entire human antibody library, antibody drugs development platform, antibody optimization technology and Bi-Specific Antibody technology, it will improve the product competitiveness and new drug development capacity of the Company.

Per approval by Chairman of the Company on December 29, 2017, the base date determined for issuing new shares by capital increase is January 10, 2018. The aforesaid issue of new shares for capital increase has been approved by the Jin-Guan-Zheng-Fa-Zi No. 1060048379 Letter issued by Financial Supervisory Commission on December 22, 2017.

With respect to the issue of new shares for the transfer of shares of AP Biosciences, Inc., please refer to the next page for the evaluation opinion issued by the lead securities underwriter (Masterlink Securities) in the last quarter.

Table of basic information on companies being merged and transferred is as follows:

Unit: NT$ thousand, the unit for earnings per share is NT$one dollar

Company name		AP Biosciences, Inc.
Company address		17F, No. 3, Park Street, Nangang District, Taipei City
Responsible person		Lin Hongda
Paid-up capital		120,000
Main business items		Biotechnology service industry
Major products		Research and development of protein drugs and antibody drugs
Financial information in the last year	Total assets	65,245
	Total liabilities	2,063
	Total amount of shareholders' equity	63,182
	Operating income	22,464
	Gross profit	17,177
	Operating profit and loss	(46,232)
	Current profit and loss	(45,549)
	Earnings per share	(4.31)

With respect to the issue of new shares for the transfer of shares of AP Biosciences, Inc., please refer to the next page for the evaluation opinion issued by the lead securities underwriter (Masterlink Securities) in the last quarter.

Lead Underwriter's Evaluation Opinion on the Issue of New Shares by OBI Pharma, Inc. for the Transfer of Shares of AP Biosciences, Inc. in 2017

For the transfer of 6,700,000 outstanding shares of AP Biosciences, Inc. (hereinafter referred to as AP) to OBI Pharma, Inc. (hereinafter referred to as OBI Pharma) in 2017, it has been reported and become effective for the record according to the Jin-Guan-Zheng-Fa-Zi No. 1060048379 Letter issued by Financial Supervisory Commission on December 22, 2017, the base date for equity swap is January 10, 2018, and OBI has completed the equity change registration on February 9, 2018. Pursuant to Subparagraph 8, Paragraph 1, Article 9 of "Guidelines for Issuer to Raise and Issue Negotiable Securities", within one year after the completion of registration, OBI shall ask the original lead underwriter to issue evaluation opinion on the impact of the receiving shares of AP on the financial affairs, business and shareholders' equity of OBI Pharma on a quarterly basis. Regarding the examination results of underwriter and OBI Pharma's receiving shares of AP, for the evaluation opinion on the impact on financial affairs, business and shareholders' equity of OBI Pharma, it is hereby described one by one as follows:

I. Impact of receiving shares of other company on financial affairs

As far as financial affairs are concerned, after receiving shares of AP by issuing new shares, AP becomes the subsidiary of OBI Pharma with 67% shareholding. Since the authorization object of pre-clinical bifunctional fusion protein new drug IBI302 of AP has proposed human investigational new drug application to China CFDA, it has achieved the phased objective, hence the milestone payment of USD250 thousand (equivalent to NT$7,358 thousand) was received according to contract in January 2018; together with other revenue, in the 2018, the combined revenue of OBI Pharma in self-settlement is NT$13,339 thousand, increased by NT$12,963 thousand year on year. Accordingly, after OBI Pharma's receiving the outstanding shares of AP, it shall have positive benefits to the revenue of the company. Besides, given that both OBI Pharma and AP are new drug research and development companies, they shall have sufficient working capital to support the needs in research and development, per examination, as at the end of March, the owned fund of OBI Pharma is NT$3,560,974 thousand, hence there should be no risk of immediate shortage of funds. To sum up, as at the end of fourth quarter of 2018, after OBI Pharma's receiving of outstanding shares of AP, it has no significant impact on the financial affairs of OBI Pharma.

II. Impact of receiving shares of other company on business

As far as business is concerned, apart from focusing on antibody humanization and optimization technology, with its own entire human antibody library, AP has also developed several Immune Checkpoint Inhibitors and Bi-Specific Antibody that are still under early research and development stage. After completion of this shares transfer, apart from that AP will continue to execute the research project related to the optimization of carbohydrate antigen monoclonal antibody as appointed by OBI Pharma, R&D teams of two companies have also carried out close cooperation, including the development of

potential cancer immunology combined therapy and Bi-Specific Antibody etc. OBI's depth of the energy in research and development of new anti-cancer drugs and scope of product portfolio are expected to improve due to the joining of R&D team of AP, and it is expected to help to facilitate more international cooperation possibilities and business opportunities.

III. Impact of receiving shares of other company on shareholders' equity

After completion of transfer, the number of shares issued by OBI Pharma in aforesaid case is only 1,675 thousand shares, only accounting for 0.96% of the total outstanding shares of 173,991 thousand shares as at the end of fourth quarter of 2018, it shall have no significant adverse dilution effect or impact on existing shareholders of OBI Pharma. Besides, the cooperation of R&D technologies between both parties shall be able to strengthen corporate competitiveness and facilitate the R&D progress, and further improve the success probability in new drugs research and development, accomplishing the maximization of shareholders' equity, corporate sustainable operation as well as the mission of bringing benefits to all mankind while rooting in Taiwan. To sum up, after OBI Pharma's issue of new shares for transfer of shares of AP, it shall have positive benefits to the shareholders' equity of OBI Pharma.

IV. Whether the benefits in transfer have been shown

(1) Strengthen the technology in developing new antibody drugs in the field of cancer

After the shares transfer between OBI Pharma and AP, apart from carrying out antibody optimization research and development regarding Globo Series carbohydrate antigen monoclonal antibody, both parties will also seek for R&D objects of development value by screening the entire human antibody library of AP. Since technologies of OBI Pharma and AP have been cooperating closely, it should be helpful to improve both parties' R&D energy in developing new antibody drugs, optimizing OBI Pharma's technology in developing new antibody drugs in the field of cancer.

(2) Expand product line of the company and spread R&D risks

After the transfer, AP has become the subsidiary of OBI Pharma, AP owns the entire human antibody library platform and experience in antibody optimization technology, meanwhile, together with the Immune Checkpoint Inhibitors and Bi-Specific Antibody under development currently, as well as the bifunctional fusion protein drug for ocular lesions which is already licensed externally, it has expanded the R&D fields of OBI Pharma preliminarily; in the future, after the completing the development of new drugs, it will expand the product line of OBI Pharma and spread R&D risks.

viii Execution of fund application plan

(1) Plan contents: as at the first quarter of 2019, the previous cash capital increase plan has been completed, contents are as follows:

1. Date of approval by competent authority of target business and document No.: approved by Zheng-Gui-Shen-Zi No. 1030035504 Letter on January 16, 2015.
2. Total fund needed in this plan: NT$6,200,000 thousand.
3. Fund source: issue 20,000,000 ordinary shares in cash capital increase, the issuing price per share is NT$310, and the total fund-raising is NT$6,200,000 thousand.

(2) Plan progress and application situation:

Unit: NT$ thousand

Plan item	Expected completion date	Total fund needed	Expected fund application progress
			2015
			First quarter
Enrich working capital	March 2015	6,200,000	6,200,000

(3) Fund application situation and plan execution condition: The cash capital increase of NT$6,200,000 thousand has completed the fund-raising in March 2015, it will be used for enriching working capital according to the execution progress of plan; the current ratio, liquidity ratio and debt ratio etc. after capital increase are better than those before capital increase, and the allocation of fund necessary for future research and development of the Company will increase the future operation stability of the Company, so the execution effect of cash capital increase is good.

Unit: %

Item/Year	December 2014 (Before cash capital increase)	March 2015 (After cash capital increase)
Current ratio	2,118.82	12,523.99
Liquidity ratio	2,035.23	12,457.36
Debt ratio	2.97	0.74

(4) Date of inputting in the information declaration website designated by Financial Supervisory Commission: March 19, 2015.

V Operation Overview

i Business content

(1) Business scope:

1- Major contents of operating business:

(1) IG01010 Biotechnology Services.
(2) F108021 Wholesale of Drugs and Medicines.
(3) F208021 Retail Sales of Drugs and Medicines.
(4) F401010 International Trade.
(5) IG02010 R&D Services.
(6) F601010 Intellectual Property Rights.

2- Operating proportion of major products in 2018:

In 2018, new drug products are still in the research and development stage, so there is no operating income for the main products of the year. The company's 2018 operating income was NT$13,339,000, which was an increase from the previous year, mainly due to the recognizing Dificid Taiwan sales premium, the authorization income recognized by the subsidiary Yuanxiang, and the sales revenue of raw materials.

3- Product lines of the Company under development are as follows:

(1) OBI-822 breast cancer active immuno-oncology drug: OBI-822 links the Globo H carbohydrate molecules to the surface of carrier protein KLH, after subcutaneous injection, it will facilitate human body to generate antibody against Globo H. Global phase III clinical trial of OBI-822 will measure the testees' degree of tumor carbohydrate antigen Globo H performance by immunohistochemistry, and screen testees of higher Globo H performance to enter into clinical trial; it will take patients of Triple Negative Breast Cancer (TNBC) with unmet medical need as the test object, it is predetermined to recruit totally 668 testees from USA, Europe, Asia and Australia etc.

(2) OBI-833 new generation Globo H active immuno-oncology drug, active cancer immunotherapy: OBI-833 clinical phase I safety assessment has been completed, and one of the dosages is selected to enter into the cohorts expansion (Expansion Cohort Phase) trial taking lung cancer patients as the receiving target.

(3) OBI-866 SSEA-4 active immuno-oncology drug: currently it is at the stage of animal experiment, and it has already verified that it can trigger the generation of exclusive antibody in mouse body, tests related to tumor inhibitation effect are ongoing.

(4) OBI-888 Globo H passive immunity monoclonal antibody: OBI-888 is the passive immunotherapy monoclonal antibody designed taking Globo H as the target. The Patent Cooperation Treaty (PCT) has entered into the examination procedure (National phase) of each country, currently it has acquired patent in USA, Taiwan and South Africa. No significant adverse reaction is found in the unit-dose toxicity test of primates, it has completed the pathologic analysis of pre-clinical repeated-dose toxicity test, it has acquired approval from US Food and Drug Administration (FDA) in January 2018 to carry out phase I clinical trial, and it has been receiving cases in the world-renowned MD Anderson Cancer Center. The included trial is expected to begin in the third quarter of 2019.

(5) OBI-999 Globo H Antibody Drug Conjugate/ADC: this product will utilize Globo H antibody to identify the cancer cells of high Globo H performance, by means of releasing micromolecule chemotherapeutic drugs through the specificity of antibody, direct cytotoxicity therapy will be carried out targeting the cancer cells of high Globo H performance. It has completed the animal pharmacological test, and relevant patent application and layout have been proposed, now it is carrying out Chemistry Manufacturing Control (CMC) plan and pre-clinical GLP toxicological test, and it is expected to apply for phase I human clinical trial in 2019.

(6) OBI-898 SSEA4 passive immunity monoclonal antibody: OBI-888 is the passive immunotherapy monoclonal antibody designed taking SSEA-4 as the target. And it has applied for patent and Patent Cooperation Treaty (PCT) has been disclosed. Currently it is screening the best humanized antibody and under pharmacokinetics

assessment.

OBI-998 SSEA4 Antibody Small Molecule Drug Complex (ADC): OBI-998 is a complex that binds small molecule drugs with cytotoxic properties through chemical bonding to linkers to anti-SSEA4 antibody. It utilizes highly specific anti-SSEA4 antibody to target toxic drugs to malignant tumors, which not only enhances the efficacy of the drug, but also avoids the damage caused by traditional chemotherapy to normal tissues, in order to effectively reduce the occurrence of side effects. The current process development is almost ready, and OBI-998's appropriate linkers are being evaluated for further development.

(7) OBI-3424 micromolecule chemotherapy prodrug: in May 2017, the Company has acquired the rights to research and development and commercialization of TH-3424 anti-cancer drug (renamed as OBI-3424) in major global markets (except Asia) from US Threshold Pharmaceuticals. OBI-3424 has acquired approval from FDA on April 18, 2018 to carry out human clinical trial (IND). AKR1C3 enzyme is highly expressed in more than 15 types of tumors, and its main function is to participate in hormone synthesis and toxin clearance. OBI-3424 is converted to a cytotoxic metabolite under the catalysis of AKR1C3 enzyme in tumor cells to achieve anti-tumor effects. The company has acquired approval from US Food and Drug Administration (FDA) in April 2018 to carry out phase I clinical trial. The dose escalation phase of the phase I clinical trial is underway at the MD Anderson Cancer Center at the University of Texas and at the James Cancer Hospital and Solove Research Institute at the Ohio State University Comprehensive Cancer Center, which is expected to be completed this year. Then, it will enter the cohort expansion phase.

(8) OBI-858 new clostridium botulinum toxin preparation: this product will develop the new strains into new clostridium botulinum toxin,

and its preparation is expected to be used for medicine and cosmetology. The Company has completed toxicity test and clinical use bulk drug production, and carried out bulk drug stability test. PharmaCore has been appointed to carry out finished drugs production for use in clinical trial. And the Company prepares to seek for partner to carry out subsequent development jointly.

(2) Industry overview:

1. Global drug market conditions and development trends

According to the data of BMI, the scale of global drug market in 2017 was USD1200 billion, increased by 5.9% when comparing with that in 2016, and the Compound Annual Growth Rate (CAGR) from 2013~2017 was 2.7%. Despite the slow down of global economic development, with increasing global population and formation of an aging society, the demand on pharmaceutical supplies rose continuously, together with the rising of emerging drug market, as well as depreciation of US Dollars in 2017, becoming the weakest currency in G10, making the growth rate of global drug market in 2017 was higher than the CAGR from 2013~2017.

However, since the drug market is deeply affected by the medical care policy, budget and cost control of national governments as well as the self-paying medical budgets of consumers, therefore, the changes of growth and decline in new drugs and generic drugs market as well as drug price control measures will bring variables to the global drug market scale in the future, but it is still under growth trend generally speaking, it is expected that the CAGR from 2017~2022 is 4.5%, and the sales volume in 2022 will reach to USD1,500 billion.

The scale of global drugs market from 2013~2017

資料來源：BMI；DCB 產資組 ITIS 研究團隊整理（2018.06）

According to the data of BMI, in respect of the proportion of drug market in each region worldwide in the global drug market scale in 2017, North America was accounted for the largest proportion, followed by Europe, Asia Pacific and Latin America, and Africa and Middle East ranked No. 5; despite North America and Europe had been the uppermost regional market for global drug sales, the market had become mature and under the pressure of economic development slowdown and control of medical expenditure, the growth speed of drug market was slow relatively, and the proportion in global market tended to be reduced, even if the proportion of drug market in North America grew from 28.9% in 2013 to 33.4% in 2017, the proportion declined by 0.9% in 2017 compared with that in 2016, and the market share in Europe had been declining all the way from 34.0% in 2013 to 28.9% in 2017.

In Asian Pacific, except for the advantage of high population growth, together with the medical demand driven by economic development, countries such as China Mainland, India, Bangladesh, Iran and Vietnam etc. still belong to emerging market, the potential of drug market was promising and it was growing rapidly; therefore, the market share of Asia Pacific in global drug market was still rising year by year, from 25.3% in 2013 to 28.2% in 2017.

The proportion of drug market in Latin America declined from 7.2% in 2013 to 5.1% in 2017, and the average proportion in Africa and Middle East was approximately 3.9%, these two major regional drug markets were affected by unstable circumstances in terms of politics, economy and currency etc., restricting the development of drug market.

According to the data of BMI, the ranking of global top 10 national drug markets in 2017 was the same as that in 2016, respectively: US, China Mainland, Japan, German, England, France, Italy, Spanish, Brazil and Canada, approximately USD874.57 billion in total, accounting for 74.2% of global drug market. Among them, the scale of drug market in US, China Mainland and Japan exceeded one hundred billion US Dollars, and the total scale of drug market in these three countries had exceeded a half of the global drug market, accounting for 52.3%: the scale of drug market in US was approximately USD373.32 billion, accounting for 31.7% of global drug market; the scale of drug market in China Mainland was approximately USD140.31 billion, accounting for 11.9% of global drug market; and the scale of drug market in Japan was approximately USD102.99 billion, accounting for 8.7% of global drug market.

In the aspect of future growth of global top 10 national drug markets, it is estimated that the CAGR from 2017 to 2022 will be 4.6%, equivalent to the global drug market, among them, only the future drug market of China Mainland will still grow rapidly, with two digits of CAGR at 12.4%, and it is estimated that the CAGR in other drug markets will be below 4.6% since they are relatively mature.

Global Top 10 National Drug Markets in 2017

Unit: USD100 Million

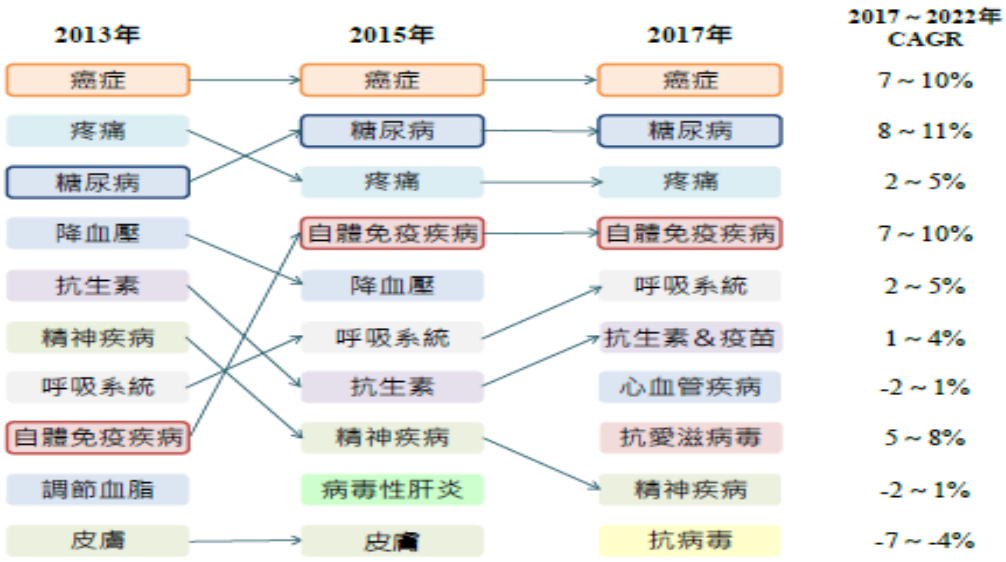
排名	國家	2017 年		占全球藥品市場比率	2013～2017 年 CAGR	2017～2022 年 CAGR
		銷售額	成長率			
1	美國	3,733.2	3.1	31.7	7.1	3.2
2	中國大陸	1,403.1	29.7	11.9	14.4	12.4
3	日本	1,029.9	-1.0	8.7	-1.1	1.4
4	德國	642.2	3.9	5.5	1.4	2.5
5	英國	442.5	-2.4	3.8	-0.8	4.4
6	法國	410.3	3.8	3.5	-2.4	2.3
7	義大利	337.3	3.7	2.9	-0.9	2.2
8	西班牙	295.5	3.9	2.5	-2.1	2.2
9	巴西	246.6	16.8	2.1	-1.5	3.7
10	加拿大	205.0	5.2	1.7	-2.8	2.9
合計		8,745.7	6.3	74.2	4.2	4.6

註：因數據四捨五入，使得各國銷售額數據之加總與合計數值稍有差異

資料來源：BMI（2018.05）；DCB 產資組 ITIS 研究團隊整理

By observing the ranking of global sales volume of drugs for diseases treatment in 2017, we found that, since 2012, the drugs for cancer treatment had been ranking at the top of list for 6 consecutive years; due to the sharp increase of patients with type II diabetes worldwide and the success in research and development of new pathogenesis drugs, making the ranking of drugs for diabetes treatment rose to No. 2 from No. 3, and the ranking of drugs for pain treatment commonly used by modern people dropped from No. 2 to No. 3; due to extensive research on autoimmune diseases, the pathogenesis can be understood better, improving the accuracy of early diagnosis and accelerating the development and launch of therapeutic drugs, hence the ranking of sales volume of drugs for the treatment of autoimmune diseases rose rapidly from No. 8 in 2013 to No. 4 in 2015; as for the drugs for mental disease, due to the lacking of successful development of ground-breaking innovative drugs, together with the patent protection for most traditional drugs expired and the impact of patent cliff experience, the market scale of such drugs were declining year by year, and the ranking also declined gradually.

Changes in the rankings of top 10 efficacy drug categories worldwide in 2013, 2015 and 2017



註 1：2017 年的抗病毒藥物銷售額不含抗愛滋病毒用藥銷售額
註 2：2017 年的心血管疾病藥物銷售額包含降血壓用藥及調節血脂用藥銷售額
資料來源：IQVIA（2018.03）；DCB 產資組 ITIS 研究團隊整理

With continuous increasing of global cancer incidence rate and prevalence, the development and market scale of anti-cancer drugs are expected to grow continuously, with estimated CAGR between 7.0% ~ 10.0% from 2017 to 2022, major research and development categories include cancer immunotherapy, and targeting drug and cell therapy aiming at a variety of molecules.

Due to the sharp increase of patients with type II diabetes worldwide, and the launch of new pathogenesis drugs for diabetes treatment such as Glucagon-Like Peptide-1 (GLP-1) analogue / GLP-1 Receptor Agonists and Sodium-Glucose Cotransporter 2 (SGLT2) inhibitor into the market, together with the existing insulin, Dipeptidyl Peptidase IV (DPP-4) inhibitor and compound drugs etc., making the market scale expand continuously, with estimated CAGR reach to 8.0%~11.0% from 2017 to 2022.

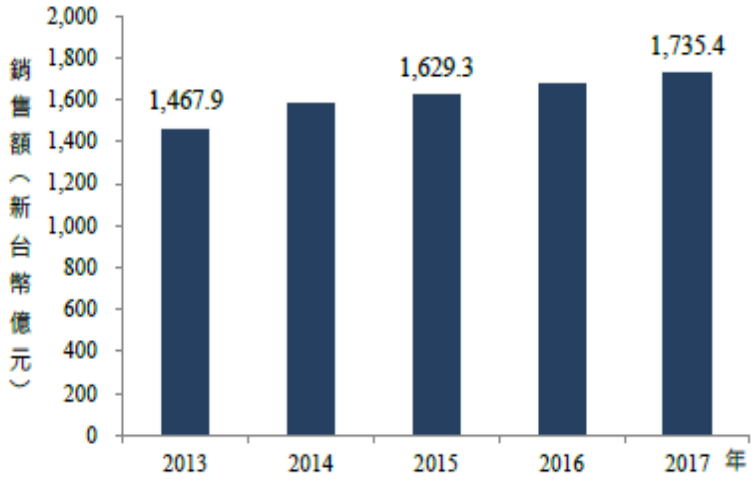
With medical research having better and better understanding of autoimmune disease, as well as the more and more advanced diagnostic technology development, it increases the diagnosis rate, together with the increase of attack rate year by year worldwide, making the demand on treatment of autoimmune

disease increase sharply; furthermore, the drugs for treatment of autoimmune disease are mostly new drugs and biological drugs of high price, hence the drugs for treatment of autoimmune disease are the medication category of high growth in recent years, and it is estimated that the CAGR will continue to increase between 7.0%~10.0% from 2017 to 2022.

2. Current development status of drug market of our country:

The scale of drug market in Taiwan had maintained stable growth over the years, but due to higher and higher medical expenditure, in order to reduce the medical costs, the government of our country continued to control the medical expenditure through adjustment of premium rate, co-payment and controlling the price of drugs applicable to health insurance, and adjusted the price of drugs applicable to health insurance once every two years, which affected the growth rate of Taiwan drug market. In March 2017, National Health Insurance Administration announced the adjustment result of drug price, after excluding the special indispensable drugs for clinical treatment and the drugs for treatment of orphan disease, totally the price of 332 items was increased and 7,331 items was reduced, the total amount of reduced expenses for medicine was NT$5.71 billion, and the average adjustment range was approximately 3.5%. According to the statistics of IQVIA (previously named as IMS Health), in 2017, the scale of Taiwan drug market was NT$173.54 billion, grew by 3.3% (see Picture below) compared with that in 2016, and it still faced the price reduction system in 2017, which restricted the range of market growth.

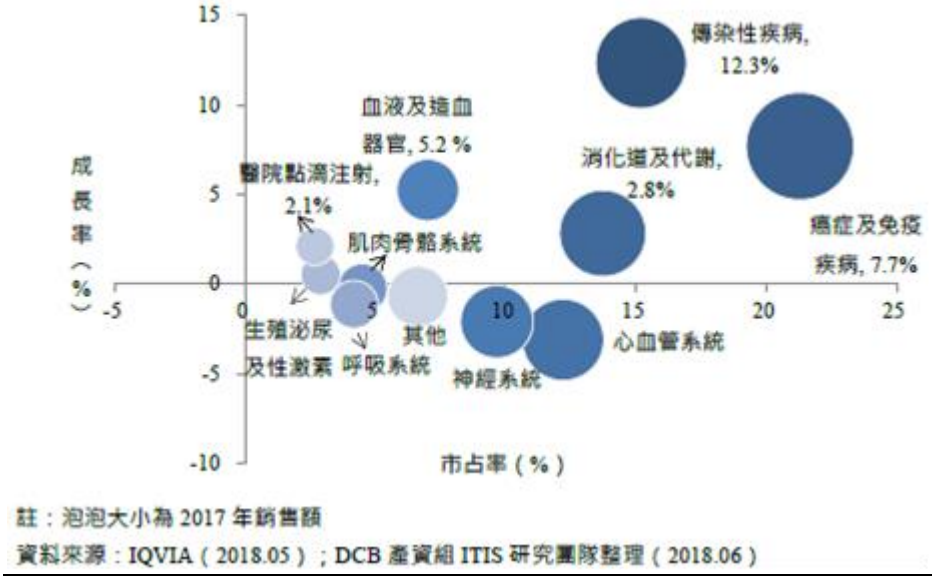
The scale of drug market in our country from 2012~2016



資料來源：IQVIA（2018.05）；DCB 產資組 ITIS 研究團隊整理

By observing the market of drug category for treatment of different diseases, the top 5 fields were drugs for treatment of cancer and immunological diseases, infectious diseases, digestive tract and metabolism, cardiovascular system and nervous system respectively, these top 5 diseases were totally accounting for 72.1% of Taiwan drug market previously. Among them, patients with cancer and immunological diseases had been increasing continuously in Taiwan, over the years, the sales volume of drugs for treatment of cancer and immunological diseases had been stably ranking on the top in Taiwan drug market, the sales volume in 2017 reached to NT$36.97 billion, and the growth rate also ranked No. 2, reached to 7.7%. By observing the drug category for diseases treatment with growth rate ranking top 5, respectively they are drugs for infectious diseases (growth rate: 12.3%), drugs for cancer and immunological diseases (7.7%), drugs for blood and hematopoietic organ (5.2%), digestive tract and metabolism (2.8%), and intravenous injection in hospital (2.1%); among them, for the drugs for infectious diseases, the combined medications for Hepatitis C treatment, namely Viekirax + Exviera, and Daklinza + Sunvepra were included in health insurance payment conditionally starting from January 2017, and three-in-one compound medicine Atripla, Complera and Triumeq were listed as the first recommended prescription starting from June 2016, the growth of sales volume of the aforesaid drugs made the drugs for infectious diseases become the drug category for diseases treatment with the highest growth rate.

2017 Market Distribution and Growth Performance of Drug Category for Diseases Treatment in Taiwan



註：泡泡大小為 2017 年銷售額

資料來源：IQVIA（2018.05）；DCB 產資組 ITIS 研究團隊整理（2018.06）

In 2017, the total sales volume of top 10 blockbuster drugs in Taiwan was NT$17.49 billion, approximately accounting for 10.1% of the domestic drug market. By comparing the changes in the list and ranking of top 10 blockbuster drugs in 2016 and 2017, apart from that Viekirax for hepatitis C treatment ranked No. 5 unexpectedly, and Nexavar for advanced renal / hepatocellular carcinoma was squeezed out of top 10, the rest drugs were the top 10 blockbuster drugs in 2016, only slight changes in ranking.

To analyze the top 10 blockbuster drugs in Taiwan according to drug category for diseases treatment, in recent years, despite the decline in cancer mortality, relevant screenings are becoming more and more popular, causing the increase of cancer incidence rate, and more and more people are receiving the therapy, among the top 10 blockbuster drugs in Taiwan, 4 of them are drugs for cancer, including Herceptin for breast cancer, Glivec for leukemia, Avastin for colorectal cancer, and Alimta for non-small cell lung cancer; besides, there are 2 drugs for infectious diseases and cardiovascular diseases respectively, and 1 drug for blood and hematopoietic organ, and immunological diseases respectively.

Top 10 blockbuster drugs in our country in 2017

Unit: NT$100 million; %

Ranking		Product name	2017		Name of manufacturer	Indications
2017	2016		Sales volume	Growth rate		
1	1	Herceptin	24.6	1.2	Roche	Breast cancer
2	2	Baraclude	21.4	0.1	Bristol-Myers Squibb	Chronic Hepatitis B
3	4	Plavix	18.5	-0.5	Sanofi	Atherothrombosis
4	3	Glivec	17.9	-4.2	Novartis	Chronic myeloid leukemia
5	-	Viekirax	16.4	999.0	AbbVie	Chronic hepatitis C genotype 1, 4
6	6	Lipitor	15.8	1.3	Pfizer	Hypercholesteremia, hypertriglyceridemia
7	5	Crestor	15.7	-6.6	AstraZeneca	Hypercholesteremia, hypertriglyceridemia
8	10	Avastin	15.4	25.2	Roche	Metastatic colorectal cancer, metastatic breast cancer etc.
9	9	Humira	14.7	8.3	AbbVie	Rheumatoid arthritis etc.
10	7	Alimta	14.5	2.3	Eli Lilly	Malignant pleural mesothelioma, non-small cell lung cancer
Total of top 10 drugs			174.9	—	—	—

Data source: IQVIA (2018.05); Product Information Group of DCB, summarized by ITIS Research Team (2018.06)

As far as growth rate was concerned, the drug of the highest growth rate in 2017 was the Viekirax for treatment of hepatitis C, because it was included in health insurance payment conditionally at the first stage starting from January 2017, since then, its sales volume grew rapidly and reached to NT$1.64 billion in 2017, and the growth rate was as high as 999.0%, unexpectedly becoming the top 5 blockbuster drugs in 2017; the drugs with the second and third highest growth rate were Avastin for the treatment of colorectal cancer and Humira for the treatment of rheumatoid arthritis respectively, with growth rate at 25.5% and 8.3% respectively.

3. New drug development industry and its relevance to upstream, midstream and downstream:

After experiencing several decades of development in the past, the modern pharmaceutical industry has formed a mature industrial chain in European and American markets, from the study on new drug development, production, marketing to generic drugs market, it all has a certain development and labor

division mode. Since drugs are used in human body, hence the drug's safety and effectiveness must be strictly controlled by competent authority of national governments. Take micromolecule new drug development as an example, the research and development of drug is a series of complicated, time consuming and capital-intensive processes, it is estimated that only one new drug can be researched and developed successfully to come into market from 10,000 candidate molecules, the average success rate is 0.01%, hence it always takes 15 years or even longer for a drug to come into market, and the average research and development expenditure at least reaches to USD1.2 billion. Therefore, comparing with other general industries, pharmaceutical industry has the following features: under strictly management of government competent authority, high technical threshold, long research and development duration, high cost and high risk, combined industry crossing technical fields, market specialization, large product market, long life cycle and high profit.

US drug development and review procedure

階段	新藥探索	臨床前試驗	IND申請	臨床 I 期	臨床 II 期	臨床 III 期	NDA申請	IV 期
所需年數	5	1.5		1～2	2～3	2～3	1～2	2
試驗對象	實驗室	實驗室及動物試驗		20～100個健康受試者	100～500個自願病患	1,000～5,000個自願病患	登記審核核准	上市後新藥監視（FDA要求）
目的	發現候選藥物	評估安全性及生物活性		決定安全性及使用劑量	評估有效性，監視副作用的產生	確認有效性，做長期之副作用監視		
成功率	評估10,000個化合物	250個化合物進入臨床前		5個化合物進入臨床			1個化合物核准	

資料來源：FDA；DCB 產資組 ITIS 計畫整理

(1) New drug exploration

The new drug exploration usually finds the new lead compound through the new research object found in the research of upstream basic research units, such as school, research institution or laboratory of pharmaceutical factory. Then carries out biological activity assessment on lead compound, test from in vitro to in vivo, such as from enzyme, receptor, G-protein, cell, tissue, organ, living animals to all kinds of disease animal models etc., the research on functioning molecular level is good for compounding and improving the drug of optimization, and it can understand the due pharmacological efficacy, physiological reaction, side effect and interaction between drugs of the drug. A lead compound with drug efficacy usually needs to further compound thousands of derivatives, after assessing and comparing their activity, toxicity, stability and pharmacokinetics, select several potential candidates to enter into the

pre-clinical trial at the next stage.

(2) Pre-clinical trial:

The main focus of preclinical experiments is on animal safety experiments, which take time, typically 6 months to 1 year. First, the entire manufacture process must be optimized to increase yield and simplify the manufacture process. The manufacture process of drug candidates must be extended to produce sufficient drug candidates for animal safety experiments. Because at least two animal safety experiments must be completed before the application for the investigational new drug (IND), and the experiment duration must not be shorter than the time for the clinical phase I human trial (the clinical trial of the terminal cancer patient is not subject to this limit), the dose used at this time can be used as a reference for the dose of the clinical phase I human trial.

(3) Investigational New Drug (IND) application:

After the end of pre-clinical trial, the research result and clinical trial plan can be attached to propose Investigational New Drug (IND) to the competent authority, so as to carry out human body clinical trial. Take USA as an example: during the 30 days of IND review period, if competent authority doesn't propose any doubt and consideration, applicant can start to carry out clinical trial after 30 days.

(4) Clinical trial:

The purpose of clinical trial is to confirm the effectiveness and safety of new drug to human body, applicant appoints clinical doctor to carry out the trial, and it can only be executed after passing the review by Institutional Review Board (IRB), according to the summary of ITIS, Product Information Group of DCB, generally the clinical trial is divided into three phases:

A. Phase I clinical trial:

Take 20~100 voluntary health adults to carry out safety test, the purpose is to establish the tolerance of human body to different dosages, and create materials related to the absorption, distribution, metabolism and excretion of drug in human body; usually this period takes 1~2 years.

B. Phase II clinical trial:

Take 100~500 patients to carry out large-scale or even transnational effectiveness test, the purpose is to verify the efficacy of phase III trial with greater samples, and find out the undiscovered adverse reaction, and to acquire all materials related to indication, taboo and side effect of new drug, usually this period takes 2~3 years, or

depends on the design of clinical trial and receiving progress.

C. Phase III clinical trial:
Take 1,000~5,000 patients to carry out large-scale or even transnational effectiveness test, the purpose is to verify the efficacy of phase II trial with greater samples, and find out the undiscovered adverse reaction, and to acquire all materials related to indication, taboo and side effect of new drug, usually this period takes 3~5 years, or depends on the design of clinical trial and receiving progress.

(5) New Drug Application (NDA):
After completing clinical trial successfully, trial results (including pre-clinical trial results) and all relevant materials can be prepared to propose New Drug Application (NDA) to the competent authority, namely the examination registration procedure, the review period takes about 1 year on average. If in those materials it can prove that the new drug under application has better therapeutic or preventive effect than the drugs in the market on the same disease, it will have the opportunity to enter into quick review procedure to shorten the review period to about 6 months.

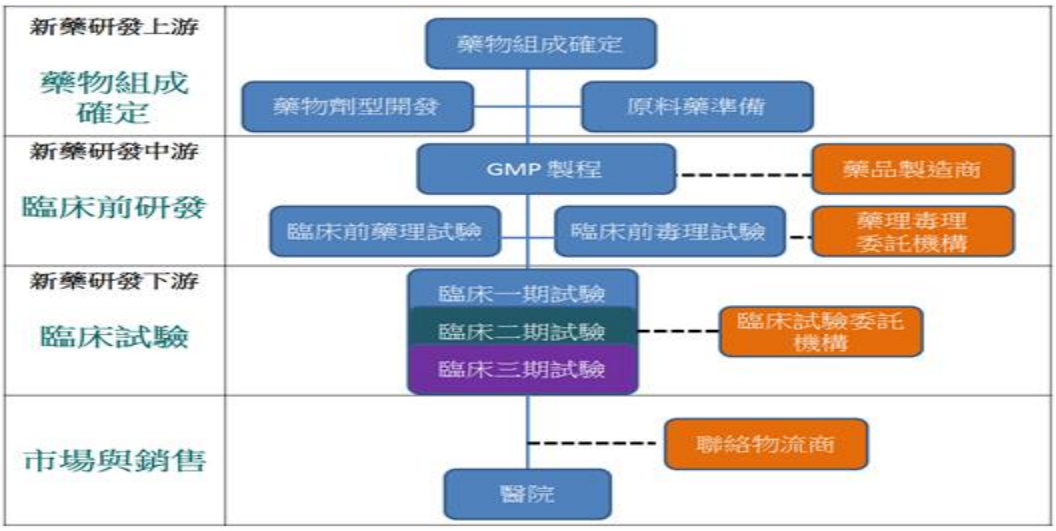
(6) Post-marketing surveillance:
The post-marketing surveillance of drug, the indispensable part to ensure medication safety of the public, through adverse drug reaction report system, clinical doctor will monitor the long term reaction after using the new drug, so as to carry out post-marketing surveillance of the drug.

During such long new drug research and development process, how to effectively connect the upstream, midstream and downstream of the industry to shorten the development schedule to accelerate the launch of product is a very important key for competition. From the study on upstream basic science, combine the outstanding domestic academic research achievement into the midstream technology development and application, and private practitioners closely cooperate with relevant juridical persons to develop the downstream drug commercialization and marketing strategy, so as to promote the joint development of production, management, academics and research of Taiwan biotechnology industry, making the biotechnology of Taiwan develop more extensively and comprehensively, and further march towards international market.

Based on innovation, apart from emphasizing independent research and

development, OBI Pharma also actively seeks for new drug research and development case of development potential from all walks of academics and research, so as to reduce the cost input at the early stage of new drug research and development. And accelerates to complete product development through effective management of drug development procedures at exploration stage to launch on the market. The operation model of OBI Pharma research, development and marketing add value, apart from rooting in research and development energy and self-establishing marketing team, the production part is outsourced in combination of domestic manufacturing capacity. The object of outsourcing partner will give priority to the local manufacturers in Taiwan, so as to assist the new biotechnological drug to root in Taiwan. According to such model, the thing first introduced by OBI Pharma is the OBI-822 already completed clinical phase I trial in Memorial Sloan-Kettering Cancer Center (MSKCC), then it is the OBI-833 and OBI-866 still at the pre-clinical stage and introduced from Academia Sinica; meanwhile, based on the internal research and development capacity, the R&D team of OBI has independently researched and developed the OBI-888, OBI-999, OBI-898 and OBI-998. Regardless of the case acquired from technology transfer or of independent research and development, OBI Pharma will spare no efforts to execute the pre-clinical and clinical phase I, II, and III trials under the most outstanding management team and high efficient management model, and further apply for medicament license to promote the launch of new drug. OBI hopes to create international Taiwan brand through such operation model, and to base in Taiwan and expand the horizon worldwide.

OBI Pharma adopts the operation model of research and development and marketing add value to create the industrial economy at home and abroad, relevance of upstream, midstream and downstream of the industry is as shown in the following photo:



4. Taiwan industrial competitiveness analysis:

The pharmaceutical industry of our country includes bulk drug, preparations of western medicine and traditional Chinese medicine. The bulk drug manufacturers mainly product bulk drugs of effective components, the products are of less categories but of large quantity, most of them are mainly exported. Preparations manufacturers process bulk drugs to product preparations, there are 143 of them in total, and about 50 of them are the manufacturers of preparations of western medicine passing the PIC/S GMP evaluation, and have certain productivity. But Taiwan pharmaceutical industry mainly produces generic drugs with expired patent, because the domestic market is small, products are of small quantity, large categories and high homogeneity, the drug prices are low, and the competition is fierce. Taiwan pharmaceutical industry already has new drug development capacity, the analysis on competitiveness and industry trend are as follows:

Advantage - The capacity of Taiwan in new drug clinical trial is strong, taking an advantage in Asia. Apart from excellent medical environment and rich experience of clinician involving in new drug clinical trial, there are plenty of patients which can represent the east Asian race in Taiwan, therefore, Taiwan possesses the conditions of becoming the development base for early clinical trial, developing phase I/II clinical trials, and attracting international cooperation with such achievements. Besides, Taiwan has high education level and has cultivated many biotechnology and pharmaceutical related talents both at home and abroad, further consolidating Taiwan industry capacity.

Weakness - Lack of experience is the difficult problem in Taiwan biotechnology industry. How to enrich the industrial experience of Taiwan biotechnology talents and establish the confidence of capital market for long-term support of biotechnology and pharmaceutical industry is the challenge of Taiwan currently.

Development trend - Since biotechnological industry is an industry of high risk, high investment, long term and high profit, for the investment to biotechnological new drug development in Taiwan, we need to introduce R&D talents and management team with international view within a short term, and jointly bear the development risk through strategic alliance with foreign companies, which is good for entering into international market. In medium and long term, we are in need of cooperation among Industry, Official and University, and talents cultivation to base on Taiwan and look around the world. In the course of growth, we are in need of continuous fund-raising, strategic alliance or going through corporate combination to compete with world first class pharmaceutical factories.

5. OBI product competitiveness analysis:

OBI Pharma takes new drug research and development in self-orientation, challenging the fields of disease still lack of effective treatment currently, hoping to make up the unsatisfied medical demand with innovative drugs, so as to improve people's health and life quality. The Company takes cancer and infectious disease as the core therapeutic field, taking the carbohydrate antigen "Globo Series" on cell surface having high effect on multiple cancers as the target, and actively developing a series of innovative cancer therapy new products, so as to develop into the first-class biotechnology industry in Taiwan. At the early stage of development, the Company refers to the market demand and future competitiveness as the basis for subject selection, analysis on the competitiveness of each product is as follows:

(1) OBI-822, OBI-833, OBI-866 active immuno-oncology drugs:

As far as safety is concerned, OBI-822, OBI-833 and OBI-866 are the new medicaments for active immunotherapy, fighting against cancer through training the immune system of human body, the dosage needed is very low, and they only occur on the surface of cancer cells at the cancer target, hence they have no harm to normal cell tissue. The active

immunotherapy has the advantage of relatively durable effect and low side effect, people from all walks of life are eagerly hoping that it can improve and change the cancer therapy, bringing the therapy safer and more effective than the current chemical therapy and target therapy to the cancer patients. OBI-822 is absorbed through subcutaneous injection, and outpatient treatment will be fine. According to the clinical data currently collected, when patients are accepting OBI-822 treatment, the side effect is mostly limited to the red and swollen and pain phenomenon occurred at the injection part, obviously far lower than the side effect in general cancer chemical therapy and target therapy, effectively improving the life quality of patients and their families.

Evaluate Pharma's analysis on breast cancer market trend - in 2017, the sales amount reached to USD17.2 billion, and it is expected to reach to USD3.4 billion in 2024 with annual growth rate of 9.9%. In 2017, the market share of the largest category of drugs for HER2 targeted therapy was 58%, the market share of rising star CDK4/6 inhibitor was about 19%, it is expected that its market share will grow up to 39% in 2024, on the contrary, the market share of drugs for HER2 targeted therapy will decline from 58% to 39%.

Competitive advantage of OBI-822 - since currently there is no drug for active cancer immunotherapy of breast cancer worldwide, hence OBI-822 has no similar competitor in the market. All patients with positive Globo series carbohydrate antigen can accept the OBI-822 therapy, approximately accounting for over 60~80% of breast cancer groups; these include all kinds of groups of breast cancer patients, including ER/PR positive/negative patients, HER2 positive/negative patients, and intractable triple negative breast cancer patients having very few choice of drugs. Besides, since such target immunotherapy is not in conflict with other therapies, so regardless of accepting hormonal therapy or other therapy not affecting the immunity of patients, OBI-822 is available for possible combined therapy.

By comparing OBI-822 with other competitive drugs under development and in the market, the differentiation of enzyme CDK 4/6 inhibitor has become the standard therapeutic drug for advanced metastatic breast cancer with positive hormone receptor and negative HER2 receptor (HR+/HER2-) after menopause, the first line therapy needs to combine with aromatase inhibitor, including the Ibrance® (palbociclib) launched in 2015 and the Kisqali® (ribociclib) and Verzenio® (abemaciclib) approved in 2017; the CDK4/6 inhibitor used for the second line therapy needs to combine with fulvestrant, including Ibrance® and Verzenio®. What is noteworthy is that the side effect of CDK4/6 will cause the reduction of white blood cell count.

The market of drugs for breast cancer is quite large, it also attracts other new drug categories:

- Afinitor® (everolimus): launched to the market in 2009, it is the inhibitor for mTOR (mammalia rapamycin target), and major side effects include stomatitis and non-infectious pneumonia.
- Immune checkpoint inhibitors: such drugs launched to the market in 2014, but among the advanced metastatic breast cancer patients with HR+/HER2- after menopause, only 6% of them with over-expression are the target population, currently it is still at the stage of human clinical trial.
- PI3K (phosphatidylinositol 3- kinase) inhibitor: Among the advanced metastatic breast cancer patients with HR+/HER2- after menopause, only 26% of them with over-expression are the target population, currently the it is still at the stage of human clinical trial, major side effects include colitis, hyperglycemia and pneumonia.
- PARP (poly ADP-ribose polymerase) inhibitors: such drugs launched to the market in 2015, but among the advanced metastatic breast cancer patients with HR+/HER2- after menopause, only 8% of them with over-expression are the target population, in 2018, Lynparza® has been approved to be used for HER 2 receptor negative metastatic breast cancer of gBRCA mutation, and major side effect is the blood toxicity.

  For the population of breast cancer patients, apart from those with HR+/HER2- and HER2+, there is triple-negative breast cancer, and currently no standard therapy is available for it, apart from that a few patients with BRCA1/2 mutation (about 8.5%) may receive PARP inhibitor therapy, chemotherapy is the main therapy for others. By comparison, the OBI-822 of OBI Pharma targeting Globo H has effects in 60%~80% breast cancer patients, together with the excellent safety of OBI-822, it will have great development potential in the field of breast cancer therapy in the future.

  Both OBI-822 and OBI-833 are the active immuno-oncology drugs targeting the Globo H antigen on the surface of cancer cells, and OBI-866 targets at the SSEA-4 antigen on the surface of cancer cells; the Company will continue to assess OBI-822, OBI-833 and OBI-866 on their feasibility of application to the clinical trial of breast cancer or other cancers by exclusive use or combined use in other therapies, so as to differentiate the potential market.

(2) OBI-888 monoclonal antibody, OBI-898 passive immunity monoclonal antibody:

OBI-888 is the passive immunotherapy monoclonal antibody designed targeting Globo H, mainly aiming at 14 tumors having high performance to Globo H, and it has been approved by US Food and Drug

Administration (FDA) in January 2018 to carry out the phase I clinical trial.

According to the data of Evaluate Pharma, the turnover of monoclonal antibody drugs curing cancer was USD42.1 billion in 2017, and it is expected to reach to USD86.6 billion in 2024 with annual growth rate of 10.9%.

The two major leading brands for curing solid tumors are Herceptin® and Avastin® , the turnover of Herceptin® that curing HER2 positive breast cancer and gastric cancer was USD7.1 billion in 2017, and the turnover of Avastin® that curing colorectal cancer and various cancers was also USD6.8 billion in 2017, it is expected that both of them will reach to a sales peak in 2016 and 2017, but their performance will decline year by year due to the mature patent in 2019.

The growth momentum of the market of monoclonal antibody drugs curing cancers mainly comes from the immune checkpoint inhibitors (anti-PD-1/PD-L1 monoclonal antibody), there are two major leading brands, namely Opdivo® and Keytruda® , the turnover of Opdivo® that curing melanoma and non-small cell lung cancer and other cancers was USD4.9 billion in 2017, other indications will be developed successively in 2017, and it is expected to reach to USD9.6 billion in 2024; the turnover of Keytruda® that curing melanoma and non-small cell lung cancer and other cancers was USD3.8 billion in 2017, other indications will be developed successively in 2017, and it is expected to reach to USD13.6 billion in 2023.

The carbohydrate antigen molecules identified by OBI-888 and OBI-898 antibodies are not the same as the drugs mentioned above, their targeted Globo Series carbohydrate has high performance in lung cancer, breast cancer, colorectal cancer, gastric cancer and liver cancer, obviously higher than the target population of Herceptin® (HER2 positive patients: 25%), in the future, they have great development potential in the fields of cancer therapy.

(3) OBI-999 Globo H and OBI-998 SSEA4 micromolecule Antibody Drug Conjugate:

According to the report of GlobalData, ADC only has launched to products (Adcetris® and Kadcyla®) worldwide as at 2016, with turnover of about USD1.4 billion. In 2017, with turnover of about USD1.6 billion, US Food and Drug Administration (FDA) further approved the launch of two products, inotuzumab ozogamicin (BESPONSA) and gemtuzumab ozogamicin (Mylotarg). OBI-999 and OBI-998 is the key development

product of the Company, it is expected to submit application to US Food and Drug Administration (FDA) in July 2019 for human clinical trial.

(4) OBI-858 New botulinum toxin:

Currently the medical cosmetology market takes micro-plastic as the mainstream, among mainstream products in the market, botulinum toxin, hyaluronic acid, collagen protein, chemical peel (such as tartaric acid, vegetable acid) and laser cosmetology are of large quantity; among them, for the botulinum toxin products, according to the report of GlobalData, the performance of market leading brand Botox® in medical cosmetology and therapeutic field reached to USD3.2 billion in 2017.

According to the forecast of GlobalData, the global market of Botox® will reach to USD5.2 billion in 2024, the compound annual growth rate from 2017~2024 will be 7.4%, which is quite impressive. Due to the great market potential, 5~6 biosimilar drugs will enter into the market successively. OBI-858 is the new botulinum toxin of good stability and safety, the Company masters high quality manufacturing technology, it is expected that its efficacy and safety will be equivalent to the market leading brand Botox® after completing the clinical trial, and then with competitive price, it will enter into the high growing botulinum toxin market.

(5) OBI-3424 AKR1C3 enzyme precursor drug:

The target market of OBI-3424 is to cure the tumor of AKR1C3 high enzyme performance (≥50%), such as liver cancer, drug or operation Castration Resistant Prostate Cancer (CRPC), kidney cancer, gastric cancer, bladder cancer and the T Acute Lymphoblastic Leukemia (T ALL) urgently needed to be satisfied clinically, in the pre-clinical toxicity test, OBI-3424 also shows good safety, hence it will have huge market potential. According to the data of pre-clinical animal experiment, OBI-3424 also shows excellent anti-neoplastic effect in T Acute Lymphoblastic Leukemia; besides, OBI-3424 also has obtained the sponsor from US National Cancer Institute (NCI), jointly carrying out the research plan on T Acute Lymphoblastic Leukemia, the research results indicate that, OBI-3424 has profound effect on the Patient-Derived Xenograft (PDX) model of T-Acute Lymphocytic Leukemia (T-ALL) expressing AKR1C3 enzyme.

According to the data of Evaluate Pharma, in 2017, the business volume of drugs for treatment of liver cancer in global market was USD865 million, and it is expected to grow to USD4.4 billion in 2024. According to the statistics, the survival rate of liver cancer patients is only 17.6%, hence many liver cancer patients are urgently in need of new therapeutic drugs to prolong life-span. In liver cancer market, the Standard of Care is

Nexavar® (sorafenib), whose patent will lose effect in 2020, in 2017, its turnover worldwide was USD772 million, and it is expected to be USD241 million (along with generic drugs) in 2024. According to the data of pre-clinical animal experiment, OBI-3424 shows excellent anti-neoplastic effect in the model of hepatoma cell lines, even in the cell lines resistance to sorafenib, it will make the tumor disappear in two weeks, it has excellent efficacy superior to Sorafenib.

(iii) Technology and research and development overview:

1. Innovative drug mechanism and exclusive production technology of the Company:

(1) Globo series carbohydrate cancer immunotherapy:

Globo series carbohydrate is the new anti-cancer object, its performance characteristics of almost only found in cancer cells instead of normal cells, together with the role it plays upon the spreading of cancer cells, making it become an ideal anti-cancer object. OBI Pharma has introduced the research results from US Memorial Sloan-Kettering Cancer Center (MSKCC) and Taiwan Academia Sinica to develop active immunity anti-cancer drugs OBI-822 and OBI-833, both of them have entered into clinical stage; the monoclonal antibody OBI-888 taking Globo H as the effect target has been approved by US FDA at the beginning of 2018 to enter into human clinical trial, and the pre-clinical trial of antibody-drug conjugate OBI-999 taking OBI-888 as the basis is under active proceeding. Apart from Globo H, the Company also starts to develop the active immunity anti-cancer drug OBI-866 taking carbohydrate antigen SSEA-4 as the effect target, as well as the passive immunity monoclonal antibody OBI-898 and antibody drug conjugate OBI-998 etc., hoping to provide cancer patients safe, effective and more diversified options.

(2) OBI Special carbohydrate production technology, large-scale chemo-enzymatic process:

The method of traditional chemical synthesis of carbohydrate molecules needs to go through several protecting groups and de-protecting groups before getting the carbohydrate molecules compound needed. Such chemical synthesis method needs to consume a lot of time and operation steps, and multiple operational steps will finally cause extremely low productivity, it is lack of possibility for commercial production, and thereby restricts the development of active immunity anti-cancer drugs, and cannot be pushed forward to clinical research.

Large-scale chemo-enzymatic process produces hexaose in several reaction steps of carbohydrate through enzymes, it breaks through the concepts that the protection of functional group must be carried out for the carbohydrate molecules upon the chemical synthesis of carbohydrate

molecule. Such new technology directly utilizes the specificity of enzyme inside bacteria, assisted by all kinds of appropriate reagents for synthesis, synthesizing monosaccharides into polysaccharides one by one under the status without protecting carbohydrate molecules, drastically simplifies the synthesis steps of Globo H carbohydrate molecules.

(3) Synthesis technology for bulk drugs of carbohydrate antigen active immuno-oncology drug:

After crosslinking carbohydrate antigen Globo H with carrier protein KLH, the bulk drug of anti-cancer vaccine OBI-822 can be obtained; after crosslinking carbohydrate antigen SSEA-4 with carrier protein KLH, the bulk drug of anti-cancer vaccine OBI-866 can be obtained. Such chemical synthesis technology is the achievement of OBI Pharma team by gradual adjustment and optimization of the aforesaid carbohydrate immunotherapy and carbohydrate synthesis technology; OBI Pharma takes full control of relevant technologies such as key production steps and control parameters etc., hoping to provide what are needed for commercial production with optimized conditions and under good quality control environment after the launch of anti-cancer vaccine into the market.

(4) Antibody drug conjugate technology:

After the chemical crosslinking of the monoclonal antibody and the chemotherapy molecular capable of killing cancer cells, the Antibody-Drug Conjugate (ADC for short) against cancer cells will be obtained. The principle of such new generation drug utilizes the specific functional group at antibody amino acids, after appropriate chemical activation, effectively crosslinks the chemotherapy molecular capable of killing cancer cells to the antibody. After the drug has been injected into human body, through the specificity of antibody, it can ensure that the toxic compounds can only be released in the areas of human body generating cancer cells, so as to kill the cancer cells effectively, meanwhile, it will not affect the growth of other normal cells in human body. OBI-999 is the leading drug of OBI in such research and development field.

2. R&D overview:

Progress of new drug research and development projects of OBI Pharma is as follows:

(1) OBI-822 breast cancer Globo H active immuno-oncology drug:

The Company has convened the End of Phase 2 Meeting with US Food and Drug Administration (FDA) in January 2017, and has received the written reply from Europe EMA regarding the questions related to the Company's design of global phase III clinical trial for OBI-822; in February 2018, the Company has held consulting meeting with China

CFDA to discuss the design of global phase III clinical trial. By referring to the conclusions of the aforesaid meetings, OBI Pharma is now actively preparing for the global phase III clinical trial of OBI-822, which takes patients of Triple-Negative Breast Cancer (TNBC) as the test object. At present, human trial has been approved by the United States, Taiwan, Australia, Hong Kong, Ukraine and Russia, and included trial has been started and tested patients are enrolled. For some parts of that in China, application must be submitted after the supplement, and the application for clinical trial in Korea and the EU member countries will be submitted after the information is perfected.

(2) OBI-833 new generation Globo H active immuno-oncology drug:

The phase I clinical trial of OBI-833 has completed the safety assessment on all dose groups, and one of the doses is selected to enter into the Chort Expansion Phase trial taking patients with lung cancer as the inclusion object.

(3) OBI-866 SSEA-4 active immuno-oncology drug:

The animal test has verified that it can trigger the generation of SSEA-4 antibody in mouse body, and the animal test on inhibiting tumor efficacy is ongoing currently.

(4) OBI-888 Globo H passive immunity monoclonal antibody:

OBI-888 is the passive immunity monoclonal antibody designed taking Globo H as the target, international patent applications have been submitted, and approval of patent has been obtained in USA, Taiwan and South Africa. It has completed the single dose toxicity test in primates and the pathologic analysis on repeated-dose toxicity test, and no major adverse reaction is found. And it has been approved by US Food and Drug Administration (FDA) in January 2018 to carry out the phase I clinical trial.The dose escalation phase of the phase I clinical trial will be completed at the world-renowned MD Anderson Cancer Center, and preparation for subsequent cohort expansion trials is underway. The included trial is expected to begin in the third quarter of 2019.

The medical equipment clinical research application (IDE) of OBI-888 also has passed the examination by US Food and Drug Administration (FDA, and has been approved to be used in Cohort Expansion Phase of OBI-888 phase I human clinical trial. Meanwhile, FDA also has examined and agreed to grant the orphan drug qualification to OBI-888 to be used for treatment of pancreatic cancer. FDA will assist in the clinical development process of orphan drug, and orphan drug will be granted longer right of monopoly after it is launched to the market.

(5) OBI-999 Globo H Antibody-Drug Conjugate (ADC):

This product will utilize Globo H antibody to identify the cancer cells of high Globo H performance, by means of releasing micromolecule chemicals through the specificity of antibody, and the therapy of direct

cells killing will be carried out targeting the cancer cells of high Globo H performance. It has completed the animal pharmacological test, and relevant patent application and layout have been proposed, now it is carrying out Chemistry Manufacturing Control (CMC) plan and pre-clinical GLP toxicological test, and it is expected to apply for phase I human clinical trial in 2019.

(6) OBI-898 SSEA-4 passive immunity monoclonal antibody:

OBI-898 is the passive immunotherapy monoclonal antibody designed taking SSEA-4 as the target. And it has applied for patent and Patent Cooperation Treaty (PCT) has been disclosed. Currently, we are carrying out antibody biochemical characteristics and stability test, and the assessment on the mechanism and stability of in vivo and in vitro efficacy, and screening of the best humanized antibody based on multiple screening conditions, it is expected to start process development and production in 2018. ◦

(7) OBI-998 SSEA4 Antibody Drug Conjugate (ADC)

OBI-998 is the conjugate conjugating with SSEA4 antibody by linkers through chemical bonding, it is the micromolecule drug of cytotoxicity characteristic. It utilizes the SSEA4 antibody of high specificity to make cytotoxic drugs aim at malignant tumor, it can not only enhance drug efficacy but also avoid the damage to normal tissues caused by traditional chemotherapy. Currently it has completed the verification of pharmaceutical effect concept in animal model, and it is expected to carry out and complete linkers stability assessment as well as the assessment on pharmacokinetics and distribution of released micromolecule drugs in tissues in 2019.

(8) OBI-3424 micromolecule chemotherapy prodrug:

In May 2017, the Company has acquired the rights to research and development and commercialization of OBI-3424 in major global markets (except Asia) from US Threshold Pharmaceuticals. OBI-3424 is a micromolecule chemotherapy prodrug, under the AKR1C3 enzyme catalysis inside tumor cells, it will be transformed into the metabolin with cytotoxicity to achieve the anti-neoplastic effect; AKR1C3 enzyme has high performance in multiple types of tumors, its main function is to participate in hormone synthesis and toxin removal. The company has acquired approval from US Food and Drug Administration (FDA) on April 18, 2007 to carry out the OBI-3424 clinical trial. OBI-3424 is undergoing the dose escalation phase of the phase I clinical trial, scheduled to be completed this year, and then enter the cohort expansion phase.

(9) OBI-858 New botulinum toxin:

The development strategy of OBI-858 will first carry out early clinical development in Taiwan. Since botulinum toxin is highly toxic, the specification of manufacturing factory is extremely strict, only a few

companies are capable of production in the world. At the beginning of development of this project, the Company reported to the Center for Disease Control (CDC) immediately, and absolutely followed relevant regulations to carry out small volume production under the condition of meeting biological safety specification. The initial result has verified that, the botulinum toxin products produced by the Company completely meet European pharmacopoeia specifications, and communication meeting with Food and Drug Administration, Ministry of Health and Welfare has been held. PharmaCore has been appointed to carry out finished drugs production for use in clinical trial.

3. R&D personnel and their education background & experience:

Full-time personnel	Title	Education background	Relevant experience
Michael N. Chang	Chairman	Senior Research Doctor, Massachusetts Institute of Technology Doctor of Organic Chemistry, Brandeis University	With over 30 years of R&D and management experience in pharmaceutical companies such as Merck, Aventis, ArQule, Pharmanex and Optimer Pharmaceuticals etc., responsible for supervising and assisting in the development of various new western medicine, among them three of them were approved by US FDA to launch on the market, personally owns 35 product patents, and has published over 60 research articles in famous scientific journals worldwide.
Tony Yu	Chief Scientific Officer & Executive Vice President	Doctor of Pharmacy of University of Michigan Doctor of Clinical Pharmacy of University of Florida	With 35 years of new drug research and development and management experience in major international pharmaceutical companies, including leading candidate drug modification (from research and development to the stage of IND), drug delivery research and formulation development ()from IND to the stage of NDA, and has won the "Ebert Prize" issued by American Academy of Pharmacy. Once served as the Deputy Director of Bristol Myers Squibb, new drug General Manager of MICROBIO. Canyon Pharma Co-founder, President and CSO
Lai, Ming-Tien	Executive Vice President of R&D Division	PhD in Bio-organic Chemistry, University of Minnesota	With over 23 years of new drugs research and development and management experience in big international pharmaceutical companies, once was the senior chief scientist of Merck Sharp & Dohme, and also the core team member in early drug development and product development, during his term of office, he once led the team to develop more than 10 drug candidates, and most of them successfully were proceeded to the phase of clinical trial. Once won various awards of Merck Sharp & Dohme, including District Staff Award in 2007, Special Achievement Award in 2009 and New Drug Development Award in 2018 etc. The antiviral drug developed by his leading obtained the medicament license from US FDA IN 2018.
Shih, Yu-Nan	Vice President of Quality Assurance and Supply Chain Division	Doctor of Chemistry,Cornell University	Postdoctoral research at the University of Minnesota. Used to serve as vice genera manager of quality assurance department of ScinoPharm and EirGenix, worked over 25 years in the special chemical and biomedical industry, with QA and RA experience, as well as the experience of planning related department/plant construction, and passed TFDA, FDA, PMDA and TGA inspection.
Tsai, Cheng-En	Vice President for	PhD in Molecular Genetics and Biology, University of	Graduated from College of Medicine, National Taiwan University; PhD in Molecular Genetics and Biology, University of Cambridge. Have received complete clinical training and with rich experience in clinical diagnosis and treatment. Before joining OBI, once served in

Full-time personnel	Title	Education background	Relevant experience
	Medical Affairs and Clinical Research and Development	Cambridge	TaiGen Biotechnology and TWi Biotechnology, supervising phase 1 to phase 4 clinical trial, and completed the phase 3 pivotal trial for new ingredient drug of TaiGen Biotechnology, obtaining the marketing authorization in both Taiwan and mainland and health insurance payment in Taiwan. Previously, once served as the examiner of Clinical Group and Senior Research Fellow of Medical Technology Evaluation Group in Center for Drug Evaluation, Taiwan; Medical Advisor of Bristol-Myers Squibb (Taiwan and Hong Kong); with comprehensive and rich experience in drug research and development, design and implementation of clinical trial, and evaluation of test results.
Sophia Lee	Vice President, Statistic & Biometrics	Doctor of Biostatistics, Boston University	Doctor of Biostatistics, Boston University, with 20 years of experience in biostatistics, currently the design expert for SAS and other statistical programs, skilled in immunology, cardiology, neurology and AIDS treatment. With solid leadership and supervision experience in drug R&D statistics, in the aspect of assuring the integrity and quality of clinical trial, has abundant experience in regulatory submission, clinical research and development plan, trial protocol design and development, clinical study report, statistical analysis plan and statistical analysis label and publication etc. Once was the senior statistician of the Center for Biostatistics in AIDS Research, School of Public Health, Harvard University and the Statistics Director of Biogen.
Jiann-Shiun Lai	Vice President of Research, R&D Division	Doctor of Inheritance Institute, State University of New York at Stony Brook	Postdoctoral Research of Massachusetts Institute of Technology, Genetics Doctor of Cold Spring Harbor Laboratory, Stony Brook University, and Master in Microbiology and Immunology, National Yang-Ming University; with over 20 years of experience in monoclonal antibody new drug research and development and management, including leading candidate drugs screening, optimization, mass production cell line development, pre-clinical pharmacological, pharmacokinetic and toxicity test design. Once served as the Consultant in the fields of biotechnology, medicine and living materials chemistry in Technology Division of Ministry of Economic Affairs; Group Leader of Protein engineering Group, Biopharmaceutical Institute, Development Center for Biotechnology (DCB), Assistant Researcher of Biomedical Institute, Academia Sinica.
Edward Hsieh	Director in Chemical Pharmacy, R&D Division	Doctor of Chemistry Institute, Simon Fraser University	Specialized in organic synthesis, physical organic chemistry and theoretical chemistry. Over ten years' experience in drug design research and development, production management, analytical method development and quality management, familiar with application requirements in GMP related laws and regulations and international CMC laws and regulations. Once served as Deputy Director of Pharmaceutical Chemistry Research Department in OBI Pharma, Examiner and Researcher of Center for Drug Evaluation and responsible for CMC related drug counseling work, Chemical Pharmaceutical Deputy General Manager of Ningbo Smart Pharmaceutical Co., Ltd., Adjunct Professor of Ningbo Institute of Technology, Zhejiang University, Researcher of Industrial Technology Research Institute.

4. Research and development costs input every year and the technologies or products successfully developed in the last five years:
    A. Research and development costs input every year in the last five years:

Unit: NT$ thousand

Item \ Year	2018	2017	2016	2015	2014
Research and development costs	1,127,083	848,729	859,480	648,157	485,290
Ending paid-up capital	1,739,907	1,721,657	1,716,119	1,707,200	1,499,936
Proportion of research and development costs in paid-up capital (%)	64.78	49.30	50.08	37.97	32.35

B. Technologies or products successfully developed in the last five years:

Product	Development progress	R&D achievements
DIFICID™	Has acquired medicament license and health insurance payment	Has acquired medicament license from Department of Health on September 7, 2012, and approved to launch in Taiwan. In August 2014, it has completed health insurance payment agreement with Department of National Health Insurance. In October 2015, through Optimer Pharmaceuticals, the subsidiary of Merck Sharp & Dohme, the product development and sales right of DIFICID™ in Taiwan was transferred to Merck Sharp & Dohme. OBI has gained signing bonus of USD three million only and will gain the milestone payment and product sales royalty in the future.
Breast cancer active immuno-oncology drug OBI-822	Global phase III clinical trial in progress	Has completed clinical phase II/III trial in Taiwan, conducting trials in 45 clinical medical centers worldwide, including 15 in Taiwan, 1 in Hong Kong, 13 in USA, 11 in Korea and 2 in India; has received 349 targets in July 2014, and unblinding was conducted in February 2016. As at April 2019, it has been approved to carry out phase III human clinical trial in Taiwan, Australia, US, Hong Kong, Ukraine and Russia etc.
OBI-833 New generation Globo H active immunity anti-cancer drug, active cancer immunotherapy	Phase I clinical trial in progress in US and Taiwan	OBI-833 clinical phase I safety assessment has been completed, and one of the dosages is selected to enter into the cohorts expansion (Expansion Cohort Phase) trial taking lung cancer patients as the receiving target.
OBI-888 Globo H passive immunity monoclonal antibody	Phase I clinical trial in progress in US	The pathological analysis of the Pre-clinical Repeated-Dose Tox Test has been completed and it has acquired approval from US Food and Drug Administration (FDA) in January

Product	Development progress	R&D achievements
		2018 to carry out phase I clinical trial. The dose escalation phase of the phase I clinical trial will be completed at the world-renowned MD Anderson Cancer Center, and preparation for subsequent cohort expansion trials is underway. The included trial is expected to begin in the third quarter of 2019.
OBI-3424 Micromolecule chemotherapy prodrug	Phase I/II human clinical trial in progress in US	In June 2017, signed contract with Threshold Pharmaceuticals from California, purchased the micromolecule first-in-class new drug TH-3424, and renamed it into OBI-3424, it will be developed into the potential therapy treating cancers of high AKR1C3 enzyme performance. In 2018, the US Food and Drug Administration (FDA) approved the qualification of orphan drugs for hepatocellular carcinoma (HCC) and acute lymphoblastic leukemia (ALL). The dose escalation phase of the phase I clinical trial is ongoing.

(iv) Long-term and short-term business development plan:

The Company aims at the unmet medical needs globally and takes the development of new anti-cancer drugs as major business. The short-term development plan is to continue to promote the global phase III clinical trial of OBI-822 active immune anticancer drugs, and accelerate the development of phase I human clinical trial of OBI-833 active immunization vaccine, OBI-888 monoclonal antibody and OBI-3424 small molecule chemotherapy prodrug. At the same time, try to seek the possibility of cooperation with international pharmaceutical companies.

The company's long-term goal is to strengthen the development of OBI-866 active immunization vaccine, OBI-898 monoclonal antibody and OBI-998 antibody small molecule drug complex through product diversification strategy, supplemented by product life cycle management, and to continue to expand its product portfolio and eventually become a world-class cancer pharmaceutical company. The company will give back to Taiwan to increase the employment opportunities, lead the biotechnology industry to internationalization, create a world-class Taiwan brand, and use capital

investment and new research and development plans to further invest and contribute to Taiwan; and hope to create value to the shareholders and the company.

ii Market and production and marketing overview

(i) Market analysis:

1. Sales territory of main commodities:

Based on the market in Taiwan and with layout worldwide, the Company takes developing into international first-class brand in biotechnology as the objective, strategically, the Company will seek for international pharmaceutical factory as strategic alliance for mutual complements of resources and expertise, so as to accelerate the schedule of commercialization of products under research and development through joint development or licensing etc.

2. Market share:

OBI-822 and other products are the new drugs under development, hence it is not applicable.

3. Future market supply and demand condition, growth:

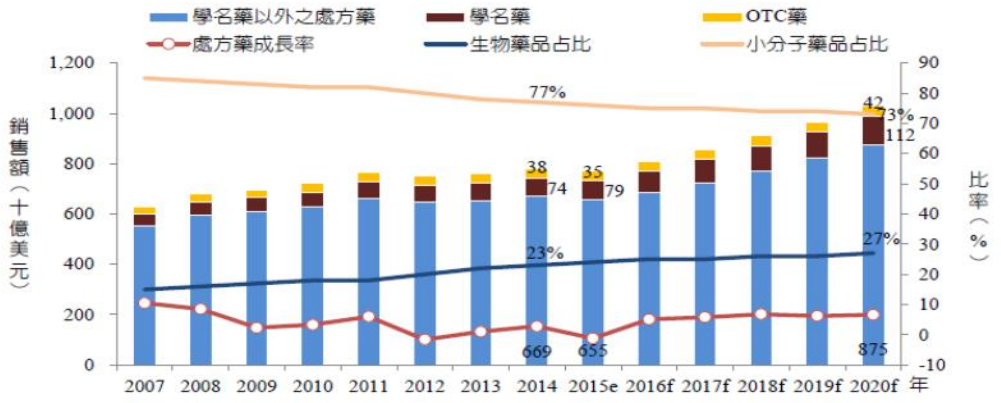
In recent years, the global pharmaceutical industry has been developing towards an active and positive direction, including the improvement of research and development productivity, historic new high in the number of brand new drugs approved to launch on the market, and drugs of breakthrough treatment, such as the launch of Sovaldi used for hepatitis from Gilead Science company, it is predicted that the global pharmaceutical industry will maintain stable growth up to 2020. According to statistics forecast of sales carried out by EvaluatePharma for the top 500 major companies in global pharmaceutical industry, it is estimated that the drug market in 2015 will reach to USD769 billion, and up to USD1 trillion in 2020, among them, the prescription drugs market (generic drugs and prescription drugs other than generic drugs) will reach to USD987 billion. From 2015 to 2020, the Compound Annual Growth Rate (CAGR) of drug market is 6%.

From 2015~2020, sales volume of USD215 billion of drugs worldwide will face the crisis of decline due to patent expiry, and according to the current market forecast, the actual sales losses caused by patent expiry will be about USD99 billion, less than the losses of USD120 billion from 2009~2014, major affecting factor lies in that the successive launch of biological drugs having acquired patent in the subsequent 6 years will slow down the erosion degree of price competition of the generic drugs in global drug market scale.

It is expected that biological drugs will become the major contribution to the global drug market growth in the future, in 2014, among top 100 bestselling drugs worldwide, 44% are biological drugs, and it is expected that there will be 46% of biological drugs among the top 100 drugs in 2020. Generally speaking, the sales volume of biological drugs is accounting for 23% of the global drug market share in 2014, and it will be increased to 27% in 2020.

When making a comprehensive survey on the development of global drug market in the future, the drug market scale will grow continuously. However, what is noteworthy in the future is the global drug market pricing and market access issue, despite currently innovative drugs of "cured" meaning have been developed gradually, the use of such innovative drugs still needs to pay quite high price; from the perspective of government and private medical treatment, it is very obvious that the payers care about the price, and more and more unwilling to provide fund payment or be recommended to use extremely expensive drug therapeutic scheme. As forming the trend of curtail expenditures, in the future, pharmaceutical industry will have to accept the reduction of product price, or actively prove that the product itself can actually cure patients and further reduce the medical expenditure of the country, or the use effect of drug itself is higher than the use cost.

2007～2020 Global drugs market forecast



註：上述數據係針對全球製藥產業 500 大公司進行之統計推估
資料來源：EvaluatPharma；DCB 產資組 ITIS 計畫整理

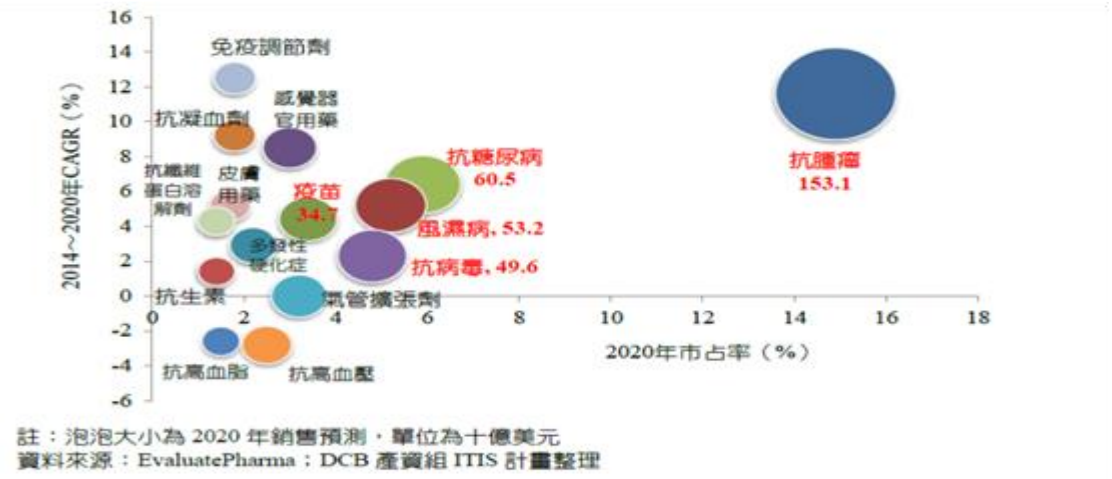
The ranking of drugs of each efficacy category in 2020 will take anti-neoplastic drugs on the top, reaching to USD153.1 billion, with market share of 14.9% in global drug market; from the perspective of future growth, anti-neoplastic drugs

is the medication field of second highest CAGR from 2014~2020, up to 11.6%, the main reason for growth is the launch of new cancer immunotherapy drugs taking PD-1 etc. as the target, and the new blockbuster drugs of anti-cancer potential such as Perjeta from Roche and Imbruvica from Jonhson & Jonhson etc., it is expected to bring the growth of overall cancer medication market.

Anti-diabetic medication (will reach to USD60.5 billion in 2020, with 5.9% market share), rheumatic disease medication (USD53.2 billion, 5.2%), anti-virus medication (USD49.6 billion, 4.8%), and active immuno-oncology drug (USD34.7 billion, 3.4%) will be the top 2~5 medication categories worldwide in 2020. The global sales volume of top 15 medications of efficacy category will be about USD561.4 billion in 2020, with market share about 54.7%.

In the future, the medication category growing fastest will be the immunomodulator, with CAGR from 2014~2020 is 12.5%, the market share will grow from 1.2% in 2014 to 1.8% in 2020, and the sales volume will reach to USD18.6 billion. The anti-hypertension and anti-hyperlipid medications will be the only two items with sales decline among the top 15 medication categories in 2020, with CAGR of -2.8% and -2.6% respectively.

Top 15 drugs of efficacy category worldwide in 2020



註：泡泡大小為 2020 年銷售預測，單位為十億美元
資料來源：EvaluatePharma；DCB 產資組 ITIS 計畫整理

In respond to the preceding extensive medical market demand, the pharmaceutical industry has been developing innovative anti-cancer drugs continuously, apart from that targeting therapy drugs will continue to develop to

replace the traditional chemical and radiation therapy, the latest development trend is cancer immunotherapy, in which drugs will directly or indirectly effect in patient's immune system, so as to improve patient's immunity, or block the capability of disease in suppressing immune system, and then achieve the anti-cancer effect. Such brand new immune immuno-oncology therapy has attracted great attention in medical industry recently; American and Japanese scholars winning Tang Prize and Biomedical Prize are the pioneers in developing such therapy. The breakthrough of the Company in carbohydrate synthesis technology opens a new gate for drug development. In recent years, several researches point out that specific carbohydrate molecule only effect on cancer cell surface, making carbohydrate molecule as the new anti-cancer object. The development of carbohydrate drugs has been deemed as one of the key directions in drug development in 21st century.

Ever since the beginning of establishment, the Company has been aiming at the global market, developing strategy according to international industry trend, and focusing on the market of cancer drugs which are of huge market demand and expected to grow strongly in the next ten years. In 2017, OBI Pharma has completed the important transformation from a company of single product line into a company of diversified cancer drugs; not only stepping into the fields of Monoclonal Antibody (mAb) and Antibody Drug Conjugate (ADC) based on the original anti-cancer vaccine in the research and development of new anti-cancer drugs taking Globo H as the target, but also carrying out multiple pre-clinical researches on another tumor carbohydrate molecules SSEA-A, continuously maintaining a leading position in the field of research and development of new anti-cancer drugs taking Globo Series carbohydrate molecules as the target. Apart from that, OBI Pharma has obtained the micromolecule chemotherapy prodrug OBI-3424 taking AKR1C3 enzyme inside the tumor as the effect target, and taken merger and acquisition of AP Biosciences, Inc. that possessing multiple immune checkpoint inhibitors, making the R&D projects of OBI on new anti-cancer drugs more diversified, and laying a solid foundation for the development of combined therapy or Bi-Specific Antibody in the future.

4. Competition niche:

OBI-822, OBI-833, OBI-866 and OBI-898, Globo series carbohydrate cancer immunotherapy, their anti-cancer mechanisms take the Globo series carbohydrate antigen only effecting on cancer cells and without effecting on normal cells as the target, hoping to provide patients a safe, effective

anti-cancer new choice with low side effect, so as to improve treatment result and life quality.

OBI-999 utilizes Globo H antibody to identify the cancer of high Globo H performance, and carries out direct cytotoxicity therapy by releasing micromolecule chemotherapeutic drugs through the specificity of antibody, it is expected that the market scale of such micromolecule antibody drug conjugate will grow to USD18.1 billion in 2022, it has huge market potential in the future.

Under the AKR1C3 enzyme catalysis inside tumor cells, OBI-3424 will be transformed into the metabolin with cytotoxicity to achieve the anti-neoplastic effect, AKR1C3 enzyme has high performance in over 15 types of tumors, and OBI-3424 is the drug of high potential under research and development in this mechanism.

OBI-858 is the new botulinum toxin of good stability and safety, the Company masters high quality manufacturing technology, it is expected to enter into the high growing botulinum toxin market with competitive price after completing the clinical trial.

5. Favorable and unfavorable factors in development prospect and solutions:

(1) Favorable factor:

- he core technology of the Company breaks through the traditional bottleneck in carbohydrate synthesis, it can resolve the difficulty that currently carbohydrate cannot be applied extensively in new drug research and development and commercial mass production.
- The exclusive production technology of OBI can break through product life cycle, making it not easy to be imitated by other competitors, so as to protect the exclusive composition of product.
- For the active immunotherapy targeting Globo H, its antigen has high specificity to cancers, it is not easy to affect the functions of normal cells, the product effectiveness is high, and the application scope is extensive.
- The new generation of active immune anticancer drug OBI-833 and OBI-866 can be applied to a variety of cancers, the market prospect is expectable.
- The operating research and development team has abundant experience in international new drug development, clinical trial and operating management.

- Has multiple core products protected by patent.

(2) Unfavorable factor and solutions:

- Most products of OBI are First-in-Class breakthrough new drugs, the research and development and clinical trial have high uncertainty.

  Solutions: the Company plans and executes all kinds of pre-clinical and clinical trials with prudent attitude, regularly consults with scholars and experts to ensure the quality of trial design, and amend the trial direction when appropriate to increase the success rate of trial.

- The clinical trial of breast cancer active immuno-oncology drug takes longer time and higher costs, once it is not completed within the expected time, it might need to introduce new capital investment.

  Solutions: the Company prudently assesses the costs input in the clinical trials of each stage and the risks thereof, appropriately utilizes company resources, maintains communication with shareholders, investors and potential international cooperative institutions, and prepares for fund-raising as early as possible to reduce the operating risk.

- It is late for OBI-858 to enter into botulinum toxin market.

  Solutions: plan to enter into the market through joint development and price advantage.

(2) Important use and production process of major products:

OBI-822 and OBI-833 and cancer immunotherapy drugs; for relevant production (development) processes, since the drugs used for clinical trial at current stage are the bulk drugs and medicines in outsourcing manufacturing, currently, the processing scale established by outsourced plant is sufficient to supply for clinical phase III trials carried out in several centers in various countries worldwide, as well as OBI-833 clinical phase I cohorts expansion test. At later stage of clinical trial, we will propose resolutions according to the clinical trial result and future market trend, and consider expanding production domestically, so as to achieve the maximum benefits in company operating strategy. OBI-888 is the drug targeting cancer antibody and OBI-999 is the micromolecule antibody drug conjugate, in respect of production (development) processes, including cell lines development and antibody mass production, they are at the stage of outsourcing manufacturing currently, regarding the current outsourcing manufacturing, the scale of process is sufficient to supply for clinical phase I and II trials. At later stage of clinical trial, we will propose resolutions according to the clinical trial result and future market trend, and consider expanding production domestically, so as to achieve the maximum benefits in company operating strategy, OBI-3424 is the drug of micromolecule, and it will be outsourced for production.

(3) Major raw materials' supply condition

Currently the product raw materials supply in each research and development is still stable, the Company also actively seeks for secondary supplier of high quality raw materials supply, so as to ensure certain supply in the future.

(4) Description on significant change of the gross profit margin of major product type or department type in the last two years:

The Company was established in April 2002, it is still at the stage of new drug research and development currently, and there is no significant change of the gross profit margin of major product type or department type.

1. Name of supplier once accounting for over ten percent of total purchase amount in any year of the last two years and its purchase amount and proportion, and describe the reason for increase or decrease change:
   The Company was established in April 2002, it is still at the stage of new drug research and development currently, and there is no commodity purchase in 2017 and 2018.
2. Name of customer once accounting for over ten percent of total sales amount in any year of the last two years and its sales amount and proportion, and describe the reason for increase or decrease change:

   Since the establishment in April 2002, the Company is still at the stage of new drug research and development currently, there was no sales facts regarding major products in 2017 and 2018; on October 2, 2015, the Company had signed the product rights transfer contract with Optimer Company for DIFICID in Taiwan, and the right transfer had completed in the second quarter of 2016, and the signing bonus of USD3 million had been collected and recognized according to the contract.

(5) Production quantity in the last two years: not applicable.

(6) Sales quantity in the last two years: not applicable

iii Number of employees in the last two years

The works of legal affairs, research and development, toxicology and drug quality control of the Company are mostly outsourced for execution at early stage, in Taiwan and US, the Company has appointed professional consultant for assistance; in recent years, the product research and development has become mature gradually, and the Company has successively recruited professional talents and elites in the industry to join, not only strengthening the team, but also making the company function more complete. As at April 2019, the distribution of human resources of the Company is as follows:

April 30, 2019

Year		2017	2018	As at April 30 in current year
Number of employees	Personnel of director level	9	8	8
	General personnel	21	21	22
	R&D and technical personnel	83	87	94
	Total	113	116	124
Average age		40.57	40.53	40.49
Average length of service		3.23	3.65	3.64
Degree distribution ratio (%)	Doctor degree	23.01	24.14	25.81
	Master degree	54.87	53.45	53.22
	College degree	22.12	22.41	20.97
	Senior high school degree	0	0	0
	Total	100	100	100

iv Environmental protection expenditure information

(1) Pursuant to laws and decrees, if pollution facility setting license or pollutant discharge permit shall be applied for, or pollution prevention and control costs shall be paid, or environmental protection dedicated unit and personnel shall be set, description on the application, payment or setting circumstances thereof: not applicable.

(2) Investment of the company regarding major equipment for preventing and controlling environmental pollution, and their use and benefits might be generated: NA.

(3) In the last two years and as at the publication date of annual report, in the course of the company's improvement of environmental pollution, if there is any pollution dispute, the handling process thereof: NA

(4) Losses and penalty amount suffered due to polluting the environment in the last two years: NA.

(5) In the last two years and as at the publication date of annual report, the losses (including compensation) and total penalty amount suffered by the company due to polluting the environment, and the disclosure of future solutions (including improvement measures) and possible expenditure (including estimated amount of possible losses, penalty and compensation due to the failure of adopting solutions, if it cannot be estimated reasonably, the facts of cannot be estimated reasonably shall be described): NA.

(6) The impact of current pollution status and its improvement on the company earnings, competitive status and capital expenditure, and the expected significant environmental protection capital expenditure in the coming two years: not applicable.

(7) Working environment and employee personal safety protection measure:

1. Air conditioner: conduct regular maintenance to air conditioner to improve the efficiency of machinery equipment and reduce the failure rate.
2. Improvement of environmental waste reduction: implement garbage classification and set resources classification recycling bin, conduct classification for treatment and recycling according to resources categories.
3. Wastewater treatment: for the biotechnology floor of the company located at Nangang Software Park Phase II, the wastewater produced must be discharged to biotechnology wastewater treatment tank for treatment, and then transferred into general wastewater treatment tank for treatment before discharge, building management unit conducts water quality testing

regularly every month, the testing results thereof are conforming to the government laws and decrees and have passed the test conducted by Sanitary Sewer Engineering Division, Works Bureau of Taipei City Government, and it will not produce pollution to the environment.

4. Preparation, maintenance and use of protective equipment: in each laboratory, personal safety protective equipment are provided according to the possible hazard conditions and types in the nature of operation, and professional or special protective equipment shall be kept and maintained by dedicated personnel.
5. Handling of mechanical equipment and instrument waste: if the mechanical equipment and analytical instruments in the laboratory cannot be used due to the expiry of service life, if the expiry of service life of such instruments have been confirmed, scrapping procedures can be gone through immediately.
6. Power utilization improvement: select and use fluorescent lighting fixtures of high power factor to improve power utilization efficiency and illuminating brightness, and employees form a good habit of turning off lights and the power when leaving, so as to save power utilization.
7. Noise improvement: select and use instrument and equipment of high efficiency and low noise to reduce the environmental noise. Set machine room to isolate the running noise of relevant equipment.
8. The Company implements regular inspection, repair and maintenance to each working equipment, so as to ensure work safety of employees. And holds labor safety and health education and disaster prevention training every year to let employees be familiar with and comply with relevant rules. Laboratories also set laboratory safety and health management organization members to implement the promotion of laboratory safety and health management of the company.

v Labor-capital relationship

(i) Employee benefit measures, further education, training and retirement system of the company and the implementation condition thereof, agreement between labor and capital and maintenance measures of all kinds of employees' rights and interests:

1. Employee benefit measures:

(1) Labor insurance: handle pursuant to labor insurance laws and decrees.

(2) National health insurance: handle pursuant to provisions of National

Health Insurance Act.

(3) Group insurance: all employees can enjoy the life insurance, accident insurance, hospitalization medical insurance, cancer medical insurance etc. borne by the company in full amount.

(4) Festival bonus / recreation: issue birthday gift, marriage or funeral allowance, issue gifts etc. for three major festivals regularly and hold employee tourism regularly every year.

(5) Employee bonus: when surplus is available upon annual settlement, taxes shall be withheld and losses in previous years shall be covered first, and then draft the distribution proportion of employee bonus in current year, after passed by Board of Directors, propose it to Shareholders' Meeting for acknowledgment.

(6) Employee subscription right: in order to attract professionals to join the work team of the Company and retain excellent employees of development potential in the future, and further take care of employees and improve their living standard to jointly create benefits for company and shareholders, after approved by Board of Directors, the employee stock option certificate will be issued pursuant to "Employee Stock Options Issuance and Exercise Provisions".

(ii) Further education and training measures:

（1） New employee: on the date when employee reports for duty, relevant personnel of the company will be responsible for describing personnel regulations, company profile, working rules, environment introduction, and introduction of supervisors and colleagues.

（2） In-service employee further education measures: in order to implement lifelong learning, facilitate professional knowledge, skill and improve humanistic quality, and further improve service quality and performance, after report and being approved, all in-service full-time employees will be encouraged to participate in all kinds of in-service education and advanced study and training courses.

3. Retirement system:

The Company implements retirement system pursuant to the provisions

of Labor Standards Act, regularly allocate the reserve for employee retirement to deposit in the special account in Bank of Taiwan, and appoints actuary for actuarial practice to ensure sufficient preparation of retirement pension reserve.

4. greement between labor and capital and maintenance measures of all kinds of employees' rights and interests:

Through mechanisms such as communication, incentive, service and education etc., the Company duly satisfies the demand of employees, allowing employees to established a good relationship with the company under a common goal and in the same boat, so as to improve employees' centripetal force to the company and work satisfaction, making them willing to spare more efforts to create greater contribution and value to the company, and the relationship between labor and capital is harmonious.

(iii) In the last two years and as at the date of annual report publication, the loss suffered by the company due to labor dispute, and disclosure of estimated amount occurred currently and likely to occur in the future and the solutions:

The Company always treats employees as the most valuable assets and attaches great importance to the future development of employees. Therefore, both labor and capital are always maintaining a harmonious relationship, and there is no loss caused by labor-capital dispute.

vi. Important contracts

Agreement	Contracting Parties	Term	Major contents	Restrictions
Assignment Agreement	Optimer Pharmaceuticals, Inc. Sloan-Kettering Institution for Center Research	From May 7, 2009 for a period of twenty years, or until the expiration of patent, whichever is later.	Acquisition of patent licensing	NA
Intellectual Property Assignment and License Agreement	Optimer Pharmaceuticals, Inc.	Effective from October 30, 2009	Acquisition of patent licensing	NA
Intellectual Property Assignment and License Agreement	Optimer Pharmaceuticals, Inc.	From October 19, 2012 (effective date of supplementary contract) to July 30, 2022.	Acquisition of all rights and information related to the patent, manufacturing and sales from Optimer	NA
Exclusive License Contract	Optimer Pharmaceuticals, Inc.	From June,2011 to the expiration date of the patent of the product and its composition in Taiwan, or ten years after the first sale in Taiwan, whichever is later.	Acquire authorization to research, develop and sell patented products	NA
Exclusive License Contract	Academia Sinica	From July 2010 until terminated by OBI Pharma with 30 day prior written notice or terminated by Academia Sinica with 60 day prior written notice.	Acquisition of technology licensing	NA
Exclusive License Contract	Academia Sinica	From April 23, 2014 until the expiration of patent.	Acquisition of exclusive technology licensing	NA
The Right of First Refusal Agreement	Optimer Pharmaceuticals, Inc.	From October 30, 2009 for a period of ten years	Acquisition of right of first refusal to the patent	NA
Technology Purchase Agreement	Amaran Biotechnology, Inc.	March 3 2012	OBI Pharma purchases technology from Amaran	NA
Assignment Agreement	Optimer Pharmaceuticals, LLC	From May 2015 until the final patent expiration date	Assignment contract	NA
Technical Cooperation Contract	Amaran Biotechnology, Inc.	From January 25, 2016 to January 24, 2026	OBI Pharma appoints Amaran Biotechnology, Inc. for OEM products manufacturing.	NA
Purchase Contract	Amaran Biotechnology, Inc.	January 25 2016	OBI Pharma purchases production equipment from Amaran	NA
Real Estate Sales Contract	(1) Protech Technology Enterprise Co., Ltd. (2) Bio-genesis Technologies, Inc.	July 5, 2016	Purchase real estate in Nangang Software Park for laboratory use	NA
Supply and Marketing	Amaran Biotechnology, Inc.	From January 25, 2016 to January 24, 2026	OBI Pharma appoints Amaran Biotechnology, Inc. as OEM	NA

Agreement	Contracting Parties	Term	Major contents	Restrictions
Contract				
Long-term Borrowing Contract	E.SUN Bank Taipei Qijin Center	Effective from September 26, 2016	Long-term secured borrowing for laboratory	NA
Purchase Contract	Threshold Pharmaceuticals, Inc.	May 31, 2017	Product purchase	NA
Exclusive License Contract	Abzena	July 11, 2017	Acquisition of exclusive technology licensing.	NA
Technology Development Contract	PharmaCore Biotech Co., Ltd.	From September 2017 to September 2024	Sign the Design and Construction Supervision of Botulinum Toxin Injection Plant & Management Maintenance Service Contract	NA
Supply and marketing contract	Amaran Biotechnology, Inc.	Effective from January 25, 2018	Sale of products	NA
Equipment transfer agreement	Amaran Biotechnology, Inc.	Effective from May 19, 2018	Carrying out project equipment transfer and relocation	NA
Non-exclusive License Contract	OBI Pharma Australia Pty Ltd.	Effective from June 13, 2019	Conducting clinical trials for non-exclusively licensed patents in Australian subsidiary	NA
Service Agreement	Company A	Effective from February 14, 2019	Development of GMP Product	NA
Technical Cooperation Contract	EirGenix, Inc	Effective from August 27, 2015	Technical development with EirGenix, Inc	NA
License Contract	Sigma-Aldrich, Inc.	Effective from May 30, 2018	Sigma licenses OBI Pharma the right of research and development of cell line.	NA
Technical Cooperation Contract	AP Biosciences, Inc.	Effective from September 1, 2018	Joint development of antibody	NA
Engineering Contract	Quanlian Engineering Technology Co., Ltd.	Effective from March 22, 2019	Commissioned engineering for interior decoration	NA
Engineering Contract	Aurora Co., Ltd.	April 04,2019- July 31,2019	Office decoration and fire-fighting engineering	NA

VI. Financial Overview

i. Concise financial information in the last five years

(i) Concise balance sheet and consolidated profit and loss statement

1. Individual concise balance sheet - International Financial Reporting Standards

Unit: NT$ thousand

Item \ Year		Financial information in the last five years					Financial information in current year as at March 31, 2019
		2014	2015	2016	2017	2018	
Current assets		913,453	2,314,025	3,846,379	4,667,464	3,678,055	Not applicable
Property, plant and equipment		44,430	74,317	226,251	234,441	234,296	
Intangible assets		67,745	56,983	46,462	127,266	105,950	
Other assets		460,717	4,871,791	2,221,468	170,315	491,916	
Total assets		1,486,345	7,317,116	6,340,560	5,199,486	4,510,217	
Current liabilities	Before distribution	42,484	133,124	109,940	78,110	111,138	
	After distribution	42,484	133,124	109,940	78,110	111,138	
Non-current liabilities		-	-	69,860	61,003	52,147	
Total liabilities	Before distribution	42,484	133,124	179,800	139,113	163,285	
	After distribution	42,484	133,124	179,800	139,113	163,285	
Equity attributable to owners of parent		1,443,861	7,183,992	6,160,760	5,060,373	4,346,932	
Share capital		1,499,936	1,707,200	1,716,119	1,721,657	1,739,907	
Capital surplus		1,804,890	8,277,385	8,743,211	9,037,381	9,530,118	
Retained earnings	Before distribution	(1,861,812)	(2,803,149)	(3,913,277)	(5,292,713)	(6,514,955)	
	After distribution	(1,861,812)	(2,803,149)	(3,913,277)	(5,292,713)	(6,514,955)	
Other equity interest		847	2,556	1,428	(19,231)	(21,417)	
Treasury share		-	-	(386,721)	(386,721)	(386,721)	
Non-controlling interests		-	-	-	-	-	
Total equity	Before distribution	1,443,861	7,183,992	6,160,760	5,060,373	4,346,932	
	After distribution	1,443,861	7,183,992	6,160,760	5,060,373	4,346,932	

Notes: the above financial information have been audited and certified or checked and approved by the accountant.

2. Consolidated concise balance sheet - International Financial Reporting Standards

Unit: NT$ thousand

Item \ Year		Financial information in the last five years					Financial information in current year as at March 31, 2019
		2014	2015	2016	2017	2018	
Current assets		937,345	2,358,277	3,879,550	4,713,520	3,793,229	3,593,278
Property, plant and equipment		45,234	74,934	226,648	234,645	235,442	242,410
Right-of-use assets		-	-	-	-	-	120,789
Intangible assets		67,745	56,983	46,462	127,266	574,075	558,455
Other assets		437,776	4,820,802	2,175,417	114,598	106,748	89,131
Total assets		1,488,100	7,310,996	6,328,077	5,190,029	4,709,494	4,604,063
Current liabilities	Before distribution	44,239	127,004	97,457	68,653	103,817	54,635
	After distribution	44,239	127,004	97,457	68,653	103,817	54,635
Non-current liabilities		-	-	69,860	61,003	132,211	250,143
Total liabilities	Before distribution	44,239	127,004	167,317	129,656	236,028	304,778
	After distribution	44,239	127,004	167,317	129,656	236,028	304,778
Equity attributable to owners of parent		1,443,861	7,183,992	6,160,760	5,060,373	4,473,466	4,299,284
Share capital		1,499,936	1,707,200	1,716,119	1,721,657	1,739,907	1,731,287
Capital surplus		1,804,890	8,277,385	8,743,211	9,037,381	9,530,118	9,532,724
Retained earnings	Before distribution	(1,861,812)	(2,083,149)	(3,913,277)	(5,292,713)	(6,514,955)	(7,065,202)
	After distribution	(1,861,812)	(2,083,149)	(3,913,277)	(5,292,713)	(6,514,955)	(7,065,202)
Other equity interest		847	2,556	1,428	(19,231)	(21,417)	(19,883)
Treasury share		-	-	(386,721)	(386,721)	(386,721)	-
Non-controlling interests		-	-	-	-	126,534	120,359
Total equity	Before distribution	1,443,861	7,183,992	6,160,760	5,060,373	4,473,466	4,299,285
	After distribution	1,443,861	7,183,992	6,160,760	5,060,373	4,473,466	4,299,285

Notes: the above financial information have been audited and certified or checked and approved by the accountant.

2. Notes: the above financial information have been audited and certified or checked and approved by the accountant.

Unit: NT$ thousand

Item \ Year	Financial information in the last five years					Financial information in current year as at March 31, 2019
	2014	2015	2016	2017	2018	
Net revenue	-	-	92,422	376	5,162	Not applicable
Gross profit	-	-	92,422	376	5,162	
Income from operations (loss)	(677,392)	(1,060,288)	(1,110,256)	(1,188,216)	(1,300,667)	
Non-operating income and expenses	10,385	118,951	128	(191,220)	78,425	
Income before tax	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,222,242)	
Continuing operating unit Net profit for the year	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,222,242)	
Loss from discontinued operations	-	-	-	-	-	
Net profit (loss) for the year	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,222,242)	
Other comprehensive profit and loss for the year (net of tax)	1,048	1,709	(1,128)	(20,659)	(2,186)	
Total comprehensive profit and loss for the year	(665,959)	(939,628)	(1,111,256)	(1,400,095)	(1,224,428)	
Net income attributable to shareholders of the parent	-	-	-	-	-	
Net income attributable to non-controlling interests	-	-	-	-	-	
Total comprehensive income (loss) attributable to shareholders of the parent	-	-	-	-	-	
Total comprehensive income (loss) attributable to non-controlling interests	-	-	-	-	-	
Earnings per share	(4.46)	(5.66)	(6.51)	(8.06)	(7.06)	

3. Consolidated concise profit and loss statement - International Financial Reporting Standards

Unit: NT$ thousand

Item \ Year	Financial information in the last five years					Financial information in current year as at March 31, 2019
	2014	2015	2016	2017	2018	
Net revenue	-	-	92,422	376	13,339	214
Gross profit	-	-	92,422	376	8,053	214
Income from operations (loss)	(712,325)	(1,063,218)	(1,112,470)	(1,189,642)	(1,427,683)	(260,433)
Non-operating income and expenses	45,318	123,405	4,846	(187,815)	171,881	38,294
Income before tax	(667,007)	(939,813)	(1,107,624)	(1,377,457)	(1,255,802)	(222,139)
Continuing operating unit Net profit for the year	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,249,493)	(220,656)
Loss from discontinued operations	-	-	-	-	-	-
Net profit (loss) for the year	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,249,493)	(220,656)
Other comprehensive profit and loss for the year (net of tax)	1,048	1,709	(1,128)	(20,659)	(2,287)	(2,071)
Total comprehensive profit and loss for the year	(665,959)	(939,628)	(1,111,256)	(1,400,095)	(1,251,780)	(267,202)
Net income attributable to shareholders of the parent	(667,007)	(941,337)	(1,110,128)	(1,379,436)	(1,222,242)	(262,561)
Net income attributable to non-controlling interests	-	-	-	-	(27,251)	(7,465)
Total comprehensive income (loss) attributable to shareholders of the parent	(665,959)	(939,628)	(1,111,256)	(1,400,095)	(1,224,428)	(264,531)
Total comprehensive income (loss) attributable to non-controlling interests	-	-	-	-	(27,352)	(2,671)
Earnings per share	(4.46)	(5.66)	(6.51)	(8.06)	(7.06)	(1.23)

Notes: the above financial information have been audited and certified or checked and approved by the accountant.

(ii) Concise balance sheet and profit and loss statement - financial accounting standards of our country: The Company started to adopt International Financial Reporting Standards as of 2013, hence the financial information in the last five years are not applicable.

(iii) Name and audit opinion of certified public accountants in the last five years:

Year	Accounting firm	Name of accountant	Audit opinion	Reason for change
2014	PwC Taiwan	Audrey Tseng Chang, Ming-Hui	Clean opinion	NA
2015	PwC Taiwan	Audrey Tseng Chang, Ming-Hui	Clean opinion	NA
2016	PwC Taiwan	Audrey Tseng Chang, Ming-Hui	Clean opinion	NA
2017	PwC Taiwan	Audrey Tseng Chang, Ming-Hui	Clean opinion	NA
2018	PwC Taiwan	Lin Yukuan Audrey Tseng	Clean opinion	Due to internal business transfer of the firm

ii. Financial analysis in the last five years

(i) Individual important financial ratio analysis in the last five years - International Financial Reporting Standards

Analysis item \ Year		Financial analysis in the last five years (Notes 1)					As at March 31, 2018 in the current year
		2014	2015	2016	2017	2018	
Financial structure (%)	Proportion of liabilities in assets	2.86	1.82	2.84	2.68	3.62	Not applicable
	Proportion of long-term funds in property, plant and equipment	3,249.74	9,666.69	2,753.85	2,184.51	1,877.57	
Debt paying ability (%)	Current ratio	2,150.11	1,738.25	3,498.62	5,975.50	3,309.45	
	Liquidity ratio	2,063.81	1,706.95	3,440.61	5,880.37	3,229.38	
	Interest coverage ratio (ratio)	-	-	(5,210.87)	(1,146.62)	(1,154.24)	
Operating capacity	Receivables turnover rate (time)	-	-	-	7.30	10.58	
	Average cash collection days	-	-	-	50.00	34.50	
	Inventory turnover rate (time)	-	-	-	-	-	
	Payables turnover rate (time)	-	-	-	-	-	
	Average sales days	-	-	-	-	-	
	Property, plant and equipment turnover rate (time)	-	-	-	-	-	
	Total assets turnover rate (time)	-	-	-	-	-	
Profitability	Return on assets (%)	(38.59)	(21.39)	(16.25)	(23.89)	(25.16)	
	Return on equity (%)	(39.55)	(21.82)	(16.64)	(24.59)	(25.98)	
	Proportion of net profit before tax in paid-up capital (%)	(44.47)	(55.14)	(64.69)	(80.12)	(70.25)	
	Net profit ratio (%)	-	-	(1,201.15)	(366,871.28)	(23,677.68)	
	Earnings per share (NT$)	(4.46)	(5.66)	(6.51)	(8.06)	(7.06)	
Cash flow (Notes 2)	Cash flow ratio (%)	-	-	-	-	-	
	Cash flow adequacy ratio (%)	-	-	-	-	-	
	Cash reinvestment ratio (%)	-	-	-	-	-	
Degree of leverage (Notes 3)	Degree of operating leverage	-	-	-	-	-	
	Degree of financial leverage	-	-	-	-	-	

Description on the reasons for change of all kinds of financial ratios in the last two years:

1. Financial structure: the reason for the decrease of proportion of long-term funds in property, plant and equipment is mainly because the company is still at the stage of research and development and the CRO cost is high, hence the company is still under loss status in 2018.
2. Debt paying ability：The reduction of current ratio and liquidity ratio is mainly due to the interest income when various foreign currency time deposits become due, causing the accrued interest is lower year-on-year; the increase of interest coverage ratio is mainly caused by the increase of pre-tax income.
3. Operating capacity: since the company is still at the stage of new drug research and development currently, and there is no operating revenue and relevant inventory yet.
4. Profitability: the product line of the Company is still at the stage of active research and development, and there is no profit yet.

Notes 1: Notes: International Financial Reporting Standards are only adopted since 2013, and the above financial information have been audited and certified or checked and approved by the accountant.

Notes 2: The cash flow ratio, cash flow adequacy ratio, and cash reinvestment ratio are negative, hence relevant cash flow proportions are not calculated.

Notes 3: Since the company is still at the stage of research and development, hence it is still under net operating loss, and the degree of leverage is not calculated because it is negative.

(ii) Consolidated important financial ratio analysis in the last five years - International Financial Reporting Standards

Analysis item \ Year		Financial analysis in the last five years (Notes 1)					As at March 31, 2019 in the current year
		2014	2015	2016	2017	2018	
Financial structure (%)	Proportion of liabilities in assets	2.97	1.74	2.64	2.50	5.01	6.23
	Proportion of long-term funds in property, plant and equipment	3,191.98	9,587.09	2,749.03	2,182.61	1,922.18	1,834.07
Debt paying ability (%)	Current ratio	2,118.82	1,856.85	3,980.78	6,865.72	3,653.76	5,830.04
	Liquidity ratio	2,035.23	1,823.31	3,914.01	6,756.39	3,566.55	5,674.32
	Interest coverage ratio (ratio)	-	-	(5,199.11)	(1,144.97)	(750.08)	(110.07)
Operating capacity	Receivables turnover rate (time)	-	-	-	7.30	27.36	0.87
	Average cash collection days	-	-	-	50.00	13.34	417.66
	Inventory turnover rate (time)	-	-	-	-	-	-
	Payables turnover rate (time)	-	-	-	-	-	-
	Average sales days	-	-	-	-	-	-
	Property, plant and equipment turnover rate (time)	-	-	-	-	0.06	0.0035
	Total assets turnover rate (time)	-	-	-	-	-	-
Profitability	Return on assets (%)	(38.57)	(21.40)	(16.28)	(23.94)	(25.22)	(18.96)
	Return on equity (%)	(39.55)	(21.82)	(16.64)	(24.59)	(26.21)	(20.12)
	Proportion of net profit before tax in paid-up capital (%)	(44.47)	(55.05)	(64.54)	(80.01)	(72.18)	(50.98)
	Net profit ratio (%)	-	-	(1,201.15)	(366,871.28)	(9,367.22)	(103,110.75)
	Earnings per share (NT$) retroactive adjustment	(4.46)	(5.66)	(6.51)	(8.06)	(7.06)	(1.23)
Cash flow (Notes 2)	Cash flow ratio (%)	-	-	-	-	-	-
	Cash flow adequacy ratio (%)	-	-	-	-	-	-
	Cash reinvestment ratio (%)	-	-	-	-	-	-
Degree of leverage (Notes 3)	Degree of operating leverage	-	-	-	-	-	-
	Degree of financial leverage	-	-	-	-	-	-

Description on the reasons for change of all kinds of financial ratios in the last two years:

1. Financial structure: the reason for the decrease of proportion of long-term funds in property, plant and equipment is mainly because the company is still at the stage of research and development and the CRO cost is high, hence the company is still under loss status in 2018.
2. Debt paying ability: The reduction of current ratio and liquidity ratio is mainly due to the interest income when various foreign currency time deposits become due, causing the accrued interest is lower year-on-year; the increase of interest coverage ratio is mainly caused by the increase of pre-tax income.
3. Operating capacity: since the company is still at the stage of new drug research and development currently, and there is no operating revenue and relevant inventory yet.
4. Profitability: the product line of the Company is still at the stage of active research and development, and there is no profit yet.

Notes 1: Notes: International Financial Reporting Standards are only adopted since 2013, and the above financial information have been audited and certified or checked and approved by the accountant.

Notes 2: The cash flow ratio, cash flow adequacy ratio, and cash reinvestment ratio are negative, hence relevant cash flow proportions are not calculated.

Since the company is still at the stage of research and development, hence it is still under net operating loss, and the degree of leverage is not calculated because it is negative.

Calculation formulas of the above financial analysis data are as follows:

1. Financial structure
   （1） Proportion of liabilities in assets=total liabilities/total assets.
   （2） Proportion of long-term funds in property, plant and equipment=(total equity+non-current liabilities)/net amount of property, plant and equipment.
2. Debt paying ability
   （1） Current ratio=current assets/current liabilities
   （2） Liquidity ratio=(current assets-inventory-prepaid costs)/current liabilities
   （3） Interest coverage ratio=income tax and net profit before interest expense/current interest expenditure.
3. Operating capacity
   （1） Receivables (including accounts receivable and notes receivable arising from business) turnover rate=net sales/balance of average receivables in each period (including accounts receivable and notes receivable arising from business).
   （2） Average cash collection days=365/receivables turnover rate.
   （3） Inventory turnover rate=sales cost/average inventory.
   （4） Payables (including accounts payable and notes payable arising from business) turnover rate=net sales/balance of average payables in each period (including accounts payable and notes payable arising from business).
   （5） Average sales days=365/inventory turnover rate.
   （6） Property, plant and equipment turnover rate=net sales/average net amount of property, plant and equipment.
   （7） Total assets turnover rate=net sales/average total assets amount.
4. Profitability
   （1） Return on assets=[post-tax profit or loss+interest expense x (1-tax rate)]/average total assets amount.
   （2） Return on equity=post-tax profit or loss/average total equity amount.
   （3） Net profit ratio=post-tax profit or loss/net sales.
   （4） Earnings per share=(profit and loss attributable to parent company owner-special share dividend)/weighted average number of outstanding shares.
5. Cash flow
   （1） Cash flow ratio=net cash flow in operating activity/current liabilities.
   （2） Cash flow adequacy ratio=net cash flow in operating activities in the last five years/(capital expenditure+inventory increment+cash dividend) in the last five years.
   （3） Cash reinvestment ratio=(net cash flow in operating activity-cash dividend)/(gross amount of property, plant and equipment+long-term investment+other non-current assets+working capital).
6. Degree of leverage
   （1） Degree of operating leverage=(net operating income-changes in operating costs and expenses)/operating profit.
   （2） Degree of financial leverage=operating profit/(operating profit-interest expense).

(iii)Individual important financial ratio analysis in the last five years - financial accounting standards of our country: The Company started to adopt International Financial Reporting Standards as of 2013, hence the financial information in the last five years are not applicable.

(iv) Consolidated important financial ratio analysis in the last five years - financial accounting standards of our country: The Company started to adopt International Financial Reporting Standards as of 2013, hence the financial information in the last five years are not applicable.

(iii) Supervisor of the financial report in the last year or Audit Committee's Review Report
The Company had established the Audit Committee with three independent directors on November 27, 2013, and the original supervisor was dismissed on that day. Hence it is attached the 2018 Audit Committee's Review Report as follows:

Audit Committee's Review Report

The proposals on 2018 Business Report, consolidated and individual financial statements and Deficit Compensation Table etc. of the Company have been prepared and submitted by Board of Directors of the Company, among them, the consolidated and individual financial statements have been audited by accountant Audrey Tseng and Chang, Ming-Hui from PwC Taiwan and audit report has been issued. Proposals regarding the above Business Report, consolidated and individual financial statements and Deficit Compensation Table have been reviewed by Audit Committee, and those proposals are appropriate, it is hereby proposed for supervision pursuant to 5 of Article 14 of Securities Exchange Act and Article 219 of Company Act.

Sincerely submitted to
2019 General Meeting of the Company

OBI Pharma, Inc.

Convener of Audit Committee: Jerry Fong

Member of Audit Committee: Tony Chang

Member of Audit Committee: Taychang Wang

March 8, 2019

iv Financial statements and accountant's audit report in the last year: please see page **168** page **174** this annual report for details.

v Company individual financial report audited and certified by accountant in the last year: please see page **175** page **235** this annual report for details.

vi In the last year and as at the publication date of annual report, if the Company and affiliated enterprise have difficulty in financial turnover, its impact on the financial situation of the Company shall be listed: NA.

Vii Financial situation and financial performance review analysis and risks

i Financial situation

In the last two years, the main reasons for significant changes of assets, liabilities and shareholders' equity and its impact, in case of significant impact, the future solutions shall be described:

Unit: NT$ thousand

Item \ Year	2017	2018	Balance	
			Amount	Percentage (%)
Current assets	4,713,520	3,793,229	(920,291)	(19.52)
Available-for-sale financial assets - non-current	10,160	7,454	(2,706)	(26.63)
Property, plant and equipment	234,645	235,442	797	0.34
Intangible assets	127,266	574,075	446,809	351.08
Other non-current assets	104,438	99,294	(5,144)	(4.93)
Total assets	5,190,029	4,709,494	(480,535)	(9.26)
Current liabilities	68,653	103,817	35,164	51.22
Non-current liabilities	61,003	132,211	71,208	116.73
Total liabilities	129,656	236,028	106,372	82.04
Share capital	1,721,657	1,739,907	18,250	1.06
Capital surplus	9,037,381	9,530,118	492,737	5.45
Accumulated deficit	(5,292,713)	(6,514,955)	(1,222,242)	23.09
Other equity interest	(19,231)	(21,417)	(2,186)	11.37
Treasury stock	(386,721)	(386,721)	0	-
Non-controlling interests	-	126,534	126,534	100.00
Total equity	5,060,373	4,473,466	(586,907)	(11.60)

If the changes in adjacent periods reach to over twenty percent and the changed amounts reach to over NT$10 million, descriptions on the main reasons and its impact analysis are as follows:

1. The increase of intangible assets is mainly due to the market price of equity swap of AP Biosciences, Inc. exceeds the book value and recognition of US$500 million intangible assets in 2018.
2. The increase of current liabilities is mainly due to higher recognition of accrued expenses in 2018。
3. The increase of non-current liabilities is mainly due to the deferred income tax liabilities is charged for the recognition of intangible assets from the premium of equity swap with AP Biosciences, Inc. according to 20% tax rate in Taiwan.
4. The increase of accumulated loss is mainly because the Company is still at the stage of research and development and has not generated stable operating income, hence it is still under loss status in 2018.
5. The increase of non-controlling interest is mainly due to the minority holding of AP Biosciences, Inc.

ii Financial performance

Main reasons for significant changes in operating income, operating net profit and net profit before tax in the last two years, and expected sales quantity and its basis, and possible impact on future financial affairs of the company and solutions:

Unit: NT$ thousand

Item \ Year	2017	2018	Balance	
			Amount	Percentage (%)
Net revenue	376	13,339	12,963	3,447.61
Operating costs	-	(5,286)	(5,286)	(100.00)
Gross profit	376	8,053	7,677	2,041.76
Operating expenses	(1,190,018)	(1,435,736)	(245,718)	20.65
Operating loss	(1,189,642)	(1,427,683)	(238,041)	20.01
Non-operating income and expenses	(187,815)	171,881	359,696	191.52
Net loss	(1,379,436)	(1,249,493)	129,943	(9.42)
Total comprehensive loss for the year	(1,400,095)	(1,251,780)	148,315	(10.59)

Notes:

1. The increase of operating income is mainly due to the licensing fee income, income from selling R&D materials and service income etc. in 2018.
2. The increase of operating costs is the labor costs.
3. The increase of operating expenses is mainly due to the increase of outsourcing service fee for clinical research and clinical drug production costs.
4. The increase of non-operating income and expenses is mainly due to the appreciation of US Dollars and the total interest due from various foreign currency time deposits is higher year-on-year.
5. Currently products of the Company are still at the stage of development, and it is expected that there will be no significant sales in the coming year; but after completing the analysis on all kinds of product clinical trial data, the Company will apply for investigational new drug as soon as possible, aiming at early launch of products.

iii Cash flow

(i) Analytical statement of cash flow changes in the last year

Unit: NT$ thousand

Item \ Year	2017	2018	Balance	
			Amount	Percentage (%)
Cash flows from operating activities (outflow)	(1,106,891)	(864,309)	242,582	21.92
Cash flows from investing activities (outflow)	2,224,658	1,980,388	(244,270)	(10.98)

Cash flows from financing activities (outflow)	27,040	(7,500)	(34,540)	(127.74)
Description: 1. The decrease of cash outflow from operating activities is mainly due to the deferred clinical costs of multiple products. 2. The increase of cash outflow from financing activities is mainly due to the weighted average share price in the execution of stock option in 2018 is reduced.				

(ii) Improvement plan for liquidity shortage: not applicable.

(iii) Cash liquidity analysis in the coming year:

Unit: NT$thousand

Opening cash balance (1)	Expected annual net cash flow from operating activity (2)	Expected annual net cash flow from other activity (3)	Number of residual (insufficient) cash (1)+(2)+(3)	Remedial measure for cash shortage	
				Investment plan	Financial plan
3,664,593	(1,700,000)	1,900,000	3,864,593	-	-
Analysis description: 1. Analysis on cash flow changes in the coming year: Operating activity: in 2019, the Company is still at the stage of new drug research and development, hence it is under net operating cash outflow. Other activity: the net cash inflows from other activity in 2019 are mainly the cash inflow from cash capital increase via issuing new shares, and cash outflows from the acquisition of property, plant and equipment and intangible assets, and repayment of laboratory long-term borrowing. 2. Expected remedial measure for cash shortage and liquidity analysis: not applicable.					

iv. The impact of significant capital expenditure on financial affairs in the last year: NA.

v. Reinvestment policy in the last year, main reason for its profit or loss, improvement plan and investment plan in the coming year

(1) Reinvestment policy:

The Company complies with the "Regulations Governing the Acquisition and Disposal of Assets by Listed Company" and has formulated the "Regulations Governing the Acquisition and Disposal of Assets" as the basis for the Company's reinvestment business, so as to master relevant business and financial conditions; and the Company has formulated the "Measures for Supervision and Management of Subsidiaries" to improve the supervision and management of reinvested company, and formulate relevant regulations for the management of its information disclosure, financial affairs, business, inventory and financing; besides, the Company otherwise carries out regular audit operation to establish relevant risk control mechanism to maximize the effectiveness of reinvestment business of the Company.

(2) Main reason for profit or loss, improvement plan and investment plan in the coming year:

In order to smoothly carry out the clinical trial in China Mainland and USA, in November, 2012, March and April 2013, the Company had completed the registration of establishment of Hong Kong OBI Pharma Limited, OBI Pharma (Shanghai) Limited (reinvestment of OBI Pharma Limited) and OBI PHARMA USA, INC. respectively, up to now, it is still under accumulated loss status, in the future, with completion of each product clinical trial and smooth launch of product, it will bring revenue and profit to each reinvestment business.

In order to strengthen the ability in research and development of new antibody drugs, the Company carries out clinical trial in Australia and applies for R&D subsidy provided by Australian Government locally. In January and June of 2018, the Company reinvested AP Biosciences, Inc. and OBI PHARMA AUSTRALIA PTY LTD by issuing new shares for assignment of shares of other company and establishing wholly-owned subsidiaries respectively, despite it is unprofitable currently, with completion of product development and test in the future, it will bring revenue and profits to reinvestment businesses.

In order to shorten the R&D schedule and seize market opportunity, currently the Company is actively seeking for building partnership with the company of the same trade or business, or upstream and downstream manufacturers sharing similar philosophy, or with complementary resources and technologies, so as to reduce the risks in research and development and maximize the value of product line.

vi Risk analysis and assessment

(i) In the last year and as at the publication date of annual report, the impact of interest rate, fluctuation in exchange rate, and inflation on company profit and loss and future solutions:

1. The impact of interest rate, fluctuation in exchange rate, and inflation in the last year on company profit and loss:

(1) Interest rate change:
The Company has real estate financing loan, but the impact of interest rate on liabilities is slight; despite the interest income is declining due to interest rate, its impact on the Company is not significant.

(2) Fluctuation in exchange rate:
In the operating activities of the Company, those priced in foreign currency and might be impacted by the exchange rate in the future include:

A. Technology licensing fee and royalty paid overseas due to acquiring technology licensing overseas.
B. Technology licensing fee and royalty collected overseas due to licensing technology overseas.
C. Relevant costs needed to be paid due to carrying out clinical trial overseas.

(3) Inflation:
In March 2019, the Consumer Price Index (CPI) is 101.76, dropped by 0.62% comparing with the last month, and increased by 0.58% year-on-year; the Wholesale Price Index is 103.07, increased by 0.44% comparing with the last month, and increased by 1.19% year-on-year. In the future, the Company will pay close attention to the impact of inflation on all kinds of costs.

2. Future solutions of the Company in respond to the fluctuation in exchange rate and interest rate change:

(1) Pay attention to the trend and change of each major currency in international foreign exchange market at any time, so as to master the trend of exchange rate and respond promptly, in consideration of the risk generated from fluctuation in exchange rate, adjust the foreign currency position in due time to safeguard the due profits.

(2) The Company adopts natural hedging to control and reduce foreign currency position as far as possible.

(3) Open foreign currency deposit account in the correspondent bank, keep certain part of foreign currency position in respond to the demand of foreign exchange fund.

(4) Keep a good interactive relationship with the bank, strive for more extensive foreign exchange and interest rate information, and more favorable quotation.

(5) Pay attention to the trend of interest rate at any time, utilize all kinds of financing tools in capital market in due time to reduce the cost of capital acquisition.

3. The impact of inflation on company profit and loss in the last year and future solutions:
The Company pays attention to market price fluctuation at any time, and keeps a good interaction with suppliers and customers, in recent years, there is no significant impact caused by inflation, and there is no

inflation risk within a short term, hence it has no significant impact on the annual profit and loss of the Company.

(ii) Policy on engaging in high risk highly leveraged investment, granting of loans, endorsement and derivative securities transaction, main reason for profit or loss, and future solutions:

In 2018 and as at the publication date of annual report in 2019, the Company has not engaged in high risk highly leveraged investment, granting of loans, derivative securities transaction and endorsement. The Company has formulated the "Regulations Governing the Acquisition and Disposal of Assets", "Procedures of Making Endorsement and Guarantees" and "Procedures of Granting of Loans" and have been passed in the resolution of Shareholders' Meeting, in the future, if engaging in relevant business, the Company will handle according to relevant procedures and immediately and accurately announce all kinds of information pursuant to laws and decrees.

(iii) Future research and development plan and expected invested research and development costs:

Time	Research and development plan
Short or medium term	● OBI-822 global phase III clinical trial inclusion. ● Continue to carry out new generation active immuno-oncology drug (OBI-833) Cohorts Expansion clinical inclusion. ● OBI-888 cancer carbohydrate monoclonal antibody phase I clinical trial inclusion. ● OBI-999 cancer therapeutic drug, Globo H antibody-drug conjugate pre-clinical research and development. ● OBI-3424 micromolecule chemotherapy prodrug phase I/II clinical trial inclusion.
Medium and long term	● Complete global phase III clinical trial for active immuno-oncology drug OBI-822. ● Continue to expand anti-cancer product lines, such as Bi-Specific Antibody and immune cell therapy. ● Continue to expand the research and development of Antibody-Drug Conjugate, such as SSEA-4 antibody-drug conjugate. ● OBI-999 enters into phase III clinical trial. ● OBI-3424 enters into phase III clinical trial.

The Company mainly invests in the clinical trial, product development and

pre-clinical research and development of each new drug product, in the future, the research and development costs will be listed gradually according to the new product development progress, and it is expected to invest research and development costs of about NT$5.4 billion in total from 2019 to 2021.

(iv) The impact of changes in domestic and overseas important policies and laws on company financial affairs and solutions:

In recent years, the government attaches importance to the development of biotechnology industry, under the promotion by policies such as "Biotech and New Pharmaceutical Development Act", "Taiwan Biotechnology Take-off Diamond Action Plan" and "Economic Cooperation Framework Agreement" etc., including the compliance with Good Clinical Practice (GCP) standards, the government gives priority to promote the cross-strait clinical trial, drug research and development cooperation and "Drug Project Advisory Guidelines of Food and Drug Administration, Department of Health, Executive Yuan" in the way of pilot program and project, and has been leading the research and development energy of biotechnology industry.

In September 2010, OBI Pharma was approved as the "Biotechnology New Drug Development Company", apart from actively applying for relevant tax preference and budget subsidy to reduce capital outflow, OBI Pharma also observed the changes of relevant biotechnology policies and laws and regulations both at home and abroad at any time, so as to master the opportunity to respond to the change of market environment. Meanwhile, under the ECFA cooperation framework between the governments across the strait, OBI-822 program of OBI Pharma and other four biotechnology companies in Taiwan had been elected as the first pilot program in cross-strait clinical trial.

Biotechnology industry is under high control by laws and regulations, from research and development stage of product, clinical trial execution, medicament license acquisition to production and launch for sales, every stage must conform to the operation specification of medical laws and regulations. Moreover, due to the territoriality characteristics of medical laws and regulations, if product needs to be exported to other countries, it needs to conform to the requirement of medical laws and regulations of every country. The change of medical laws and regulations in each country will directly impact the development schedule and research funding of biotechnology product. Therefore, the solutions of the Company include:

1. Actively recruit talents with experience in global laws and regulations, and set medical regulatory department.
2. The development of new drug chooses the USA and Taiwan which with the most mature, transparent and open medical laws and regulations as

the prior bases for clinical trial execution.

3. Apart from keeping close attention to the changes of laws and regulations in each country, personnel of medical regulatory department will also actively participate in the medical laws and regulations seminar held by each public association in biotechnology industry, and hire experts familiar with local medical laws and regulations in the country of executing clinical trial as the consultant, so as to actually master the change of latest laws and regulations, and reduce the adverse impact caused by the changes of laws and regulations on the developing products of the Company.

(v) The impact of changes of technology and industry on company financial affairs and solutions:

The entry threshold of biotechnology industry is high, the product research and development period is long, and the added value is high but the risk is also high. Hence from research and development to the output of new drug, it might take over ten years, therefore, the Company will always pay attention to the technology development trend of biotechnology industry, commence on assessing possible impacts, and carry out necessary direction or strategy adjustment. In flexible respond to the change of technology or industry, and effectively avoid the possible impact, the Company takes the following solutions:

1. Has prepared adequate funding to complete the OBI-822 new drug clinical trial.

   The total assets value of the Company is NT$4.58 billion as at the end of March 2019, among them, the current assets are NT$3.56 billion, hence the Company has prepared sufficient fund to respond to the expenditures in the OBI-822 new drug development application and the clinical experiments in each phase.

2. Prudently assess the opportunity and benefit of the new drug under development

   For products under research and development currently, all kinds of trials are carried out according to the new drug development process, and their success likelihood and market value are assessed gradually according to the trial result, once the product benefit of competitor is better or its development speed is ahead, all the result of each trial of the Company is not as well as expected etc., the Company will adjust or suspend the plan in due time to reduce unnecessary subsequent risks.

3. Implement saving and costs rationalization

The Company strictly executes budget management system to reduce unnecessary expenditure.

4. Apply for research and development plan subsidy
   Actively strive for research and development plan subsidy from the government to reduce the costs expenditure of the Company.
5. Cooperate with major pharmaceutical company through technology licensing
   The Company possess sufficient financial resources and experience for independent research and development and developing global market, but not excluding the cooperative development with major pharmaceutical company to accelerate the extension of product research and development progress, and share the research and development risks through collecting early signing bonus and milestone payment.

(vi) The impact of change of corporate image on corporate crisis management and solutions:
Ever since the establishment, the Company has been adhering to the operating principles of sustainability and integrity and concentrating on new drug development, hoping to provide patients a new medical choice; meanwhile, the Company continuously strengthens company internal management, actively marches towards international market and improves quality management capability. In the last year and as at the publication date of annual report, the Company has no relevant corporate crisis derived from the change of corporate image; in the future, the Company will continuously implement corporate governance requirement and consult expert opinion in due time to reduce the impact of such risk on company operation.

(vii) Expected benefit and possible risk of merger and acquisition and solutions: Please refer to Item vii. Handling situation of acquiring or transferring shares of other company to issue new shares in the Item IV. Fundraising Situation of the annual report.

(viii) Expected benefit and possible risk of plant expansion and solutions: currently the Company has no plan of plant expansion.

(ix) Risk encountered in centralized purchasing or sales and solutions:
Apart from that DIFICID™ of the Company has acquired the new drug license issued by the Ministry of Health and Welfare, other products are still at the stage of development and clinical experiment, and there is no launch and production of other new drug product yet. In October 2015, the Company had licensed DIFICID™ to American Merck Sharp & Dohme, in the future, Merck Sharp & Dohme will be responsible for product purchasing and sales, and the

Company will not need to bear the purchasing or sales risks. The future sales of other products mainly target at hospitals, and there is no risk of centralized sales, and the Company may conduct self-production or outsource for manufacturing, the choice of outsourcing manufacturing is large, and there is no risk of centralized purchasing.

(x) The impact and risk of massive transfer or change of the stock rights of directors, supervisors or substantial shareholders with shareholding over ten percent and solutions:

There is no such circumstance.

(xi) The impact and risk of change of operation right and solutions:

Most of the operations of the Company are planned by the business unit and executed after approved by the management echelon, hence a sound and complete operation mode has been established; even if in case of change of operation right, its impact on sustainable operation is limited.

(xii) Litigation or non-litigation case:

1. In the last two years and as at the publication date of public prospectus, the litigation, non-litigation or administrative litigation case already concluded by the final and unappealable judgment or still under litigation, where the result thereof might have significant impact on the shareholders' equity or security price, the facts in dispute, amount of money at stake , the commencement date of litigation, major parties involved in litigation and current status of dispute shall be disclosed:
   (1) The Company applied to the Trademark Office of The State Administration for Industry & Commerce of the People's Republic of China (hereinafter referred to as Trademark Office) for registration of "OBI PHARMA" trademark in 2013, but the Trademark Office rejected the application of the Company on the ground of likelihood of confusion, and the Company determined to bring the case to administrative court, on September 27, 2017, Beijing High People's Court made an administrative judgment to repeal the decision on trademark review rejection, and the Trademark Office has issued the "OBI PHARMA" trademark registration announcement on February 20, 2018.
   (2) The Company had applied to the Trademark Office of The State Administration for Industry & Commerce of the People's Republic of China for registration of "浩鼎" trademark in 2014, but the Trademark Office rejected the application case of the Company on

the ground of likelihood of confusion. In February 2016, the Company reached a coexistence agreement with the cited trademark owner, and filed an application to the Beijing Intellectual Property Court in April 2016 for trademark administrative litigation, in November 2016, Beijing Intellectual Property Court had made an administrative judgment to withdraw the decision on rejection of review on OBI trademark, and the Trademark Office has issued the trademark certificate of "浩鼎" on June 21, 2017.

(3) Starting from April 7, 2016, Next Media Ltd. (namely the Next Magazine) and its relevant personnel deliberately fabricated, published and issued false reports in the magazine published by it successively, intended to damage the reputation of the Company, it has caused major damage to the reputation of the Company and affected the stock price of the Company, and the Company thereby respectively filed a criminal charge on April 7, 2016 and a civil lawsuit on May 3, 2016 to claim for damage compensation pursuant to law:

For the part of civil lawsuit: on April 26, 2017, Taiwan Taipei District Court had sentenced to deny the claim of the Company, and the Company filed an appeal pursuant to law, but Taiwan High Court made a judgment against the Company on November 28, 2018, the Company still filed an appeal to the Supreme Court on December 28, 2018, currently the case is under trial by the Supreme Court.

For the part of criminal procedure: Taiwan Shilin District Prosecutors Office decided not to prosecute the relevant defendant on April 17, 2017, the Company applied to Taiwan High Prosecutors Office for reconsideration on April 24, 2017, upon rejection by Taiwan High Prosecutors Office, on May 26, 2017, the Company applied to Taiwan Shilin District Court for committed for trial, but Taiwan Shilin District Court still made repealed rulings on December 29, 2017.

(4) Since Taiwan Shilin District Prosecutors Office prosecuted against Michael N. Chang, Chairman of the Company, on the ground of violating insider trading banning regulations of Securities Exchange Act on January 9, 2017, Securities and Futures Investors Protection Center (hereinafter referred to as the Center) filed a lawsuit to Taiwan Shilin District Court on May 1, 2017 to claim for the Company's dismissal of Michael N. Chang's directorship, currently the case is under trial by Taiwan Shilin District Court.

2. In the last two years and as at the publication date of this annual report, whether the director, supervisor, General Manager, any person with actual responsibility for the company and any major shareholders holding a stake of greater than ten percent of the Company are involved in any litigation, non-litigation or administrative litigation case already

concluded by the final and unappealable judgment or still under litigation, where, the results thereof might have significant impact on company shareholders' equity or securities price:

(1) Since Michael N. Chang, Chairman of the Company, was suspected of violating Punishment of Corruption Act, Taiwan Shilin District Prosecutors Office prosecuted on January 9, 2017, after trial by Taiwan Shilin District Court, he was announced not guilty on December 28, 2018, and Taiwan Shilin District Prosecutors Office decided not to appeal on January 23, 2019, and this case was closed and confirmed.

(2) Taiwan Shilin District Prosecutors Office prosecuted against Michael N. Chang and Amy Huang, Chairman and General Manager of the Company, on the ground of violating insider trading banning regulations of Securities Exchange Act on January 9, 2017, currently the case is under trial by Taiwan Shilin District Court.

(3) Since Michael N. Chang and Amy Huang, Chairman and General Manager of the Company, involved in the aforesaid insider trading case, the Center filed an incidental civil lawsuit in April 2018 to claim for damage compensation, currently it is under trial by Taiwan Shilin District Court.

(4) Since Michael N. Chang, Chairman of the Company, involved in the aforesaid insider trading case, the Center filed a lawsuit to on May 1, 2017 to claim for the Company's dismissal of Michael N. Chang's directorship, currently the case is under trial by Taiwan Shilin District Court.

3. In the last two years and as at the publication date of this annual report, whether the director, supervisor, manager and major shareholders holding a stake of greater than ten percent of the Company have any circumstance as prescribed in Article 157 of Securities Exchange Act and the current status of the company's disposition: NA.

(xiii) Other important risks and solutions:

Major operating items of the Company are the new drug development, despite the predictable profits are impressive after successful launch of products, but, relatively, the risk is also high. Overall operating risks of the Company and solutions are summarized as follows:

1. Risk of new drug development failure

If the new drug development and clinical trial results are not as well as expected, it will cause the risk that the new drug cannot launch on the market. Patients with triple negative breast cancer have more variables and currently there is no uniform treatment guideline worldwide, and it is more difficult in clinical trial, hence rigorous and thorough trial must be

designed to verify that OBI-822 can indeed postpone the recurrence of triple negative breast cancer and increase survival rate.

Solutions:

(1) It is planned to select patients with early triple negative breast cancer as the test population for global phase III trial: previous phase II/III breast cancer trials found that conditions of patients with advanced breast cancer were relatively unstable, and the recurrence speed was fast, most patients had already suffered recurrence without finishing the course of treatment of 9 injections, in order to increase of the ratio of generating sufficient antibody to fight against cancer cells in the body of patients having received complete trial course of treatment, the global phase III trial case will take the patients with early triple negative breast cancer as the test population.

(2) Use OBI-822 as adjuvant treatment after operation: currently the species diversity of neoadjuvant chemotherapy received by patients with early triple negative breast cancer before operation is great worldwide, not only there is no approved standard treatment worldwide, the selection of treatment course in each country is also different, in order to improve the homogeneity among test population, accelerate recruitment speed and expand sales market after the drug is approved to launch on the market in the future, the global phase III trial case will include triple negative breast cancer patients who have completed adjuvant chemotherapy and the residual tumor tissues have been cut off in the operation, patients may receive adjuvant chemotherapy or radiotherapy after operation according to the judgment of physician, and then start to receive OBI-822 therapy after the end of treatment course.

2. New drug product technical aspect - new drug manufacturing and raw materials supply risks

The biological preparation and protein drug always encounter the challenge of consistency in supply source and quality, since OBI-822 belongs to carbohydrate protein drug, there is no exception.

Solutions:

(1) Apart from currently stable sources of raw materials supply, the Company also actively seeks for secondary supplier of high quality raw materials supply, so as to ensure the demand of clinical trial and the product supply upon launching on the market in the future.

(2) The Company continuously recruits excellent talents to improve pharmaceutical process and research and development technology, and select cooperative manufacturers conforming to the highest

specification of Good Manufacturing Practice (PIC/S GMP) to meet the requirements of laws and regulations upon new drug registration in each country in the future, so that product can launch on the market smoothly.

3. Risk of new drug development industry aspect - despite the profit of cancer new drug is expectable, the research and development schedule is long, and the spending is also considerable.

Solutions:

(1) The cash flow of the Company and experience of internal talents are sufficient to handle the current development demand, but in order to maintain strategic flexibility and accelerate new product and new indication development, the Company will not exclude the cooperation with major international pharmaceutical company to carry out clinical trial, through technology licensing signing bonus and milestone payment income, or the joint sharing of trial expenses, so as to reduce the research and development costs and accelerate the speed of product development.

(2) The Company will continue to control the cost and make the best use of resources; and coordinate with product development schedule and assess all kinds of available fund-raising instruments to initiate the next stage of fund-raising plan in due time.

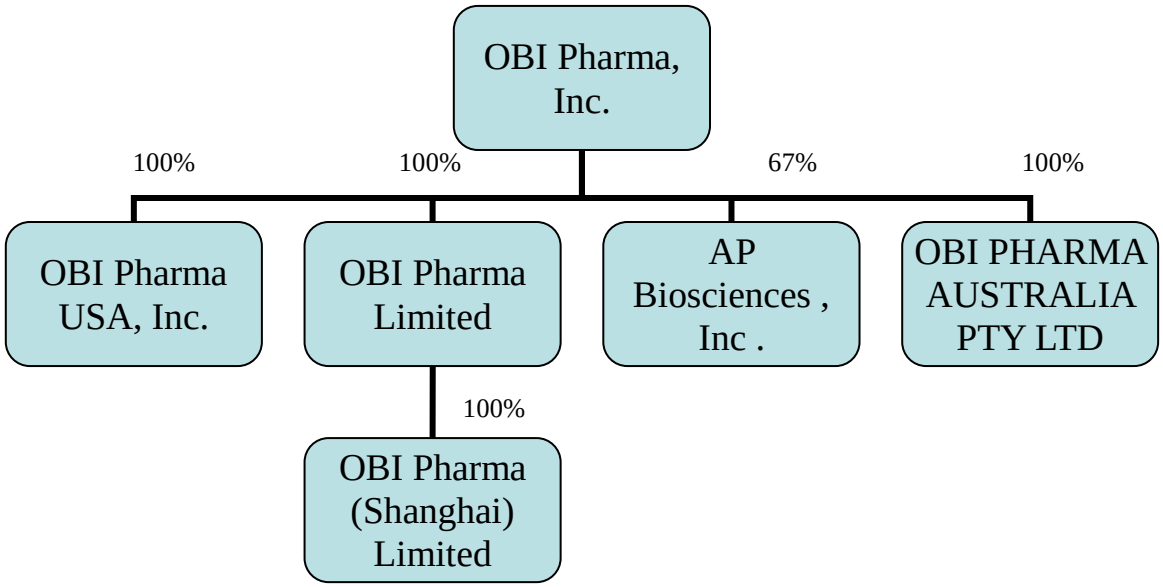
vii Other important matters: NA.

VIII. Special Recorded Matters

i. Relevant information of affiliated enterprise:

(i) Consolidated business report of affiliated enterprise

1. Consolidated business report of affiliated enterprise



2. Basic information of affiliated enterprises

Date: December 31, 2018

Name of enterprise	Establishment date	Address	Paid-up capital	Main business or production item
OBI Pharma USA,Inc.	102.04.30	Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801.	USD 2,700,001	Biotechnology research and development
OBI Pharma Limited	101.11.29	Rm. 2401, 24/F., 101 King's Road, Fortress Hill, Hong Kong	USD 1,150,000	Investment and trading business
OBI Pharma (Shanghai) Limited	102.03.29	K, Room 1006, No. 376, Zhaojiabang Road, Shanghai	USD 1,000,000	Biotechnology research and development
AP Biosciences , Inc .	102.05.27	17F., No.3, Yuancyu St., Nangang Dist., Taipei City 11503, Taiwan (R.O.C.)	NTD 120,000,000	Biotechnology research and development
OBI PHARMA AUSTRALIA PTY LTD	107.05.25	58 Gipps Street, Collingwood VIC 3066	AUD 650,100	Biotechnology research and development

3. Same shareholder information of those presumed with control and subordinate relationship: NA.

4. Industries covered by the operating business of overall affiliated enterprises.

(1) Industries covered by the operating business of overall affiliated enterprises and divisions are as follows:

A. Investment and trading: OBI Pharma Limited

B. Biotechnology research and development: OBI Pharma USA, Inc.、OBI Pharma (Shanghai) Limited, AP Biosciences , Inc ., OBI PHARMA AUSTRALIA PTY LTD

(2) For details of main business or production item of each affiliated enterprise, please see the preceding Item 2. Basic information of affiliated enterprise.

5. Information of directors, supervisors and General Manager of each affiliated enterprise

Date: December 31, 2018; Unit: NT$thousand; share; %

Name of enterprise	Title	Name or representative	Shareholding	
			Number of shares	Shareholding ratio
OBI Pharma USA,Inc.	Director	OBI Pharma, Inc. (legal representative: Michael N. Chang)	2,701,000	100%
	Director	OBI Pharma, Inc. (legal representative: Tessie M Che)		
	Director	OBI Pharma, Inc. (legal representative: Kevin Poulos)		
OBI Pharma Limited	Director	OBI Pharma, Inc. (legal representative: Amy Huang)	1,150,000	100%
OBI Pharma (Shanghai) Limited	Director	OBI Pharma Limited (legal representative: Yu Xiaofeng)	-	100%
AP Biosciences , Inc .	Chairman	OBI Pharma, Inc. (legal representative:(Lin, Hung-Ta)	8,040,000	67%
	Director	OBI Pharma, Inc. (legal representative: Tony Yu)		
	Director	OBI Pharma, Inc. (legal representative:(Victoria Lin)		
	Director & General Manager	British Cayman Islands merchant ABPROTIX INC. (legal representative: He Zhenghong)	3,300,000	27.50%
	Director	British Cayman Islands merchant ANTIPAROS (legal representative: Chen Linzheng)	560,000	4.67%

	Supervisor	OBI Pharma, Inc. (legal representative: Max Chan)	0	0%
OBI PHARMA AUSTRALIA PTY LTD	Director	OBI Pharma, Inc. (legal representative: Amy Huang)	650,100	100%
	Director	OBI Pharma, Inc. (legal representative: Tony Yu)		
	Director	OBI Pharma, Inc. (legal representative: Blair Lucas)		

(ii) Operation profile of each affiliated enterprise

Date: December 31, 2018; Unit: NT$thousand; and NT$ for earnings per share

Name of enterprise	Capital amount	Total assets	Total liabilities	Net value	Net revenue	Income from operations	Current profit and loss (after tax)	Earnings per share (after tax)
OBI Pharma USA,Inc.	82,931	53,224	5,788	47,436	68,918	4,503	2,550	0.94
OBI Pharma Limited	35,322	7,828	(1)	7,829	0	(5,704)	(5,234)	(4.55)
OBI Pharma (Shanghai) Limited	30,715	6,524	(1)	6,525	0	(5,642)	(5,173)	-
AP Biosciences , Inc .	120,000	65,245	2,063	63,182	18,464	(49,865)	(48,844)	(4.31)
OBI PHARMA AUSTRALIA PTY LTD	14,084	13,646	971	12,675	0	(1,465)	(1,465)	(2.25)

(iii) Affiliated enterprise consolidated financial statement

Pursuant to the provisions of "Affiliated Enterprise Consolidated Business Report, Affiliated Enterprise Consolidated Financial Statement and Relationship Report Preparation Standards", in 2018 [from January 1, 2018 to December 31, 2018], the Company shall be included in the company preparing affiliated enterprise consolidated financial statement, and it is the same pursuant to the provisions of Securities Issuer Financial Statement Preparation Standards and No. 27 "Related Party Disclosures" of International Accounting Standards, the Company shall be included in the company preparing parent company and subsidiary consolidated financial report, and relevant information shall be disclosed in affiliated enterprise consolidated financial statement have been disclosed in the preceding parent company and subsidiary consolidated financial report.

(iv) Relationship report: NA.

ii In the last year and as at the publication date of annual report, handling situation of private placement of securities: NA.

iii In the last year and as at the publication date of annual report, subsidiary's holding

or disposal of shares of the Company: NA.

iv Other necessary supplementary explanations:

The Company became public listing on March 23, 2015, the execution situation of commitments for listing so far:

Commitments for listing	Handling situation of commitments
(i) Commits that Taipei Exchange may ask OBI to appoint the accountant or institution designated by Taipei Exchange when necessary, so as to carry out external professional review according to the audit scope designated by it and submit the examination result to the Center, and OBI shall bear relevant costs thereof.	There is no such circumstance yet.
(ii) Commits to additionally stipulate that "The Company shall not give up the capital increase to OBI Pharmaceutical Biotechnology Co., Ltd. and OBI Pharma USA Inc. in the coming years; the OBI Pharmaceutical Biotechnology Co., Ltd. shall not give up the capital increase to OBI Bio-pharmaceutical Technology (Shanghai) Co., Ltd. in the coming years; in the future, if the Company needs to give up capital increase to or dispose the said companies due to strategic alliance consideration or other reasons as agreed by Taipei Exchange, special resolution needs to be passed by Board of Directors of the Company." in the "Handling Procedures for Acquisition or Disposal of Assets". And in case of amendment to such handling procedures subsequently, significant information disclosure shall be input at mops.twse.com.tw and reported to Taipei Exchange for future reference.	1 The commitments on the left have been passed in General Meeting held on June 27, 2016. 2 According to the letter of commitment submitted upon the first application for OTC, the Company commits not to waive the capital increase to subsidiary.

v The first listing (foreign public) company shall include the description on significant difference from the shareholders' equity protection regulations of our country: Not applicable

vi In the last year and as at the publication date of annual report, the occurrence of matter having significant impact on the shareholders' equity or security price as prescribed in Subparagraph 2, Paragraph 3, Article 36 of Securities Exchange Act: NA.

OBI PHARMA, INC. AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS AND

REPORT OF INDEPENDENT ACCOUNTANTS

DECEMBER 31, 2018 AND 2017

For the convenience of readers and for information purpose only, the auditors' report and the accompanying financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. In the event of any discrepancy between the English version and the original Chinese version or any differences in the interpretation of the two versions, the Chinese-language auditors' report and financial statements shall prevail.

REPORT OF INDEPENDENT ACCOUNTANTS TRANSLATED FROM CHINESE

To the Board of Directors and Shareholders of OBI PHARMA, INC.

Opinion

We have audited the accompanying consolidated balance sheets of OBI PHARMA, INC. and subsidiaries (the "Group") as at December 31, 2018 and 2017, and the related consolidated statements of comprehensive income, of changes in equity and of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission.

Basis for opinion

We conducted our audits in accordance with the "Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants" and generally accepted auditing standards in the Republic of China (ROC GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the Code of Professional Ethics for Certified Public Accountants in the Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and, in forming our opinion thereon, we do not provide a separate opinion on these matters.

Key audit matters for the Group's consolidated financial statements of the current period are stated as follows:

Key audit matter – Business combinations

Description

On January 10, 2018, the Group acquired 67% equity of AP Biosciences, Inc. through issuance of new

shares. Given the significant amount of intangible assets (including goodwill and identifiable intangible assets) arising from the acquisition, the transaction was accounted for in accordance with IFRS 3, 'Business combinations'. Please refer to Note 6(19) for details on price allocation.

As the allocation of goodwill and the net fair value of identifiable assets and liabilities is based on management's estimation and relies on accounting estimates and assumptions, we consider the price allocation of the acquiree's equity a key audit matter.

How our audit addressed the matter

In addition to performing an inquiry with the management in terms of the acquisition procedure, including the purpose of acquisition, stock swap rate, and verifying whether the resolution of the Board of Directors is in agreement with contractual terms by agreeing the Board's meeting minutes and contracts, we also requested internal valuer to ensure the reasonableness of source information, major assumptions and fair value calculation adopted in the Group's expert report on price allocation. Our procedures included the following:

1. Examined the parameters and formulas in the valuation model.
2. Assessed the reasonableness of major assumptions such as R&D timeline, R&D success rate and royalty percentage.
3. Compared the discount rate used and assumptions on the capital cost of cash-generating units.

Key audit matter – Impairment assessment of intangible assets

Description

Refer to Note 4(15) for accounting policies on impairment assessment of non-financial assets, Note 5 for critical judgements adopted in accounting policies on impairment assessment of intangible assets, and Note 6(4) for account details of intangible assets.

As of December 31, 2018, the balance of the Group's intangible assets amounted to NT$574,075 thousand. The intangible assets consist of related technologies acquired from other companies for new drug development as well as patents, patented technologies and goodwill arising from equity investments in AP Biosciences, Inc. Since the drug is still under development, no cash inflow can be generated. As of the balance sheet date, the Group determines whether the patents and patented technologies are impaired based on external and internal information. The Group would then consider to recognise an impairment loss by comparing the recoverable amount if there is an indication that they are impaired. The goodwill is directly assessed for impairment test. Since the impairment assessment performed by management involves critical judgement and has significant effect on value-in-use valuation, we consider impairment assessment of intangible assets a key audit matter.

How our audit addressed the matter

We performed the following audit procedures on the above key audit matter:

1. Reviewed the information used by the Group management for impairment assessment of intangible assets (excluding goodwill) including plan and progress for each development project, etc., conducted discussion with management and director of research and development department regarding the information used for impairment assessment of intangible assets, and assessed whether:

   (1) The features, marketing advantages and market tendency of the main products including research and development technology are still competitive.

   (2) The progress of the major research and development plan has no significant delay.

   (3) The specifications and quality of the research and development results comply with the local standards and regulations.

   (4) The total market value of the company is higher than the net assets as of the balance sheet date.

2. Performed the following procedures based on the obtained valuation report on goodwill impairment prepared by external experts:

   (1) Assessed whether the valuation methods adopted are reasonable for the industry, environment and the valued assets of the Group;

   (2) Evaluated the reasonableness of main assumptions used in estimating the value-in-use, including R&D timeline, R&D success rate and royalty percentage.

   (3) Examined model parameters and calculations.

   (4) Compared the discount rate used and assumptions on the capital cost of cash-generating units.

   (5) Verified whether the value-in-use exceeds the book value of equity in AP Biosciences, Inc.

Key audit matter – Valuation of employee share-based payment

Description

Refer to Note 4(19) for accounting policies applied to employee share-based payment and Note 6(7) for details of account items.

The compensation cost of employee share-based payment recognized for 2018 amounted to NT$231,290 thousand, which accounted for 19% of the Group's net loss for 2018. The accrual of transactions require the use of valuation model; thus, we consider the valuation of employee share-based payment a key audit matter.

How our audit addressed the matter

We performed the following audit procedures on the above key audit matter:

1. Obtained actuarial valuation report regarding employee share-based payment from external experts,

and performed the following procedures regarding critical assumptions and estimates used in the actuarial valuation from external experts:

(1) Checked whether the Group made reasonable estimates based on inputs such as expected dividend rate, expected option life, price volatility, and risk-free interest rate as of the option grant date.

(2) Recalculating accrued expenses for 2018 based on fair value of share option.

2. Assessed the reasonableness of recognition in accordance with the valuation report of the employee share-based payment.

Other matter – Parent company only financial reports

We have audited and expressed an unmodified opinion on the parent company only financial statements of OBI PHARMA, INC. as at and for the years ended December 31, 2018 and 2017.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including audit committee, are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ROC GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or

error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ROC GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Lin, Yu-Kuan　　Audrey Tseng

For and on behalf of PricewaterhouseCoopers, Taiwan

March 8, 2019

The accompanying consolidated financial statements are not intended to present the financial position and results of operations and cash flows in accordance with accounting principles generally accepted in countries and jurisdictions other than the Republic of China. The standards, procedures and practices in the Republic of China governing the audit of such financial statements may differ from those generally accepted in countries and jurisdictions other than the Republic of China. Accordingly, the accompanying consolidated financial statements and report of independent accountants are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice.

As the financial statements are the responsibility of the management, PricewaterhouseCoopers cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

OBI PHARMA, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars)

	Assets	Notes	December 31, 2018 AMOUNT	%	December 31, 2017 AMOUNT	%
	Current assets					
1100	Cash and cash equivalents	6(1)	$ 3,664,593	78	$ 2,555,275	49
1147	Investments in debt instruments without active markets - current	12(4)	-	-	2,022,658	39
1170	Accounts receivable, net		872	-	103	-
1200	Other receivables		37,216	1	60,430	1
1410	Prepayments		90,548	2	75,054	2
11XX	**Total current assets**		3,793,229	81	4,713,520	91
	Non-current assets					
1517	Financial assets at fair value through other comprehensive income - non-current	6(2)	7,454	-	-	-
1523	Available-for-sale financial assets - non-current	12(4)	-	-	10,160	-
1600	Property, plant and equipment, net	6(3) and 7	235,442	5	234,645	5
1780	Intangible assets, net	6(4)	574,075	12	127,266	2
1900	Other non-current assets	7 and 8	99,294	2	104,438	2
15XX	**Total non-current assets**		916,265	19	476,509	9
1XXX	**Total assets**		$ 4,709,494	100	$ 5,190,029	100

(Continued)

OBI PHARMA, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars)

	Liabilities and Equity	Notes	December 31, 2018 AMOUNT	%	December 31, 2017 AMOUNT	%
	Current liabilities					
2200	Other payables		$ 88,472	2	$ 51,540	1
2220	Other payables to related parties	7	3,652	-	5,622	-
2230	Current income tax liabilities		499	-	434	-
2320	Long-term liabilities, current portion	6(5)	9,853	-	9,997	-
2399	Other current liabilities		1,341	-	1,060	-
21XX	**Total current liabilities**		103,817	2	68,653	1
	Non-current liabilities					
2540	Long-term borrowings	6(5)	52,147	1	61,003	1
2570	Deferred income tax liabilities		80,064	2	-	-
25XX	**Total non-current liabilities**		132,211	3	61,003	1
2XXX	**Total liabilities**		236,028	5	129,656	2
	Equity attributable to owners of parent					
	Share capital	6(8)				
3110	Share capital - common stock		1,739,907	37	1,721,657	33
3200	**Capital surplus**	6(9)	9,530,118	202	9,037,381	174
	Retained earnings	6(10)				
3350	Accumulated deficit		(6,514,955)	(138)	(5,292,713)	(102)
3400	**Other equity interest**	6(2)	(21,417)	(1)	(19,231)	-
3500	**Treasury shares**	6(8)	(386,721)	(8)	(386,721)	(7)
31XX	**Equity attributable to owners of the parent**		4,346,932	92	5,060,373	98
36XX	**Non-controlling interest**	4(3) and 6(19)	126,534	3	-	-
3XXX	**Total equity**		4,473,466	95	5,060,373	98
	Significant Contingent Liabilities and Unrecognised Contract Commitments	6(4) and 9				
	Significant Events after the Balance Sheet Date	11				
3X2X	**Total liabilities and equity**		$ 4,709,494	100	$ 5,190,029	100

The accompanying notes are an integral part of these consolidated financial statements.

OBI PHARMA, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars, except for loss per share amount)

	Items	Notes	2018 AMOUNT	2018 %	2017 AMOUNT	2017 %
4000	**Operating revenue**	6(11) and 12(5)	$ 13,339	1	$ 376	-
5000	**Operating costs**		(5,286)	(1)	-	-
5900	**Gross profit**		8,053	-	376	-
	Operating expenses	6(6)(7)(15)(16)(20) and 7				
6200	Administrative expenses		(308,653)	(24)	(341,289)	(25)
6300	Research and development expenses		(1,127,083)	(90)	(848,729)	(61)
6000	**Total operating expenses**		(1,435,736)	(114)	(1,190,018)	(86)
6900	**Operating loss**		(1,427,683)	(114)	(1,189,642)	(86)
	Non-operating income and expenses					
7010	Other income	6(12)	90,935	7	57,900	4
7020	Other losses	6(13)	82,618	7	(244,513)	(18)
7050	Finance costs	6(14)	(1,672)	-	(1,202)	-
7000	**Total non-operating income and expenses**		171,881	14	(187,815)	(14)
7900	**Loss before tax**		(1,255,802)	(100)	(1,377,457)	(100)
7950	Income tax benefit (expense)	6(17)	6,309	-	(1,979)	-
8200	**Loss for the year**		($ 1,249,493)	(100)	($ 1,379,436)	(100)
	Other comprehensive loss, net					
	Components of other comprehensive loss that will not be reclassified to profit or loss					
8316	Unrealised valuation gains and loss from equity investment instruments measured at fair value through other comprehensive income	6(2)	($ 2,706)	-	$ -	-
	Components of other comprehensive income (loss) that will be reclassified to profit or loss					
8361	Financial statements translation differences of foreign operations		419	-	(3,638)	(1)
8362	Unrealised loss on valuation of available-for-sale financial assets	12(4)	-	-	(17,021)	(1)
8300	**Other comprehensive loss for the year, net**		($ 2,287)	-	($ 20,659)	(2)
8500	**Total comprehensive loss for the year**		($ 1,251,780)	(100)	($ 1,400,095)	(102)
	Loss attributable to:					
8610	Owners of the parent		($ 1,222,242)	(98)	($ 1,379,436)	(100)
8620	Non-controlling interest		($ 27,251)	(2)	$ -	-
	Comprehensive loss attributable to:					
8710	Owners of the parent		($ 1,224,428)	(98)	($ 1,400,095)	(102)
8720	Non-controlling interest		($ 27,352)	(2)	$ -	-
	Loss per share (in dollars)	6(18)				
9750	**Basic and diluted loss per share**		($ 7.06)		($ 8.06)	

The accompanying notes are an integral part of these consolidated financial statements.

OBI PHARMA, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars)

		Equity attributable to owners of the parent											
			Capital Reserves				Other Equity Interest						
	Notes	Share capital - common stock	Total capital surplus, additional paid-in capital	Employee stock warrants	Others	Accumulated deficit	Financial statements translation differences of foreign operations	Unrealised gains (losses) from financial assets measured at fair value through other comprehensive income	Unrealised gain or loss on available-for-sale financial assets	Treasury shares	Total	Non-controlling interest	Total equity
2017													
Balance at January 1, 2017		$ 1,716,119	$ 7,962,049	$ 691,315	$ 89,847	($ 3,913,277)	$ 1,428	$ -	$ -	($ 386,721)	$ 6,160,760	$ -	$ 6,160,760
Net loss for the year		-	-	-	-	(1,379,436)	-	-	-	-	(1,379,436)	-	(1,379,436)
Other comprehensive loss for the year		-	-	-	-	-	(3,638)	-	(17,021)	-	(20,659)	-	(20,659)
Total comprehensive loss		-	-	-	-	(1,379,436)	(3,638)	-	(17,021)	-	(1,400,095)	-	(1,400,095)
Share-based payment transactions	6(7)(8)(9)(16)	5,538	49,122	245,048	-	-	-	-	-	-	299,708	-	299,708
Balance at December 31, 2017		$ 1,721,657	$ 8,011,171	$ 936,363	$ 89,847	($ 5,292,713)	($ 2,210)	$ -	($ 17,021)	($ 386,721)	$ 5,060,373	$ -	$ 5,060,373
2018													
Balance at January 1, 2018		$ 1,721,657	$ 8,011,171	$ 936,363	$ 89,847	($ 5,292,713)	($ 2,210)	$ -	($ 17,021)	($ 386,721)	$ 5,060,373	$ -	$ 5,060,373
Effect of modified retrospective application and restatement	12(4)	-	-	-	-	-	-	(17,021)	17,021	-	-	-	-
Balance after restatement on January 1, 2018		1,721,657	8,011,171	936,363	89,847	(5,292,713)	(2,210)	(17,021)	-	(386,721)	5,060,373	-	5,060,373
Net loss for the year		-	-	-	-	(1,222,242)	-	-	-	-	(1,222,242)	(27,251)	(1,249,493)
Other comprehensive loss for the year		-	-	-	-	-	520	(2,706)	-	-	(2,186)	(101)	(2,287)
Total comprehensive loss for the year		-	-	-	-	(1,222,242)	520	(2,706)	-	-	(1,224,428)	(27,352)	(1,251,780)
Shares issued pursuant to aquisitions	6(8)(19)	16,750	273,025	-	-	-	-	-	-	-	289,775	112,608	402,383
Capital increase by cash		-	-	-	-	-	-	-	-	-	-	29,700	29,700
Employee stock option exercised	6(7)(8)	1,500	-	-	-	-	-	-	-	-	1,500	-	1,500
Share-based payment transactions	6(7)(8)(9)(16)	-	576	163,312	55,824	-	-	-	-	-	219,712	11,578	231,290
Balance at December 31, 2018		$ 1,739,907	$ 8,284,772	$ 1,099,675	$ 145,671	($ 6,514,955)	($ 1,690)	($ 19,727)	$ -	($ 386,721)	$ 4,346,932	$ 126,534	$ 4,473,466

The accompanying notes are an integral part of these consolidated financial statements.

OBI PHARMA, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars)

	Notes	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES			
Loss before tax		($ 1,255,802)	($ 1,377,457)
Adjustments			
Adjustments to reconcile profit (loss)			
Depreciation	6(3)(15)	57,933	52,503
Amortisation	6(4)(15)	64,679	14,768
Interest expense	6(14)	1,672	1,202
Interest income	6(12)	(89,019)	(57,748)
Compensation cost of share-based payment transactions	6(7)(9)(16)	231,290	263,668
Changes in operating assets and liabilities			
Changes in operating assets			
Accounts receivable, net		(769)	(103)
Other receivables		(2,274)	(3,360)
Prepayments		(16,845)	(9,982)
Changes in operating liabilities			
Other payables		37,060	(32,998)
Other payables to related parties		(1,970)	5,437
Other current liabilities		(689)	(935)
Cash outflow generated from operations		(974,734)	(1,145,005)
Interest paid		(1,672)	(1,202)
Interest received		114,154	41,467
Income tax paid		(2,057)	(2,151)
Net cash flows used in operating activities		(864,309)	(1,106,891)
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds from disposal of investments in debt instruments without active markets		2,022,658	2,448,522
Acquisition of property, plant and equipment	6(21)	(20,147)	(56,462)
Cash acquired from acquisition of subsidiaries	6(19)	10,708	-
Acquisition of intangible assets	6(21)	(621)	(95,932)
Increase in other non-current assets		(32,794)	(72,577)
Decrease in refundable deposits		584	1,107
Net cash flows from investing activities		1,980,388	2,224,658
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayment of long-term debt	6(22)	(9,000)	(9,000)
Proceeds from exercise of employee stock options	6(7)(8)	1,500	36,040
Net cash flows (used in) from financing activities		(7,500)	27,040
Effects due to changes in exchange rate		739	(3,610)
Net increase in cash and cash equivalents		1,109,318	1,141,197
Cash and cash equivalents at beginning of year		2,555,275	1,414,078
Cash and cash equivalents at end of year		$ 3,664,593	$ 2,555,275

The accompanying notes are an integral part of these consolidated financial statements.

OBI PHARMA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Expressed in thousands of New Taiwan dollars, except as otherwise indicated)

1. HISTORY AND ORGANISATION

OBI PHARMA, INC. (the "Company") was established on April 29, 2002 upon approval by the Ministry of Economic Affairs. The Company conducted the initial public offering in May 2012, and traded its shares on the Emerging Stock Market of the Taipei Exchange (formerly GreTai Securities Market) since March 23, 2015. The Company and its subsidiaries (collectively referred herein as the "Group") are primarily engaged in new drugs research.

2. THE DATE OF AUTHORISATION FOR ISSUANCE OF THE CONSOLIDATED FINANCIAL STATEMENTS AND PROCEDURES FOR AUTHORISATION

These consolidated financial statements were authorised for issuance by the Board of Directors on March 8, 2019.

3. APPLICATION OF NEW STANDARDS, AMENDMENTS AND INTERPRETATIONS

(1) Effect of the adoption of new issuances of or amendments to International Financial Reporting Standards ("IFRS") as endorsed by the Financial Supervisory Commission ("FSC")

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 2, 'Classification and measurement of share-based payment	January 1, 2018
Amendments to IFRS 4, 'Applying IFRS 9, Financial instruments with IFRS 4, Insurance contracts'	January 1, 2018
IFRS 9, 'Financial instruments'	January 1, 2018
IFRS 15, 'Revenue from contracts with customers'	January 1, 2018
Amendments to IFRS 15, 'Clarifications to IFRS 15, Revenue from contracts with	January 1, 2018
Amendments to IAS 7, 'Disclosure initiative'	January 1, 2017
Amendments to IAS 12, 'Recognition of deferred tax assets for unrealised losses'	January 1, 2017
Amendments to IAS 40, 'Transfers of investment property'	January 1, 2018
IFRIC 22, 'Foreign currency transactions and advance consideration'	January 1, 2018
Annual improvements to IFRSs 2014-2016 cycle - Amendments to IFRS 1, 'First-time adoption of International Financial Reporting Standards'	January 1, 2018
Annual improvements to IFRSs 2014-2016 cycle - Amendments to IFRS 12, 'Disclosure of interests in other entities'	January 1, 2017
Annual improvements to IFRSs 2014-2016 cycle - Amendments to IAS 28, 'Investments in associates and joint ventures'	January 1, 2018

Except for IFRS 9, 'Financial instruments', the above standards and interpretations have no significant impact to the Group's financial condition and financial performance on the Group's assessment.

Classification of debt instruments is driven by the entity's business model and the contractual cash flow characteristics of the financial assets, which would be classified as financial asset at fair value through profit or loss, financial asset measured at fair value through other comprehensive income or financial asset measured at amortised cost. Equity instruments would be classified as financial asset at fair value through profit or loss, unless an entity makes an irrevocable election at inception to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument that is not held for trading.

The Group has selected not to restate prior period financial statements using the modified retrospective approach under IFRS 9. For details of the significant effect as at January 1, 2018, please refer to Note 12(4) B.

(2) Effect of new issuances of or amendments to IFRSs as endorsed by the FSC but not yet adopted by the Group

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 9, 'Prepayment features with negative compensation'	January 1, 2019
IFRS 16, 'Leases'	January 1, 2019
Amendments to IAS 19, 'Plan amendment, curtailment or settlement'	January 1, 2019
Amendments to IAS 28, 'Long-term interests in associates and joint ventures'	January 1, 2019
IFRIC 23, 'Uncertainty over income tax treatments'	January 1, 2019
Annual improvements to IFRSs 2015-2017 cycle	January 1, 2019

Except for IFRS 16, 'Leases', the above standards and interpretations have no significant impact to the Group's financial condition and financial performance based on the Group's assessment.

IFRS 16, 'Leases', replaces IAS 17, 'Leases' and related interpretations and SICs. The standard requires lessees to recognise a 'right-of-use asset' and a lease liability (except for those leases with terms of 12 months or less and leases of low-value assets). The Group expects to recognise the lease contract of lessees in line with IFRS 16. However, the Group does not intend to restate the financial statements of prior period (herein as "modified retrospective approach"). On January 1, 2019, it is expected that right-of-use asset and lease liabilities will both be increased by $97,641.

(3) IFRSs issued by IASB but not yet endorsed by the FSC

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IAS 1 and IAS 8, 'Disclosure Initiative-Definition of Material'	January 1, 2020
Amendments to IFRS 3, 'Definition of a business'	January 1, 2020
Amendments to IFRS 10 and IAS 28, 'Sale or contribution of assets between an investor and its associate or joint venture'	To be determined by International Accounting Standards Board
IFRS 17, 'Insurance contracts'	January 1, 2021

The above standards and interpretations have no significant impact to the Group's financial condition and financial performance based on the Group's assessment.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

(1) Compliance statement

The consolidated financial statements of the Group have been prepared in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" and the International Accounting Standards 34, "Interim financial reporting" as endorsed by the FSC.

(2) Basis of preparation

A. Except for the financial assets at fair value through other comprehensive income / available-for-sale financial assets measured at fair value, these consolidated financial statements have been prepared under the historical cost convention.

B. The preparation of financial statements in compliance with International Financial Reporting Standards, International Accounting Stardards, IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively referred herein as the "IFRSs") requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.

C In adopting IFRS 9 and IFRS 15 effective January 1, 2018, the Group has elected to apply the modified retrospective approach and the financial statements for the year ended December 31, 2017 were not restated. The financial statements for the year ended December 31, 2017 were prepared in compliance with International Accounting Standard 39 ('IAS 39'), International Accounting Standard 11 ('IAS 11'), International Accounting Standard 18 ('IAS 18') and related financial reporting interpretations. Please refer to Notes 12(4) and (5) for details of significant

accounting policies and details of significant accounts.

(3) Basis of consolidation

A. Basis for preparation of consolidated financial statements:

(a) All subsidiaries are included in the Group's consolidated financial statements. Subsidiaries are all entities (including structured entities) controlled by the Group. The Group controls an entity when the Group is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Consolidation of subsidiaries begins from the date the Group obtains control of the subsidiaries and ceases when the Group loses control of the subsidiaries.

(b) Inter-company transactions, balances and unrealised gains or losses on transactions between companies within the Group are eliminated. Accounting policies of subsidiaries have been adjusted where necessary to ensure consistency with the policies adopted by the Group.

(c) When the Group loses control of a subsidiary, the Group remeasures any investment retained in the former subsidiary at its fair value. That fair value is regarded as the fair value on initial recognition of a financial asset or the cost on initial recognition of the associate or joint venture. Any difference between fair value and carrying amount is recognised in profit or loss. All amounts previously recognised in other comprehensive income in relation to the subsidiary are reclassified to profit or loss on the same basis as would be required if the related assets or liabilities were disposed of. That is, when the Group loses control of a subsidiary, all gains or losses previously recognised in other comprehensive income in relation to the subsidiary should be reclassified from equity to profit or loss, if such gains or losses would be reclassified to profit or loss when the related assets or liabilities are disposed of.

B. Subsidiaries included in the consolidated financial statements and movements for the period are as follows:

Name of investor	Name of subsidiary	Main business activities	Ownership (%) December 31, 2018	Ownership (%) December 31, 2017	Description
The Company	OBI Pharma Limited	Investing and trading	100.00	100.00	-
The Company	OBI Pharma USA, Inc.	Biotechnology development	100.00	100.00	-
The Company	AP Biosciences, Inc.	Biotechnology development	67.00	-	Note 1
The Company	OBI Pharma Australia Pty	Biotechnology development	100.00	-	Note 2
OBI Pharma Limited	OBI Pharma (Shanghai) Limited	Biotechnology development	100.00	100.00	-
AP Biosciences, Inc.	Ablogix Inc.	Biotechnology development	-	-	Note 3

Note 1: In January 2018, the Company acquired 67% of the shares of AP Biosciences, Inc.

Note 2: OBI Pharma Australia Pty Ltd. was established in July 2018.

Note 3: In January 2018, the Company acquired 67% of the shares of AP Biosciences, Inc., indirectly holding 100% of the shares of Ablogix Inc, which had been dissolved in March 2018.

C. Subsidiaries not included in the consolidated financial statements: None.

D. Adjustments for subsidiaries with different balance sheet dates: None.

E. Significant restrictions: None.

F. Subsidiaries that have non-controlling interests that are material to the Group: None.

As of December 31, 2018, the non-controlling interest amounted to $126,534. The information of non-controlling interest and respective subsidiaries is as follows:

Name of subsidiary	Principal place of business	Non-controlling interest December 31, 2018 Amount	Non-controlling interest December 31, 2018 Ownership (%)
AP Biosciences, Inc.	Taiwan	$ 126,534	33%

Summarised financial information of the subsidiaries:

Balance sheet

	December 31, 2018
Current assets	$ 56,847
Non-current assets	408,715
Current liabilities	(2,052)
Non-current liabilities	(80,075)
Total net assets	$ 383,435

Statement of comprehensive income

	From January 11, 2018 to December 31, 2018
Revenue	$ 18,464
Loss before tax	(91,013)
Income tax benefit	8,433
Loss for the year	(82,580)
Other comprehensive loss	(306)
Total comprehensive loss for the year	($ 82,886)
Comprehensive loss attributable to non-controlling interest	($ 27,352)

Statements of cash flows

	From January 11, 2018 to December 31, 2018
Net cash used in operating activities	($ 43,824)
Net cash used in investing activities	(942)
Net cash provided by financing activities	90,000
Net increase in cash and cash equivalents	45,234
Cash and cash equivalents at beginning of year	10,708
Cash and cash equivalents at end of year	$ 55,942

As of December 31, 2017, the Group had no non-controlling interest.

(4) Foreign currency translation

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in New Taiwan dollars, which is the Company's functional and the Group's presentation currency.

A. Foreign currency transactions and balances

(a) Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured.

Foreign exchange gains and losses resulting from the settlement of such transactions are recognised in profit or loss in the period in which they arise.

(b) Monetary assets and liabilities denominated in foreign currencies at the period end are re-translated at the exchange rates prevailing at the balance sheet date. Exchange differences arising upon re-translation at the balance sheet date are recognised in profit or loss.

(c) Non-monetary assets and liabilities denominated in foreign currencies held at fair value through profit or loss are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognised in profit or loss. Non-monetary assets and liabilities denominated in foreign currencies held at fair value through other comprehensive income are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognised in other comprehensive income. However, non-monetary assets and liabilities denominated in foreign currencies that are not measured at fair value are translated using the historical exchange rates at the dates of the initial transactions.

(d) All other foreign exchange gains and losses based on the nature of those transactions are presented in the statement of comprehensive income within "other gains and losses".

B. Translation of foreign operations

The operating results and financial position of all the group entities that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

(a) Assets and liabilities for each balance sheet presented are translated at the closing exchange rate at the date of that balance sheet;

(b) Income and expenses for each statement of comprehensive income are translated at average exchange rates of that period; and

(c) All resulting exchange differences are recognised in other comprehensive income.

(5) Classification of current and non-current items

A. Assets that meet one of the following criteria are classified as current assets:

(a) Assets arising from operating activities that are expected to be realised, or are intended to be sold or consumed within the normal operating cycle;

(b) Assets held mainly for trading purposes;

(c) Assets that are expected to be realised within twelve months from the balance sheet date;

(d) Cash and cash equivalents, excluding restricted cash and cash equivalents and those that are to be exchanged or used to settle liabilities more than twelve months after the balance sheet date.

Otherwise, they are classified as non-current assets.

B. Liabilities that meet one of the following criteria are classified as current liabilities:

(a) Liabilities that are expected to be settled within the normal operating cycle;

(b) Liabilities arising mainly from trading activities;

(c) Liabilities that are to be settled within twelve months from the balance sheet date;

(d) Liabilities for which the repayment date cannot be extended unconditionally to more than twelve months after the balance sheet date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

Otherwise, they are classified as non-current liabilities.

(6) Cash equivalents

Cash equivalents refer to short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. Time deposits that meet the definition above and are held for the purpose of meeting short-term cash commitments in operations are classified as cash equivalents.

(7) Financial assets at fair value through other comprehensive income

A. Financial assets at fair value through other comprehensive income comprise equity securities which are not held for trading, and for which the Group has made an irrevocable election at initial recognition to recognise changes in fair value in other comprehensive income.

B. On a regular way purchase or sale basis, financial assets at fair value through other comprehensive income are recognised and derecognised using trade date accounting.

C. At initial recognition, the Group measures the financial assets at fair value plus transaction costs, and subsequently measured it at fair value. The changes in fair value of equity investments that were recognised in other comprehensive income are reclassified to retained earnings and are not reclassified to profit or loss following the derecognition of the investment. Dividends are recognised as revenue when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

(8) Financial assets at amortised cost

A. Financial assets at amortised cost are those that meet all of the following criteria:

(a) The objective of the Group's business model is achieved by collecting contractual cash flows.

(b) The assets' contractual cash flows represent solely payments of principal and interest.

B. On a regular way purchase or sale basis, financial assets at amortised cost are recognised and derecognised using trade date accounting.

C. The Group's time deposits which do not fall under cash equivalents are those with a short

maturity period and are measured at initial investment amount as the effect of discounting is immaterial.

(9) Accounts receivable

A. Accounts and notes receivable entitle the Group a legal right to receive consideration in exchange for transferred goods or rendered services.

B. The short-term accounts without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

(10) Impairment of financial assets

For financial assets at amortised cost, at each reporting date, the Group recognises the impairment provision for 12 months expected credit losses if there has not been a significant increase in credit risk since initial recognition or recognises the impairment provision for the lifetime expected credit losses (ECLs) if such credit risk has increased since initial recognition after taking into consideration all reasonable and verifiable information that includes forecasts. On the other hand, for accounts receivable or contract assets that do not contain a significant financing component, the Group recognises the impairment provision for lifetime ECLs.

(11) Derecognition of financial assets

The Group derecognises a financial asset when the contractual rights to receive the cash flows from the financial asset expire.

(12) Property, plant and equipment

A. Property, plant and equipment are initially recorded at cost.

B. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

C. Land is not depreciated. Other property, plant and equipment apply cost model and are depreciated using the straight-line method to allocate their cost over their estimated useful lives.

D. The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each balance sheet date. If expectations for the assets' residual values and useful lives differ from previous estimates or the patterns of consumption of the assets' future economic benefits embodied in the assets have changed significantly, any change is accounted for as a change in estimate under IAS 8, 'Accounting Policies, Changes in Accounting Estimates and Errors', from the date of the change. The estimated useful lives of property, plant and equipment are as follows:

Buildings and structures	50 years
Lab equipment	3~5 years
Office equipment	3~5 years
Leasehold improvements	3~5 years

(13) Operating leases (lessee)

An operating lease is a lease that the lessor assumes substantially all the risks and rewards incidental to ownership of the leased asset. Payments made under an operating lease (net of any incentives received from the lessor) are recognised in profit or loss on a straight-line basis over the lease term.

(14) Intangible assets

A. Patent and acquired special technology:

(a) Patents acquired in intellectual property right as equity are recognised at fair value at the acquisition date, and amortised on a straight-line basis over their estimated useful lives of 17 years.

(b) If acquired by cash, it is recorded at acquisition cost; if acquired through business combination, it is recorded at fair value as measured at the acquisition date. The estimated useful life is 2 to 16 years, and it is amortised on a straight-line basis.

B. Computer software

Computer software is stated at cost and amortised on a straight-line basis over its estimated useful life of 3 to 5 years.

C. Goodwill

Goodwill arises in a business combination accounted for by applying the acquisition method.

(15) Impairment of non-financial assets

A. The Group assesses at each balance sheet date the recoverable amounts of those assets where there is an indication that they are impaired. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. Except for goodwill, when the circumstances or reasons for recognising impairment loss for an asset in prior years no longer exist or diminish, the impairment loss is reversed. The increased carrying amount due to reversal should not be more than what the depreciated or amortised historical cost would have been if the impairment had not been recognised.

B. The recoverable amount of goodwill is evaluated periodically. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. Impairment loss of goodwill previously recognised in profit or loss shall not be reversed in the following years.

C. For the purpose of impairment testing, goodwill acquired in a business combination is allocated

to each of the cash-generating units, or groups of cash-generating units, that is/are expected to benefit from the synergies of the business combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

(16) Borrowings

Borrowings comprise long-term and short-term bank borrowings and other short-term loans. Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in profit or loss over the period of the borrowings using the effective interest method.

(17) Derecognition of financial liabilities

A financial liability is derecognised when the obligation specified in the contract is either discharged or cancelled or expires.

(18) Employee benefits

A. Short-term employee benefits

Short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in respect of service rendered by employees in a period and should be recognised as expenses in that period when the employees render service.

B. Pensions - Defined contribution plans

For defined contribution plans, the contributions are recognised as pension expenses when they are due on an accrual basis. Prepaid contributions are recognised as an asset to the extent of a cash refund or a reduction in the future payments.

C. Employees' compensation and directors' and supervisors' remuneration

Employees' compensation and directors' and supervisors' remuneration are recognised as expense and liability, provided that such recognition is required under legal or constructive obligation and those amounts can be reliably estimated. Any difference between the resolved amounts and the subsequently actual distributed amounts is accounted for as changes in estimates.

(19) Employee share-based payment

For the equity-settled share-based payment arrangements, the employee services received are measured at the fair value of the equity instruments granted at the grant date, and are recognised as compensation cost over the vesting period, with a corresponding adjustment to equity. The fair value of the equity instruments granted shall reflect the impact of market vesting conditions and non-market vesting conditions. Compensation cost is subject to adjustment based on the service

conditions that are expected to be satisfied and the estimates of the number of equity instruments that are expected to vest under the non-market vesting conditions at each balance sheet date. Ultimately, the amount of compensation cost recognised is based on the number of equity instruments that eventually vest.

(20) Income tax

A. The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or items recognised directly in equity, in which cases the tax is recognised in other comprehensive income or equity.

B. The current income tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in accordance with applicable tax regulations. It establishes provisions where appropriate based on the amounts expected to be paid to the tax authorities. An additional 10% tax is levied on the unappropriated retained earnings and is recorded as income tax expense in the year the shareholders resolve to retain the earnings.

C. Deferred income tax is recognised, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated balance sheet. However, the deferred income tax is not accounted for if it arises from initial recognition of goodwill or of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred tax is provided on temporary differences arising on investments in subsidiaries except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

D. Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. At each balance sheet date, unrecognised and recognised deferred income tax assets are reassessed.

E. Current income tax assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. Deferred income tax assets and liabilities are offset on the balance sheet when the entity has the legally enforceable right to offset current tax assets against current tax liabilities and they are levied by the same taxation authority on either the same entity or different entities that intend to settle on a net basis or realise the asset and settle the liability simultaneously.

F. A deferred tax asset shall be recognised for the carryforward of unused tax credits resulting

from research and development expenditures, to the extent that it is possible that future taxable profit will be available against which the unused tax credits can be utilised.

(21) Share capital

A. Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or stock options are shown in equity as a deduction, net of tax, from the proceeds.

B. Where the Company repurchases the Company's equity share capital that has been issued, the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the Company's equity holders. Where such shares are subsequently reissued, the difference between their book value and any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the Company's equity holders.

(22) Revenue recognition

A. Materials sales revenue

The Group enters into agreements with clients to sell materials for the manufacturing of clinical trial drugs. The revenue is recognised when the performance obligations are satisfied and risks are transferred to clients.

B. Revenue from licensing intellectual property

(a) The Group entered into a contract with a customer to grant a license of patents to the customer. Given the license is distinct from other promised goods or services in the contract, the Group recognises the revenue from licensing when the license is transferred to a customer either at a point in time or over time based on the nature of the license granted. The nature of the Group's promise in granting a license is a promise to provide a right to access the Group's intellectual property if the Group undertakes activities that significantly affect the patents to which the customer has rights, the customer is affected by the Group's activities and those activities do not result in the transfer of a good or a service to the customer as they occur. The royalties are recognised as revenue on a straight-line basis throughout the licensing period. In case the abovementioned conditions are not met, the nature of the Group's promise in granting a license is a promise to provide a right to use the Group's intellectual property and therefore the revenue is recognised when transferring the license to a customer at a point in time.

(b) Some contracts require a sales-based royalty in exchange for a license of intellectual property. The Group recognises revenue when the performance obligation has been satisfied and the subsequent sale occurs.

C. Service revenue

The Group provides research services. Revenue from providing services is recognised in the accounting period in which the services are rendered. Revenue arising from fixed-price contracts is recognised to the extent the client actually benefited from the services rendered. The client pays based on the agreed-upon terms and conditions. If the services rendered exceed the payment, a contract asset is recognised. If the payments exceed the services rendered, a contract liability is recognised.

(23) Business combinations

A. The Group uses the acquisition method to account for business combinations. The consideration transferred for an acquisition is measured as the fair value of the assets transferred, liabilities incurred or assumed and equity instruments issued at the acquisition date, plus the fair value of any assets and liabilities resulting from a contingent consideration arrangement. All acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. For each business combination, the Group measures at the acquisition date components of non-controlling interests in the acquiree that are present ownership interests and entitle their holders to the proportionate share of the entity's net assets in the event of liquidation at either fair value or the present ownership instruments' proportionate share in the recognised amounts of the acquiree's identifiable net assets. All other non-controlling interests should be measured at the acquisition-date fair value.

B. The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of any previous equity interest in the acquiree over the fair value of the identifiable assets acquired and the liabilities assumed is recorded as goodwill at the acquisition date. If the total of consideration transferred, non-controlling interest in the acquiree recognised and the fair value of previously held equity interest in the acquiree is less than the fair value of the identifiable assets acquired and the liabilities assumed, the difference is recognised directly in profit or loss on the acquisition date.

(24) Operating segments

Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Operating Decision-Maker, who is responsible for allocating resources and assessing performance of the operating segments.

5. CRITICAL ACCOUNTING JUDGEMENTS, ESTIMATES AND KEY SOURCES OF ASSUMPTION UNCERTAINTY

The preparation of these consolidated financial statements requires management to make critical judgements in applying the Group's accounting policies and make critical assumptions and estimates concerning future events. Assumptions and estimates may differ from the actual results and are continually evaluated and adjusted based on historical experience and other factors. Critical judgements adopted in the accounting policies are as follows:

(1) Impairment assessment of intangible assets (excluding goodwill)

In accordance with IAS 36, the Group determines whether an intangible asset (excluding goodwill) may be impaired requiring significant judgements. The Group assesses whether there is any indication for impairment based on internal and external information, including the plan and progress of research and development project and the prospect of such technology.

(2) Impairment assessment of goodwill

The impairment assessment of goodwill relies on the Group's subjective judgement, including identifying cash-generating units, allocating assets and liabilities as well as goodwill to related cash-generating units, and determining the recoverable amounts of related cash-generating units.

6. DETAILS OF SIGNIFICANT ACCOUNTS

(1) Cash and cash equivalents

	December 31, 2018	December 31, 2017
Cash on hand	$ 130	$ 100
Checking accounts and demand deposits	228,081	233,016
Time deposits	3,436,382	2,322,159
	$ 3,664,593	$ 2,555,275

A. The Group transacts with a variety of financial institutions all with high credit quality to disperse credit risk, so it expects that the probability of counterparty default is remote.

B. The Group has no cash and cash equivalents pledged to others.

(2) Financial assets at fair value through other comprehensive income

Items	December 31, 2018
Non-current item:	
Unlisted stocks	$ 27,181
Valuation adjustment	(19,727)
	$ 7,454

A. The Group has elected to classify equity investments that are considered to be strategic investments as financial assets at fair value through other comprehensive income. The fair value of such investments amounted to $7,454 as at December 31, 2018.

B. Amounts recognised in other comprehensive income in relation to the financial assets at fair value through other comprehensive income are listed below:

	Year ended December 31, 2018
Equity instruments at fair value through other comprehensive income	
Fair value change recognised in other comprehensive income	($ 2,706)

C. As at December 31, 2018, without taking into account any collateral held or other credit enhancements, the maximum exposure to credit risk in respect of the amount that best represents

the financial assets at fair value through other comprehensive income held by the Group was $7,454.

D. Information relating to credit risk of financial assets at fair value through other comprehensive income is provided in Note 12(2).

E. Information on available-for-sale financial assets as of December 31, 2017 is provided in Note 12(4).

(3) Property, plant and equipment

	Land	Buildings and structures	Lab equipment	Office equipment	Leasehold improvements	Total
At January 1, 2018						
Cost	$ 87,514	$ 26,818	$ 193,459	$ 19,591	$ 36,939	$ 364,321
Accumulated depreciation	-	(1,689)	(96,897)	(10,993)	(20,097)	(129,676)
	$ 87,514	$ 25,129	$ 96,562	$ 8,598	$ 16,842	$ 234,645
2018						
At January 1	$ 87,514	$ 25,129	$ 96,562	$ 8,598	$ 16,842	$ 234,645
Additions	-	-	18,538	749	-	19,287
Acquired from business combinations	-	-	1,272	145	-	1,417
Reclassifications (Note 1)	-	-	38,022	-	-	38,022
Depreciation	-	(4,241)	(43,278)	(3,948)	(6,466)	(57,933)
Net exchange differences	-	-	2	2	-	4
At December 31	$ 87,514	$ 20,888	$ 111,118	$ 5,546	$ 10,376	$ 235,442
At December 31, 2018						
Cost	$ 87,514	$ 26,818	$ 251,293	$ 20,487	$ 36,939	$ 423,051
Accumulated depreciation	-	(5,930)	(140,175)	(14,941)	(26,563)	(187,609)
	$ 87,514	$ 20,888	$ 111,118	$ 5,546	$ 10,376	$ 235,442

	Land	Buildings and structures	Lab equipment	Office equipment	Leasehold improvements	Total
At January 1, 2017						
Cost	$ 87,514	$ 14,996	$ 158,484	$ 16,138	$ 27,706	$ 304,838
Accumulated depreciation	-	(75)	(55,248)	(8,494)	(14,373)	(78,190)
	$ 87,514	$ 14,921	$ 103,236	$ 7,644	$ 13,333	$ 226,648
2017						
At January 1	$ 87,514	$ 14,921	$ 103,236	$ 7,644	$ 13,333	$ 226,648
Additions	-	11,822	31,309	4,453	9,245	56,829
Reclassifications (Note 1)	-	-	3,699	-	-	3,699
Depreciation	-	(1,614)	(41,668)	(3,484)	(5,737)	(52,503)
Net exchange differences	-	-	(14)	(15)	1	(28)
At December 31	$ 87,514	$ 25,129	$ 96,562	$ 8,598	$ 16,842	$ 234,645
At December 31, 2017						
Cost	$ 87,514	$ 26,818	$ 193,459	$ 19,591	$ 36,939	$ 364,321
Accumulated depreciation	-	(1,689)	(96,897)	(10,993)	(20,097)	(129,676)
	$ 87,514	$ 25,129	$ 96,562	$ 8,598	$ 16,842	$ 234,645

Note 1: The reclassifications resulted from a transfer from prepayments for business facilities (shown as ‘other non-current asset’) to property, plant and equipment.

Note 2: Information about the property, plant and equipment that were pledged to others as collateral is provided in Note 8.

(4) Intangible assets

	Patent								Patented technology			
	OBI-822 Therapeutically metastatic vaccines	OBI-858 Product development project of botulinum	OBI-833 Next-generation cancer vaccine	OBI-868 Reagent for cancer screening	OBI-3424 AKR1C3 enzyme prodrug	ThioBridge linker technology	Antibody-drug development platform	Bispecific monoclonal antibody	Bifunctional fusion protein for age-related macular degeneration	Software	Goodwill	Total
At January 1, 2018												
Cost	$ 87,577	$ 42,858	$ 1,500	$ 1,500	$ 90,693	$ 1,945	$ -	$ -	$ -	$ 8,511	$ -	$ 234,584
Accumulated amortisation	(72,123)	(25,001)	(737)	(1,475)	(3,023)	(243)	-	-	-	(4,716)	-	(107,318)
	$ 15,454	$ 17,857	$ 763	$ 25	$ 87,670	$ 1,702	$ -	$ -	$ -	$ 3,795	$ -	$ 127,266
2018												
At January 1	$ 15,454	$ 17,857	$ 763	$ 25	$ 87,670	$ 1,702	$ -	$ -	$ -	$ 3,795	$ -	$ 127,266
Additions	-	-	-	-	-	-	-	-	-	621	-	621
Acquired from business combinations	-	-	-	-	-	-	81,037	271,933	96,644	105	61,148	510,867
Amortisation	(5,152)	(4,286)	(150)	(25)	(9,069)	(973)	(5,823)	(27,193)	(9,664)	(2,344)	-	(64,679)
At December 31	$ 10,302	$ 13,571	$ 613	$ -	$ 78,601	$ 729	$ 75,214	$ 244,740	$ 86,980	$ 2,177	$ 61,148	$ 574,075
At December 31, 2018												
Cost	$ 87,577	$ 42,858	$ 1,500	$ 1,500	$ 90,693	$ 1,945	$ 81,037	$ 271,933	$ 96,644	$ 9,237	$ 61,148	$ 746,072
Accumulated amortisation	(77,275)	(29,287)	(887)	(1,500)	(12,092)	(1,216)	(5,823)	(27,193)	(9,664)	(7,060)	-	(171,997)
	$ 10,302	$ 13,571	$ 613	$ -	$ 78,601	$ 729	$ 75,214	$ 244,740	$ 86,980	$ 2,177	$ 61,148	$ 574,075

	Patent							
	OBI-822	OBI-858	OBI-833	OBI-868	OBI-3424			
	Therapeutically metastatic vaccines	Product development project of botulinum	Next-generation cancer vaccine	Reagent for cancer screening	AKR1C3 enzyme prodrug	ThioBridge linker technology	Software	Total
At January 1, 2017								
Cost	$ 87,577	$ 42,858	$ 1,500	$ 1,500	$ -	$ -	$ 5,577	$ 139,012
Accumulated amortisation	(66,971)	(20,715)	(587)	(1,175)	-	-	(3,102)	(92,550)
	$ 20,606	$ 22,143	$ 913	$ 325	$ -	$ -	$ 2,475	$ 46,462
2017								
At January 1	$ 20,606	$ 22,143	$ 913	$ 325	$ -	$ -	$ 2,475	$ 46,462
Additions	-	-	-	-	90,693	1,945	2,934	95,572
Amortisation	(5,152)	(4,286)	(150)	(300)	(3,023)	(243)	(1,614)	(14,768)
At December 31	$ 15,454	$ 17,857	$ 763	$ 25	$ 87,670	$ 1,702	$ 3,795	$ 127,266
At December 31, 2017								
Cost	$ 87,577	$ 42,858	$ 1,500	$ 1,500	$ 90,693	$ 1,945	$ 8,511	$ 234,584
Accumulated amortisation	(72,123)	(25,001)	(737)	(1,475)	(3,023)	(243)	(4,716)	(107,318)
	$ 15,454	$ 17,857	$ 763	$ 25	$ 87,670	$ 1,702	$ 3,795	$ 127,266

A. Details of amortisation on intangible assets are as follows:

	Years ended December 31,	
	2018	2017
Administrative expenses	$ 2,052	$ 1,614
Research and development expenses	62,627	13,154
	$ 64,679	$ 14,768

B. The Company purchased patents named "OPT-822", therapeutically metastatic breast cancer vaccines, and "OPT-80", Macrolide, from Optimer Pharmaceuticals, Inc. (the name "Optimer" is no longer used since January 2013 and the name was changed to "OBI-822/821" after the organisation changed in October 2012) on December 29, 2003. The main contract information is as follows:

(a) The patent amounting to USD 6 million (approximately NTD 204,000) based on the appraisal report, was acquired as intellectual property right through equity of 20,400 thousand shares.

(b) The Company signed an authorised sale contract for Antibiotics-Fidaxomicin with OPT on June 6, 2011. The contract states that the Company must pay royalty fees to OPT based on 17% or 22% of sales under the revenue achievements. The payment period of the royalty fee is the duration of patent right or ten years starting from the initial sales, whichever is later.

(c) On October 2, 2015, the Company entered into a contract with Optimer Pharmaceuticals, LLC. (hereafter referred to as "Optimer"), agreeing to transfer all the rights of DIFICID (Fidaxomicin) in terms of marketing approval and filing a trademark application pursuant to Taiwan legislations. The contract will expire on November 27, 2028 when the patent term lapses. The contract provides that the Company is obliged to transfer all related rights to Optimer. In return, Optimer is obliged to pay the Company (a) US$3 million of contract value; (b) a maximum of US$3.25 million of accumulated net sales revenue and additional US$1 million of milestone payment for each new indication; (c) sales royalty calculated based on a certain percentage of net sales revenue. As for all business activities related to DIFICID, it is handed over to Optimer's associate in Taiwan, Merck Sharp & Dohme (I.A.) LLC. - Taiwan Branch (hereafter referred to as "MSD"). In the second quarter of 2016, the Company has completed the transfer of all related rights to MSD and received US$3 million under the contract. In addition, the authorised sale contract mentioned in Note 6(4)B.(b) has been terminated when the contract value of this transfer contract was settled based on mutual agreement. For the years ended December 31, 2018 and 2017, the Company recognised the aforementioned royalty income of $1,176 and $0, respectively.

(d) The Company needs to pay the annual fee and achieved milestones. As of December 31, 2018, the remaining unpaid amount for achieved milestones amounted to US$13,250 thousand. The amount of payment was determined based on whether the milestones in the agreement are achieved or not. Furthermore, the Company must pay royalty fees based on a

certain percentage of the sales of patented products annually.

C. In order to improve mass production and manufacturing process of OBI-822 for expanding global market, the Company has signed an exclusive patent license for the Globo H series' chemosynthesis of carbohydrates with Academia Sinica on April 23, 2014, and the contract period is from April 23, 2014 to the expiration of protection duration of the last patented product. The Company must pay upfront patent licensing fees and royalty fees in accordance with the contract. Except for royalty fees, the Company assesses whether to pay periodical patent licensing fees based on 4 achieved milestones. The total contract amount was approximately $60,000. Further, pursuant to the supplements and amendments agreement on February 18, 2016, the patent licensing fees was reduced to $57,320. As of December 31, 2018, the Company paid royalty fees of $20,000 in 2014, milestone patent licensing fees of $27,320 in 2016 and $10,000 in 2017. These fees were recognised as research and development expenses.

D. The Company purchased a patent named "product development project of botulinum" (OBI-858) from Amaran Biotechnology Inc. on March 2, 2012, which amounted to $42,858 based on external experts' valuation.

E. The Company acquired patents named "next-generation cancer vaccine" (OBI-833) and "reagent for cancer screening" (OBI-868). The contract states that the Company must pay royalty fees based on the achieved milestones. In 2013, the Company paid royalty fees of $1,500 separately for both projects. Furthermore, the Company must pay royalty fees based on a certain percentage of the sales of patented products annually.

F. On May 31, 2017, the Company entered into an agreement with Threshold Pharmaceuticals, Inc. to acquire the global IP right (excluding Mainland China, Hong Kong, Macao, Taiwan, Japan, South Korea, Singapore, Malaysia, Thailand, Turkey and India) and patent regarding the innovative micromolecule drug TH-3424, which was then renamed OBI-3424.

G. On July 11, 2017, the Company entered into a licensing agreement with PolyTherics Limited (Abzena) to introduce the ThioBridge™ linker technology required for the antibody drug conjugate (ADC). Under the terms of the agreement, the Company is obliged to pay a small amount of upfront payment to Abzena to acquire the worldwide exclusive right to use the ThioBridge™ technology for the development and commercialisation of ADCs targeting of carbohydrates in the Globo series. In the following years, milestone payments amounting up to GBP 128 million will be due whenever the specified milestones are reached. In addition, the Company is also required to pay royalties based on a certain percentage of sales of the products which incorporate the ThioBridge™ technology.

H. Aiming to bolster the competitive edge of products and the ability to develop new drugs, on January 10, 2018, the Company issued 1,675 thousand new common stocks in return for AbProtix, Inc.'s 6,700 thousand common stocks of AP Biosciences, Inc., which is equivalent to 67% ownership; the share exchange ratio is 1:4. The Company hired independent experts to issue a purchase price allocation report for the business combination. Based on the report, the Company recognised special technology, computer software, and goodwill in the amounts of

$449,614, $105, and $61,148, respectively.

I. The Group has no intangible assets pledged to others.

(5) Long-term borrowings

Type of borrowings	Borrowing period and repayment term	Interest rate	Collateral	December 31, 2018	December 31, 2017
Long-term bank borrowings					
Secured borrowings	Borrowing period is from October 5, 2016 to October 5, 2026; interest is repayable monthly (Note 1)	1.60%	Note 2	$ 56,000	$ 63,000
Unsecured borrowings	Borrowing period is from October 5, 2016 to October 5, 2021; interest is repayable monthly (Note 1)	1.60%	Note 2	6,000	8,000
				62,000	71,000
Less: Current portion				(9,853)	(9,997)
				$ 52,147	$ 61,003

Note 1: The Group negotiated borrowing contract with the bank whereby the principal will be repayable quarterly starting from January 2017.

Note 2: Please refer to Note 8 for details.

(6) Pension

A. The Company and its domestic subsidiaries have established a defined contribution pension plan (the "New Plan") under the Labor Pension Act (the "Act"), covering all regular employees with R.O.C. nationality. Under the New Plan, the Company and its domestic subsidiaries contribute monthly an amount based on 6% of the employees' monthly salaries and wages to the employees' individual pension accounts at the Bureau of Labor Insurance. The benefits accrued are paid monthly or in lump sum upon termination of employment. The pension costs under the defined contribution pension plans of the Group for the years ended December 31, 2018 and 2017 were $7,413 and $7,325, respectively.

B. For the pension plan based on local government regulations, OBI Pharma USA, Inc. and OBI Pharma (Shanghai) Limited recognised pension costs of $3,303 and $2,811 for the years ended December 31, 2018 and 2017, respectively.

(7) Share-based payment

A. Information on share-based payments made by the Company and a subsidiary, AP Biosciences, Inc., is as follows:

(a) The options were granted to qualified employees of the Company, the subsidiaries which the Company holds over 50% interest of shares, and the branches by issuing new shares of the Company when exercised. The options are valid for 10 years. The major contents were as follows:

Type of agreement	Grant date	No. of units	Subscription share per unit	Vesting conditions	Weighted-average remaining contract period (years)
Employee stock option plan (Note)	2010.03.08	2,360,000	1	One year after grant, employees can exercise options monthly at a certain percentage	1.19
〃	2010.05.21	100,000	1	〃	1.39
〃	2010.09.10	60,000	1	〃	1.69
〃	2010.12.15	144,000	1	〃	1.96
〃	2011.01.01	588,000	1	〃	2.00
〃	2011.03.30	80,000	1	〃	2.25
〃	2011.06.10	124,000	1	〃	2.44
〃	2011.09.30	260,000	1	〃	2.75
〃	2011.12.16	2,450,000	1	〃	2.96
〃	2012.01.01	1,560,000	1	〃	3.00
〃	2012.03.09	270,000	1	〃	3.19
〃	2013.11.27	1,821,000	1	Two years after grant, employees can exercise options monthly at a certain percentage	4.91
〃	2014.02.21	1,744,000	1	〃	5.14

Type of agreement	Grant date	No. of units	Subscription share per unit	Vesting conditions	Weighted-average remaining contract period (years)
Employee stock option plan (Note)	2014.03.26	575,000	1	Two years after grant, employees can exercise options monthly at a certain percentage	5.23
〃	2015.05.06	2,861,000	1	〃	6.35
〃	2015.08.04	75,000	1	〃	6.60
〃	2015.11.06	353,000	1	〃	6.85
〃	2015.12.15	13,000	1	〃	6.96
〃	2016.03.25	1,377,000	1	〃	7.23
〃	2017.03.09	3,145,000	1	〃	8.19
〃	2017.05.12	20,000	1	〃	8.36
〃	2017.08.11	20,000	1	〃	8.61
〃	2017.11.10	130,000	1	〃	8.86
〃	2018.01.19	1,685,000	1	〃	9.05
Cash capital increase reserved for employee preemption (Note)	2013.07.26	839,514	1	Vested immediately	-
〃	2015.03.16	3,000,000	1	〃	-

Note: The above share-based payment arrangements are equity-settled.

(b) Employees and consultants of subsidiary, AP Biosciences, Inc., are qualified for the share-based payment plan of the original parent, AbProtix Inc.:

Type of agreement	Grant date	No. of units	Subscription shares per unit	Vesting conditions	Weighted average residual contract period (years)
Employee stock options (Note)	2015.05.01	409,000	1	100% vested on grant date.	Note 2
〃	2015.05.01	436,000	1	25% vested after one year of service from grant date; the remaining options vested in equal installments over the next 36 months, with 1/48 vesting on the last day of each month.	Note 2
〃	2016.05.01	90,000	1	100% vested on grant date.	Note 2
〃	2016.05.01	404,000	1	25% vested after one year of service from grant date; the remaining options vested in equal installments over the next 36 months, with 1/48 vesting on the last day of each month.	Note 2
〃	2017.11.08	1,953,332	1	〃	Note 2

Note 1: These options are issued by AbProtix Inc., and the aforementioned share-based payment are settled in the form of equity of AbProtix Inc.

Note 2: The stock options granted before the closing of the merger on January 10, 2018 shall be fully vested as resolved by the Board of Directors of AbProtix Inc. on April 16, 2018.

B. Details of the share-based payment arrangements are as follows:

(a) The Company's employee stock option plan:

	Years ended December 31,			
	2018		2017	
	No. of units	Weighted-average exercise price (in dollars)	No. of units	Weighted-average exercise price (in dollars)
Options outstanding at beginning of the year	9,602,596	$ 260.87	8,827,788	$ 212.65
Options granted	1,685,000	170.50	3,315,000	318.64
Options exercised	(150,000)	10.00	(553,794)	65.08
Options forfeited or expired	(907,112)	309.62	(1,986,398)	217.12
Options outstanding at end of the year	10,230,484	245.60	9,602,596	260.87
Options exercisable at end of the year	5,661,427		4,599,136	
Options authorised but not granted at end of the year	-		1,685,000	

(b) The employee stock option plan of subsidiary, AP Biosciences, Inc.:

	Year ended December 31, 2018	
	No. of units	Weighted-average exercise price (in US dollars)
Options outstanding at January 1	-	$ -
Options acquired from business combinations	2,883,332	0.05
Options exercised	(2,883,332)	0.05
Options outstanding at December 31	-	
Options exercisable at December 31	-	

C. The weighted-average stock price of stock options at exercise dates for the years ended December 31, 2018 and 2017 were $166 and $292.52 (in dollars), respectively.

D. As of December 31, 2018 and 2017, the range of exercise prices of the Company's stock options outstanding of the Company were all $10~$727 (in dollars).

E. The fair value of stock options granted on grant date is measured using the Black-Scholes option-pricing model. Relevant information is as follows:

(a) The Company's employee stock option plan:

Type of agreement	Grant date	Underlying market value on measurement date (in dollars)	Exercise price per share (in dollars)	Expected volatility (Note)	Expected option life	Expected dividend yield	Risk-free interest rate	Fair value per unit (in dollars)
Employee stock option plan	2010.03.08	$ 6.9	$ 10.0	44.23%	10 years	0%	1.42%	$ 3.16
〃	2010.05.21	6.9	10.0	44.23%	10 years	0%	1.42%	3.16
〃	2010.09.10	6.9	10.0	44.23%	10 years	0%	1.42%	3.16
〃	2010.12.15	6.9	10.0	44.23%	10 years	0%	1.42%	3.16
〃	2011.01.01	9.6	10.0	41.62%	10 years	0%	1.51%	4.98
〃	2011.03.30	9.6	10.0	41.62%	10 years	0%	1.51%	4.98
〃	2011.06.10	9.6	10.0	41.62%	10 years	0%	1.51%	4.98
〃	2011.09.30	7.4	10.0	40.94%	10 years	0%	1.29%	3.21
〃	2011.12.16	7.4	10.0	40.94%	10 years	0%	1.29%	3.21
〃	2012.01.01	10.1	10.0	40.83%	10 years	0%	1.22%	5.21
〃	2012.03.09	10.1	10.0	40.83%	10 years	0%	1.22%	5.21
〃	2013.11.27	255.6	247.4	49.72%	6.375 years	0%	1.44%	128.42
〃	2014.02.21	231.4	214.4	47.62%	6.375 years	0%	1.34%	114.80
〃	2014.03.26	215.0	227.6	46.54%	6.375 years	0%	1.38%	97.07
〃	2015.05.06	234.0	334.0	44.46%	6.375 years	0%	1.33%	150.18
〃	2015.08.04	283.0	283.0	43.90%	6.375 years	0%	1.21%	125.27
〃	2015.11.06	422.0	422.0	44.11%	6.375 years	0%	1.01%	186.00
〃	2015.12.15	727.0	727.0	45.44%	6.375 years	0%	0.99%	328.28
〃	2016.03.25	420.0	420.0	47.70%	6.375 years	0%	0.72%	195.43
〃	2017.03.09	326.0	326.0	50.01%	6.375 years	0%	1.11%	159.90
〃	2017.05.12	261.0	261.0	49.51%	6.375 years	0%	0.96%	126.34
〃	2017.08.11	191.0	191.0	48.61%	6.375 years	0%	0.82%	90.60
〃	2017.11.10	169.0	169.0	48.44%	6.375 years	0%	0.81%	79.91
〃	2018.01.19	170.5	170.5	48.61%	6.375 years	0%	0.88%	81.04
Cash capital increase reserved for employee preemption	2013.07.26	158.0	158.0	18.68%	0.125 years	0%	0.87%	14.02
〃	2015.03.16	310.0	310.0	23.49%	0.005 years	0%	0.87%	63.51

Note: Expected price volatility rate was estimated by using the average price volatility of similar listed and OTC companies within appropriate period and the Company's historical transaction data since its shares traded on the Emerging Stock Market.

(b) The employee stock option plan of subsidiary, AP Biosciences, Inc.:

Type of arrangement	Grant date	Stock' s market price on the measurement date (in US dollars)	Exercise price per share (in US dollars)	Expected volatility	Expected option life	Expected dividend yield	Risk-free interest rate	Fair value per unit (in US dollars)
Employee stock options plan	2015.05.01	$ 0.3283	$ 0.05	36.69%	5.00 years	0%	1.50%	$ 0.28
〃	2015.05.01	$ 0.3283	0.05	38,78%	6.09 years	0%	1.71%	0.28
〃	2016.05.01	$ 0.2061	0.06	37.99%	5.00 years	0%	1.30%	0.15
〃	2016.05.01	$ 0.2061	0.06	38.37%	6.09 years	0%	1.48%	0.15
〃	2017.11.08	$ 0.4292	0.05	34.49%	6.09 years	0%	2.12%	0.39

F. For the years ended December 31, 2018 and 2017, the Group recognised employee stock option plan compensation expense of $231,290 and $263,668, respectively.

G. On November 11, 2016, the Board of Directors of the Company resolved to apply with the Financial Supervisory Commission for the issuance of employee stock warrants of 5,000,000 units, representing 5,000,000 shares for subscribed ordinary shares. The application has been approved to be effective on January 20, 2017 by the Financial Supervisory Commission.

(8) Share capital

A. As of December 31, 2018, the Company's authorised capital was $3,000,000, consisting of 300 million shares of ordinary stock (including 24 million shares reserved for employee stock options), and the outstanding capital was $1,739,907 with a par value of $10 (in dollars) per share. All proceeds from shares issued have been collected.

Movements in the number of the Company's ordinary shares outstanding are as follows:

	2018	2017
At January 1	171,303,674	170,749,880
Issuance of new shares	1,675,000	-
Exercise of employee stock options	150,000	553,794
At December 31	173,128,674	171,303,674

B. Treasury stock

(a) Reason for share reacquisition and movements in the number of the Company's treasury shares are as follows:

	Year ended December 31, 2018			
Reason for reacquisition	Beginning shares	Additions	Disposal	Ending shares
To transfer shares to the employees	862 thousand shares	-	-	862 thousand shares

	Year ended December 31, 2017			
Reason for reacquisition	Beginning shares	Additions	Disposal	Ending shares
To transfer shares to the employees	862 thousand shares	-	-	862 thousand shares

(b) Pursuant to the R.O.C. Securities and Exchange Law, the number of shares bought back as treasury share should not exceed 10% of the number of the Company's issued and outstanding shares and the amount bought back should not exceed the sum of retained earnings, paid-in capital in excess of par value and realised capital surplus.

(c) Pursuant to the R.O.C. Securities and Exchange Law, treasury shares should not be pledged as collateral and is not entitled to dividends before it is reissued.

(d) Pursuant to the R.O.C. Securities and Exchange Law, treasury shares should be reissued to the employees within three years from the reacquisition date and shares not reissued within the three-year period are to be retired. The capital deduction took effective on March 8, 2019 as resolved by the Board of Directors. All treasury shares were retired.

(e) The price range of actual repurchased treasury shares was between $431.88 ~ $454.26 (in dollars). The average repurchased price was $448.63 (in dollars) and the actual repurchased amount was $386,721.

(9) Capital surplus

Pursuant to the R.O.C. Company Act, capital surplus arising from paid-in capital in excess of par value on issuance of common stocks and donations can be used to cover accumulated deficit or to issue new stocks or cash to shareholders in proportion to their share ownership, provided that the Company has no accumulated deficit. Further, the R.O.C. Securities and Exchange Act requires that the amount of capital surplus to be capitalised mentioned above should not exceed 10% of the paid-in capital each year. Capital surplus should not be used to cover accumulated deficit unless the legal reserve is insufficient.

	2018		
	Share premium	Employee stock options	Others
At January 1	$ 8,011,171	$ 936,363	$ 89,847
Issuance of new shares	273,025	-	-
Employee stock options compensation cost	-	163,888	55,824
Employee stock options exercised	576	(576)	-
At December 31	$ 8,284,772	$ 1,099,675	$ 145,671

	2017		
	Share premium	Employee stock options	Others
At January 1	$ 7,962,049	$ 691,315	$ 89,847
Employee stock options compensation cost	-	263,668	-
Employee stock options exercised	49,122	(18,668)	-
At December 31	$ 8,011,171	$ 936,315	$ 89,847

(10) Accumulated deficit

A. In accordance with the Articles of Incorporation of the Company, a ratio of distributable profit of the current year, after covering accumulated losses, shall be distributed as employees' compensation and directors' and supervisors' remuneration. The ratio shall not be lower than 2% for employees' compensation and shall not be higher than 2% for directors' and supervisors' remuneration. A company may, by a resolution adopted by a majority vote at a meeting of Board of Directors attended by two-thirds of the total number of directors, have the abovementioned employees' compensation distributed in the form of shares or in cash; and in addition thereto a report of such distribution shall be submitted to the shareholders during their meeting. Qualification requirements of employees, including the employees of subsidiaries of the company meeting certain specific requirements, entitled to receive aforementioned stock or cash may be specified in the Articles of Incorporation. The term shall be defined by the Board of Directors. The current year's earnings, if any, shall first be used to pay all taxes and offset prior years' operating losses and then 10% of the remaining amount shall be set aside as legal reserve. Cash dividends shall first be appropriated, and the remainder, if any, to be retained or to be appropriated shall be resolved by the stockholders at the stockholders' meeting.

B. The Company is facing a capital intensive industrial environment, with the life cycle of the industry in the growth phase. The residual dividend policy is adopted taking into consideration the Company's operating expansion plans and investment demands. According to the balanced dividend policy adopted by the Board of Directors, stock dividends and cash dividends will be allocated in consideration of the actual net income and funds status and are subject to the approval by the Board of Directors and resolution by shareholders and cash dividends shall account for at least 10% of the total dividends distributed.

C. Except for covering accumulated deficit, increasing capital or payment of cash, the legal reserve shall not be used for any other purpose. The amount capitalised or the cash payment shall not exceed 25% of the paid-in capital.

D. As resolved by the shareholders on March 8, 2019, the Company's proposal for 2018 deficit compensation is as follows:

	Year ended December 31, 2018
Accumulated deficit at beginning of the year	($ 5,292,713)
Net loss for 2018	(1,222,242)
Accumulated deficit at end of the year	($ 6,514,955)

As of March 8, 2019, the aforementioned proposal for 2018 deficit compensation has not yet been resolved by the shareholders.

E. For the information relating to employees' compensation and directors' and supervisors' remuneration, please refer to Note 6(16).

(11) Operating revenue

	Year ended December 31, 2018
Revenue from contracts with customers	$ 13,339

A. Disaggregation of revenue from contracts with customers

The Group derives revenue from the transfer of goods and services over time and at a point in time in the following major product lines:

Year ended December 31, 2018	Sale of materials	Patent technology licensing	Service provision	Total
Revenue from external customer contracts				
Contract revenue	$ 3,985	$ 8,534	$ 820	$ 13,339
Timing of revenue recognition				
At a point in time	$ 3,985	$ 8,534	$ 820	$ 13,339

B. Related disclosures on operating revenue for the year ended December 31, 2017 are provided in Note 12(5).

(12) Other income

	Years ended December 31,	
	2018	2017
Interest income:		
Interest income from bank deposits	$ 86,481	$ 34,997
Interest income from financial assets at amortised cost	2,538	-
Interest income from investments in debt instruments without active market	-	22,751
Total interest income	89,019	57,748
Other income	1,916	152
	$ 90,935	$ 57,900

(13) Other gains and losses

	Years ended December 31,	
	2018	2017
Gain on disposal of investment	$ 290	$ -
Net currency exchange gain (loss)	82,347	(244,464)
Miscellaneous disbursements	(19)	(49)
	$ 82,618	($ 244,513)

(14) Finance costs

	Years ended December 31,	
	2018	2017
Interest expense	$ 1,672	$ 1,202

(15) Expenses by nature

	Years ended December 31,	
	2018	2017
Employee benefit expenses	$ 453,171	$ 485,198
Clinical material expenses	307,544	277,670
Consulting and service fees	149,302	169,533
Clinical trials cost	309,919	69,914
Rental expenses	30,873	25,483
Depreciation charges on property, plant and equipment	57,933	52,503
Amortisation charges on intangible assets	64,679	14,768
Other expenses	67,601	94,949
Operating expenses	$ 1,441,022	$ 1,190,018

(16) Employee benefit expense

	Years ended December 31,	
	2018	2017
	Operating expense	Operating expense
Wages and salaries	$ 188,008	$ 192,688
Employee stock options	231,290	263,668
Labor and health insurance fees	11,744	10,921
Pension costs	10,716	10,136
Other personnel expenses	11,413	7,785
	$ 453,171	$ 485,198

A. In accordance with the Articles of Incorporation, a ratio of distributable profit of the current year, after covering accumulated losses, shall be distributed as employees' compensation and directors' and supervisors' remuneration. The ratio shall not be lower than 2% for employees' compensation and shall not be higher than 2% for directors' and supervisors' remuneration. A company may, by a resolution adopted by a majority vote at a meeting of Board of Directors attended by two-thirds of the total number of directors, have the abovementioned employees' compensation distributed in the form of shares or in cash; and in addition thereto a report of such distribution shall be submitted to the shareholders during their meeting. Qualification requirements of employees, including the employees of subsidiaries of the company meeting certain specific requirements, entitled to receive aforementioned stock or cash may be specified in the Articles of Incorporation. The term shall be defined by the Board of Directors.

B. As of December 31, 2018, the Company had an accumulated deficit; thus, no employees' compensation and directors' and supervisors' remuneration was recognised for the years ended December 31, 2018 and 2017. Information about employees' compensation and directors' and supervisors' remuneration of the Company as approved by the Board of Directors will be posted in the "Market Observation Post System" at the website of the Taiwan Stock Exchange.

(17) Income tax

A. Components of income tax expense:

	Years ended December 31,	
	2018	2017
Total current tax	($ 2,124)	($ 1,979)
Total deferred tax	8,433	-
Income tax benefit (expense)	$ 6,309	($ 1,979)

B. The reconciliation between accounting income and income tax (benefit) expense:

	Years ended December 31,	
	2018	2017
Tax calculated based on loss before tax and statutory tax rate	($ 262,935)	($ 234,168)
Expenses disallowed by tax regulation	251	147
Withholding income tax	2,124	1,979
Tax effects of unrecognised deferred tax assets	254,251	234,021
Income tax (benefit) expense	($ 6,309)	$ 1,979

C. Amounts of deferred tax assets or liabilities as a result of temporary differences are as follows:

	Year ended December 31, 2018			
	January 1	Recognised in profit or loss	Business combination	December 31
－Deferred tax liabilities:				
Book-tax differences on business combinations	$ -	($ 8,433)	$ 88,497	$ 80,064

D. Details of the amount the Company is entitled as investment tax credits and unrecognised deferred tax assets under the Act for the Development of Biotech and New Pharmaceuticals Industry are as follows:

December 31, 2018		
Qualifying items	Unused tax credits	Unrecognised deferred tax assets
Research and development expense	$ 477,348	$ 477,348
December 31, 2017		
Qualifying items	Unused tax credits	Unrecognised deferred tax assets
Research and development expense	$ 415,837	$ 415,837

The unused tax credits can offset the current income tax payable for the next five years with a range of not more than 50% of each year’s income tax payable, but the last year can be fully offset.

E. Expiration dates of unused tax losses and amounts of unrecognised deferred tax assets for the Company and its subsidiary, AP Biosciences, Inc., are as follows:

(a) Expiration dates of unused tax losses and amounts of unrecognised deferred tax assets of the Company are as follows:

December 31, 2018				
Year incurred	Amount field/ assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2009	$ 7,557	$ 7,557	$ 7,557	2019
2010	92,437	92,437	92,437	2020
2011	116,457	116,457	116,457	2021
2012	239,902	239,902	239,902	2022
2013	405,027	405,027	405,027	2023
2014	606,286	606,286	606,286	2024
2015	981,510	981,510	981,510	2025
2016	943,536	943,536	943,536	2026
2017	1,045,471	1,045,471	1,045,471	2027
2018	1,387,871	1,387,871	1,387,871	2028

December 31, 2017				
Year incurred	Amount field/ assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2008	$ 154,355	$ 154,355	$ 154,355	2018
2009	7,557	7,557	7,557	2019
2010	92,437	92,437	92,437	2020
2011	116,457	116,457	116,457	2021
2012	239,902	239,902	239,902	2022
2013	405,027	405,027	405,027	2023
2014	606,286	606,286	606,286	2024
2015	981,510	981,510	981,510	2025
2016	943,536	943,536	943,536	2026
2017	1,045,471	1,045,471	1,045,471	2027

(b) Expiration dates of unused tax losses and amounts of unrecognised deferred tax assets of the subsidiary, AP. Biosciences, Inc., are as follows:

December 31, 2018				
Year incurred	Amount field/ assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2013	$ 8,309	$ 8,309	$ 8,309	2023
2014	22,773	22,773	22,773	2024
2015	18,959	18,959	18,959	2025
2016	27,321	27,321	27,321	2026
2017	17,032	17,032	17,032	2027
2018	24,748	24,748	24,748	2028

F. The Company's income tax returns through 2016 have been assessed and approved by the Tax Authority. The subsidiary, AP Biosciences, Inc.'s income tax returns through 2017 have been assessed and approved by the Tax Authority.

G. Under the amendments to the Income Tax Act which was promulgated by the President of the Republic of China on February 7, 2018, the Company's applicable income tax rate was raised from 17% to 20% effective from January 1, 2018. The Group has assessed the impact of the change in income tax rate.

(18) Loss per share

	Year ended December 31, 2018		
	Amount after tax	Weighted-average number of ordinary shares outstanding (shares in thousands)	Loss per share (in dollars)
Basic and diluted loss per share			
Loss attributable to ordinary shareholders of the parent	($ 1,222,242)	173,080	($ 7.06)

	Year ended December 31, 2017		
	Amount after tax	Weighted-average number of ordinary shares outstanding (shares in thousands)	Loss per share (in dollars)
Basic and diluted loss per share			
Loss attributable to ordinary shareholders of the parent	($ 1,379,436)	171,140	($ 8.06)

Note: The potential ordinary shares have anti-dilutive effect due to net loss for the years ended December 31, 2018 and 2017, so the calculation of diluted loss per share is the same as the calculation of basic loss per share.

(19) Business combinations

A. On January 10, 2018, the Group acquired 67% of the share capital of AP Biosciences, Inc. and obtained control over the company. The company engages in research and development of biotechnology. The Group expects the acquisition to boost the competitiveness of its products and improve its ability to develop new drugs. The allocation of purchase price will be completed within one year.

B. The following table summarises the consideration paid for AP Biosciences, Inc. and the fair values of the assets acquired and liabilities assumed at the acquisition date, as well as the non-controlling interest's proportionate share of the recognised amounts of acquiree's identifiable net assets at the acquisition date:

		January 10, 2018
Purchase consideration		
Equity instruments	$	289,775
Non-controlling interest's proportionate share of the recognised amounts of acquiree's identifiable net assets		112,608
		402,383
Fair value of the identifiable assets acquired and liabilities assumed		
Cash and cash equivalents		10,708
Other receivables		353
Prepayments		1,351
Property, plant and equipment		1,417
Intangible assets		449,719
Other non-current assets		668
Other payables	(	33,514)
Other current liabilities	(	970)
Deferred income tax liabilities	(	88,497)
Total identifiable net assets		341,235
Goodwill	$	61,148

C. The fair value of $289,775 for the 1,675 thousand ordinary shares issued as part of the consideration paid for AP Biosciences, Inc. was based on the published share price on January 10, 2018. Issuance costs totaling $1,240 had been recognised in profit or loss.

D. The operating revenue and loss before income tax included in the consolidated statement of comprehensive income since January 10, 2018 contributed by AP Biosciences, Inc. were $8,178 and $59,130, respectively. Had AP Biosciences, Inc. been consolidated from January 1, 2018, the consolidated statement of comprehensive income would show operating revenue of $13,339 and loss before income tax of $1,256,506.

(20) Operating leases

The Group leases offices under non-cancellable operating lease agreements. For the years ended December 31, 2018 and 2017, the Group recognised rental expenses of $30,873 and $25,483, respectively. Information about the future aggregate minimum lease payments under non-cancellable operating leases are disclosed in Note 9.

(21) Supplemental cash flow information

Investing activities with partial cash payments

	Years ended December 31,	
	2018	2017
Acquisition of property, plant and equipment	$ 20,019	$ 56,829
Add: Opening balance of payable	1,742	1,375
Less: Ending balance of payable	(1,614)	(1,742)
Cash paid during the year	$ 20,147	$ 56,462

	Years ended December 31,	
	2018	2017
Acquisition of intangible assets	$ 621	$ 95,572
Add: Opening balance of payable	-	360
Less: Ending balance of payable	-	-
Cash paid during the year	$ 621	$ 95,932

(22) Changes in liabilities from financing activities

	Long-term borrowings	Liabilities from financing activities-gross
At January 1, 2018	$ 71,000	$ 71,000
Changes in cash flow from financing activities	(9,000)	(9,000)
At December 31, 2018	$ 62,000	$ 62,000

7. RELATED PARTY TRANSACTIONS

(1) Parent and ultimate controlling party

As of December 31, 2018, the Company does not have an ultimate parent or controlling party.

(2) Names of related parties and relationship

Names of related parties	Relationship with the Group
Amaran Biotechnology Inc.	Other related party

(3) Significant related party transactions

A. Operating revenue

	Years ended December 31,	
	2018	2017
Sales of materials:		
Other related parties		
-Amaran Biotechnology Inc.	$ 3,085	$ -

The transaction price and payment terms of the sales of materials are based on the mutual

agreement.

B. Research and development expenses

	Years ended December 31,	
	2018	2017
Other related parties		
-Amaran Biotechnology Inc.	$ 12,322	$ 27,203

The Group signed the drugs purchase agreement for clinical trial of OBI-821 and OBI-822 with Amaran Biotechnology Inc. The purchase amount was based on the mutual agreement.

C. Other payables

	December 31, 2018	December 31, 2017
Other related parties		
-Amaran Biotechnology Inc.	$ 3,652	$ 5,622

It was paid for research and development expenditures.

D. Property transactions

(a) On March 26, 2016, the Group entered into purchase agreement for production equipment with Amaran Biotechnology Inc. The Group purchased the existing equipment from Amaran Biotechnology Inc. and made it available for processing related products of OBI-821/822, Globo H and OBI-858. The initial acquisition cost of $108,753 less the carrying amount (net of accumulated depreciation) was the purchase amount. As of December 31, 2018, the Group has paid $95,514 for production equipment, of which $52,638 has been transferred and $42,876 was recognised as other non-current assets.

(b) For the years ended December 31, 2018 and 2017, experimental equipment amounting to $0 and $915, respectively, were purchased from Amaran Biotechnology Inc.

(4) Key management compensation

	Years ended December 31,	
	2018	2017
Salaries and other short-term employee benefits	$ 85,997	$ 91,893
Share-based payments	111,152	140,568
	$ 197,149	$ 232,461

8. PLEDGED ASSETS

The Group's assets pledged as collateral are as follows:

	Book value		
Pledged asset	December 31, 2018	December 31, 2017	Purpose
Land	$ 87,514	$ 87,514	Long-term borrowings (Note)
Buildings and structures	14,321	14,621	Long-term borrowings (Note)
Other non-current assets	32,432	31,848	Deposits for clinical trial agreement and rental deposit, etc.
	$ 134,267	$ 133,983	

Note: The Group has entered into mortgage contract with E. SUN Bank in 2016. The contract requires a property as collateral and the credit line is $100 million. Please refer to Note 6(5) for details.

9. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNISED CONTRACT COMMITMENTS

(1) Pursuant to the government grants for OBI-822 (formerly OPT-822/821), therapeutically metastatic breast cancer vaccines, in Phase Ⅱ/Ⅲ obtained by the Company from Department of Industrial Technology of Ministry of Economic Affairs R.O.C. (MOEA) on December 25, 2012, if OBI-822 (formerly OPT-822/821) will be successfully licensed to others, the Company promises to contribute 5% of the signing bonus and achieved milestones as feedback fund and the maximum amount for feedback fund is $150,256.

(2) In September 2017, the Company commissioned Pharmacore Biotech Co., Ltd. to build a customised production line for OBI-858 botulinum toxin under an agreement. The contract price totaled $36,500 with some other service charges whenever additional machinery and equipment is acquired. As of December 31, 2018, the Company has paid $20,557.

(3) Except for the promised payments described in Note 6(4) Intangible assets, the Group entered into operating lease contracts for its offices. Future lease payments under those leases were as follows:

	December 31, 2018	December 31, 2017
Not later than one year	$ 21,391	$ 20,860
Later than one year but not later than five years	62,182	56,375
Over five years	28,252	44,396
	$ 111,825	$ 121,631

10. SIGNIFICANT DISASTER LOSS

None.

11. SIGNIFICANT EVENTS AFTER THE BALANCE SHEET DATE

(1) Please refer to Note 6(10) for details on the proposal of 2018 deficit compensation.

(2) Please refer to Note 6(8)B(d) for details on the retirement of treasury shares.

12. OTHERS

(3) Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern through maintaining an optimal capital structure to reduce the cost of capital, and to provide returns for shareholders after the Company turns around from loss to profit. In order to maintain or adjust the capital structure, the Group may increase capital by cash and sell assets to pay off or improve operating capital, adjust the amount of dividends paid to shareholders or capital reduction, etc. The Group monitors capital on the basis of the Debt/Equity ratio. The ratio is calculated by the "Net debt" divided by the "Total equity". The "Net debt" is the "Total liability" less cash and cash equivalents, and the "Total equity" is the same as the consolidated balance sheet.

During 2018, the Group's strategy, which was unchanged from 2017, was to maintain the gearing ratio within reasonable security range. The ratios are as follows:

	December 31, 2018	December 31, 2017
Total liability	$ 236,028	$ 129,656
Less: Cash and cash equivalents	3,664,593	2,555,275
Net debt	($ 3,428,565)	($ 2,425,619)
Total equity	($ 4,473,466)	($ 5,060,373)

(4) Financial instruments

A. Financial instruments by category

	December 31, 2018	December 31, 2017
Financial assets		
Financial assets at fair value through other comprehensive income		
-Designation of equity instrument	$ 7,454	$ -
Available-for-sale financial assets		
Available-for-sale financial assets	-	10,160
Financial assets at amortised cost/loans and receivables		
Cash and cash equivalents	3,664,593	2,555,275
Investments in debt instruments without active market	-	2,022,658
Accounts receivable	872	103
Other receivables	37,216	60,430
Other financial assets	32,432	31,848
	$ 3,742,567	$ 4,680,474
Financial liabilities		
Financial liabilities at amortised cost		
Other payables (including related parties)	$ 92,124	$ 57,162
Long-term borrowings (including current portion)	62,000	71,000
	$ 154,124	$ 128,162

B. Financial risk management policies

(a) The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial position and financial performance.

(b) Risk management is carried out by a central treasury department (Group treasury) under policies approved by the Board of Directors. Group treasury identifies, evaluates and hedges financial risks in close cooperation with the Company's operating units. The Board provides written principles for overall risk management, as well as written policies covering specific areas and matters, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

C. Significant financial risks and degrees of financial risks

(a) Market risk

Foreign exchange risk

i. The Group operates internationally and is exposed to exchange rate risk arising from the transactions of the Company and its subsidiaries used in various functional currency, primarily with respect to the USD and RMB. Exchange rate risk arises from future commercial transactions and recognised assets and liabilities.

ii. Management has set up a policy to require group companies to manage their foreign exchange risk against their functional currency. The companies are required to hedge their entire foreign exchange risk exposure with the Group treasury.

iii. The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk.

iv. The Group's businesses involve some non-functional currency operations (the Company's functional currency: NTD; the subsidiaries' functional currencies: USD and RMB). The information on assets and liabilities denominated in foreign currencies whose values would be materially affected by the exchange rate fluctuations is as follows:

	December 31, 2018					
				Sensitivity Analysis		
(Foreign currency: functional currency)	Foreign currency amount (in thousands)	Exchange rate	Book value (NTD)	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
Financial assets						
Monetary items						
USD:NTD	$ 97,861	30.715	$ 3,005,801	1%	$ 30,058	$ -
RMB:NTD	44,080	4.472	197,126	1%	1,971	-
USD:RMB	691	6.8683	21,224	1%	212	-
Financial assets						
Non-monetary items						
USD:NTD	1,799	30.715	55,256	-	-	-
RMB:USD	1,459	4.472	6,525	-	-	-
AUD:NTD	585	21.665	12,675	-	-	-
Financial liabilities						
Monetary items						
USD:NTD	1,378	30.715	39,254	1%	393	-

	December 31, 2017					
				Sensitivity Analysis		
(Foreign currency: functional currency)	Foreign currency amount (in thousands)	Exchange rate	Book value (NTD)	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
Financial assets						
Monetary items						
USD:NTD	$ 108,525	29.76	$ 3,229,704	1%	$ 32,297	$ -
RMB:NTD	42,137	4.565	192,355	1%	1,924	-
USD:RMB	301	6.52	8,958	1%	90	-
Financial assets Non-monetary items						
USD:NTD	1,902	29.76	56,613	-	-	-
RMB:USD	2,595	0.153	11,844	-	-	-
Financial liabilities Monetary items						
USD:NTD	486	29.76	14,464	1%	145	-

v. The total exchange gain (loss), including realised and unrealised arising from significant foreign exchange variation on the monetary items held by the Group for the years ended December 31, 2018 and 2017, amounted to $82,347 and ($244,464), respectively.

Price risk

i. The Group’s equity securities, which are exposed to price risk, are the held financial assets at fair value through other comprehensive income and available-for-sale financial assets. To manage its price risk arising from investments in equity securities, the Group diversifies its portfolio. Diversification of the portfolio is done in accordance with the limits set by the Group.

ii. The prices of the Group’s investments in equity securities would change due to the change of the future value of investee companies. If the prices of these equity securities had increased/decreased by 1% with all other variables held constant, other components of equity for the years ended December31, 2018 and 2017 would have increased / decreased by $75 and $102, respectively, as a result of other comprehensive income classified as equity investment at fair value through other comprehensive income and available-for-sale equity investment.

Cash flow and fair value interest rate risk

i. The Group's interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk which is partially offset

by cash and cash equivalents held at variable rates. The Group's borrowings were calculated by floating rate and stated at New Taiwan Dollars for the years ended December 31, 2018 and 2017.

ii. At December 31, 2018 and 2017, if interest rates had been 1% higher or lower with all other variables held constant, post-tax profit for the years ended December 31, 2018 and 2017 would have been $529 and $624 lower or higher, respectively, mainly as a result of changes in interest expense on floating rate borrowings.

(b) Credit risk

i. Credit risk refers to the risk of financial loss to the Group arising from default by the clients or counterparties of financial instruments on the contract obligations. The main factor is that counterparties could not repay in full the accounts receivable based on the agreed terms, and the contract cash flows of debt instruments stated at amortised cost.

ii. The Group manages their credit risk taking into consideration the entire group's concern. For banks and financial institutions, only independently rated parties with stable credit rating are accepted. According to the Group's credit policy, each local entity in the Group is responsible for managing and analysing the credit risk for each of their new clients before standard payment and delivery terms and conditions are offered. Internal risk control assesses the credit quality of the customers, taking into account their financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the Board of Directors. The utilisation of credit limits is regularly monitored.

iii. Under IFRS 9, if the contract payments were past due over 30 days based on the terms, there has been a significant increase in credit risk on that instrument since initial recognition.

iv. The Group adopts the assumption under IFRS 9, that is, the default occurs when the contract payments are past due over 180 days.

v. The Group classifies customer's accounts receivable, contract assets and rents receivable in accordance with customer types. The Group applies the simplified approach using loss rate methodology to estimate expected credit loss under the provision matrix basis.

vi. The following indicators are used to determine whether the credit impairment of debt instruments has occurred:

(i) It becomes probable that the issuer will enter bankruptcy or other financial reorganisation due to their financial difficulties;

(ii) The disappearance of an active market for that financial asset because of financial difficulties;

(iii) Default or delinquency in interest or principal repayments;

(iv) Adverse changes in national or regional economic conditions that are expected to cause a default.

vii. When estimating the allowance for uncollectible accounts for receivables, the Group incorporates forward-looking information in the adjustment of the loss rate, which is calculated based on historical data from specific periods and current information. As of December 31, 2018, the expected loss rate of the Group's accounts receivable that are not past due is immaterial.

viii. Credit risk information as of and for the year ended December 31, 2017 is provided in Note 12(4).

(c) Liquidity risk

i. Cash flow forecasting is performed by Group treasury to monitor rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational and R&D needs. Such forecasting is in compliance with internal R&D project schedule targets.

ii. Group treasury invests surplus cash in interest bearing current accounts, time deposits, money market deposits and marketable securities, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient headroom as determined by the abovementioned forecasts. As of December 31, 2018 and 2017, the Group's financial assets at amortised cost / investments in debt instruments without active market amounted to $0 and $2,022,658, respectively, that are expected to readily generate cash inflows for managing liquidity risk.

iii. The table below analyses the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date for non-derivative financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows.

	December 31, 2018				
	Less than 1 year	Between 1 and 2 years	Between 2 and 3 years	Between 3 and 5 years	Over 5 years
Non-derivative financial liabilities:					
Other payables	$ 92,124	$ -	$ -	$ -	$ -
Long-term borrowings (including current portion)	9,914	9,770	9,626	14,887	21,490

	December 31, 2017				
	Less than 1 year	Between 1 and 2 years	Between 2 and 3 years	Between 3 and 5 years	Over 5 years
Non-derivative financial liabilities:					
Other payables (including related parties)	$ 57,162	$ -	$ -	$ -	$ -
Long-term borrowings (including current portion)	10,058	9,914	9,770	17,125	28,877

iv. The Group does not expect the timing of occurrence of the cash flows estimated through the maturity date analysis will be significantly earlier, nor expect the actual cash flow amount will be significantly different.

(5) Fair value information

A. The different levels that the inputs to valuation techniques are used to measure fair value of financial and non-financial instruments have been defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. A market is regarded as active where a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Unobservable inputs for the asset or liability. The fair value of the Group's investment in available-for-sale financial assets – non-current is included in Level 3.

B. The carrying amount of financial instruments not measured at fair value (including cash and cash equivalents, accounts receivable, other receivables, investments in debt instruments without active market, and other payables (including those to related parties)) is a reasonable approximation to their fair value; the interest rate on long-term borrowings (including the portion due within a year or one operating cycle) is close to the market interest rate, therefore their carrying amount is a reasonable basis for the estimation of their fair value.

C. The related information of financial and non-financial instruments measured at fair value by level on the basis of the nature, characteristics and risks of the assets and liabilities is as follows:

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurements				
Financial assets at fair value through other comprehensive income				
Equity securities	$ -	$ -	$ 7,454	$ 7,454

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurements				
Available-for-sale financial assets				
Equity securities	$ -	$ -	$ 10,160	$ 10,160

D. Financial segment is in charge of valuation procedures for fair value measurements being categorised within Level 3, which is to verify independent fair value of financial instruments. Such assessment is to ensure the valuation results are reasonable by applying independent information to make results close to current market conditions, confirming the resource of information is independent, reliable and in line with other resources and represented as the exercisable price, and frequently calibrating valuation model, performing back-testing, updating inputs used to the valuation model and making any other necessary adjustments to the fair value.

E. The following is the qualitative information of significant unobservable inputs and sensitivity analysis of changes in significant unobservable inputs to valuation model used in Level 3 fair value measurement:

	Fair value at December 31, 2018	Valuation technique	Significant unobservable input	Range (median)	Relationship of inputs to fair value
Non-derivative equity instrument:					
Unlisted shares	$ 7,454	Market comparable companies	Price to book ratio multiple	0.69~3.70 (1.57)	The higher the mulitple the higher the fair value
			Discount for lack of marketability	25%(25%)	The higher the discount for lack of marketability, the lower the fair value

	Fair value at December 31, 2017	Valuation technique	Significant unobservable input	Range (median)	Relationship of inputs to fair value
Non-derivative equity instrument:					
Unlisted shares	$ 10,160	Market comparable companies	Price to book ratio multiple	0.79~3.30 (1.89)	The higher the mulitple the higher the fair value
			Discount for lack of marketability	25%(25%)	The higher the discount for lack of marketability, the lower the fair value

F. The Group has carefully assessed the valuation models and assumptions used to measure fair value. However, use of different valuation models or assumptions may result in different measurement. The following is the effect of profit or loss or of other comprehensive income from financial assets and liabilities categorised within Level 3 if the inputs used to valuation models have changed:

			December 31, 2018			
			Recognised in profit or loss		Recognised in other comprehensive income	
	Input	Change	Favourable change	Unfavourable change	Favourable change	Unfavourable change
Financial assets						
Equity instrument	Price to book ratio multiple	±1%	$ -	$ -	$ 78	($ 78)
	Discount for lack of marketability	±10%	-	-	248	(248)

			December 31, 2017			
			Recognised in profit or loss		Recognised in other comprehensive income	
	Input	Change	Favourable change	Unfavourable change	Favourable change	Unfavourable change
Financial assets						
Equity instrument	Price to book ratio multiple	±1%	$ -	$ -	$ 98	($ 98)
	Discount for lack of marketability	±10%	-	-	339	(339)

G. The following chart is the movement of Level 3 for the years ended December 31, 2018 and 2017:

	Equity securities	
	Years ended December 31,	
	2018	2017
Opening net book amount	$ 10,160	$ 27,181
Loss recognised in other comprehensive income	(2,706)	(17,021)
Closing net book amount	$ 7,454	$ 10,160

H. As of December 31, 2018 and 2017, there was no transfer into or out from Level 3.

(6) Effects on initial application of IFRS 9 and information on application of IAS 39 in 2017

A. Summary of significant accounting policies adopted in 2017:

(a) Available-for-sale financial assets

i. Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories.

ii. On a regular way purchase or sale basis, available-for-sale financial assets are recognised and derecognised using trade date accounting.

iii. Available-for-sale financial assets are initially recognised at fair value plus transaction costs. These financial assets are subsequently remeasured and stated at fair value, and any changes in the fair value of these financial assets are recognised in other comprehensive income.

(b) Loans and receivables

i. Accounts receivable

Accounts receivable are loans and receivables originated by the entity. They are created by the entity by selling goods or providing services to customers in the ordinary course of business. They are initially recognised at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. However, short-term accounts receivable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

ii. Investment in debt instrument without active market

Investments in debt instruments without active market held by the Group are those time deposits with a short maturity period but do not qualify as cash equivalents, and they are measured at initial investment amount as the effect of discounting is immaterial.

(c) Impairment of financial assets- available-for-sale financial assets

i. The Group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired as a result of one or more events that occurred after the initial recognition of the asset (a ‘loss event’) and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

ii. The criteria that the Group uses to determine whether there is objective evidence of an impairment loss is as follows:

(i) Significant financial difficulty of the issuer or debtor;

(ii) Observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial asset in the group, including adverse changes in the payment status of

borrowers in the group or national or local economic conditions that correlate with defaults on the assets in the group;

(iii) Information about significant changes with an adverse effect that have taken place in the technology, market, economic or legal environment in which the issuer operates, and indicates that the cost of the investment in the equity instrument may not be recovered;

(iv) A significant or prolonged decline in the fair value of an investment in an equity instrument below its cost.

iii. When the Group assessed there was objective evidence of impairment, and the impairment loss has incurred, the amount of the impairment loss is measured as the difference between the asset's acquisition cost (less any principal repayment and amortisation) and current fair value, less any impairment loss on that financial asset previously recognised in profit or loss, and is reclassified from 'other comprehensive income' to 'profit or loss'. Impairment loss of an investment in an equity instrument recognised in profit or loss shall not be reversed through profit or loss. Impairment loss is recognised and reversed by adjusting the carrying amount of the asset through the use of an impairment allowance account.

B. The reconciliations of carrying amount of financial assets transferred from December 31, 2017, IAS 39, to January 1, 2018, IFRS 9, are as follows:

				Effects	
IAS 39 / IFRS 9	Available-for-sale-equity	Debt instruments without active markets	Total	Retained earnings	Other equity interest
Transferred into and measured at fair value through other comprehensive income-equity	$ 10,160	$ -	$ 10,160	$ -	$ -
Transferred into and measured at amortised cost	-	2,022,658	2,022,658	-	-

(a) Under IAS 39, because the cash flows of debt instruments, which were classified as debt instruments without active markets, amounting to $2,022,658, met the condition that it is intended to settle the principal and interest on the outstanding principal balance, they were reclassified as "financial assets at amortised cost" amounting to $2,022,658.

(b) Under IAS 39, because the equity instruments, which were classified as available-for-sale financial assets, amounting to $10,160, were not held for the purpose of trading, they were reclassified as "financial assets at fair value through other comprehensive income (equity instruments)" amounting to $10,160.

(c) The accounting policies applied for the aforementioned financial assets was transitioned from IAS 39 on December 31, 2017 to IFRS 9 on January 1, 2018. The impact of the transition on retained earnings and other equity interest was immaterial.

C. The significant accounts as of December 31, 2017 are as follows:

(a) Available-for-sale financial assets

Items	December 31, 2017
Non-current item:	
Unlisted shares	$ 27,181
Valuation adjustment	(17,021)
	$ 10,160

i. For the year ended December 31, 2017, the change in fair value recognised in other comprehensive income was $17,021.

ii. The Group has no available-for-sale financial assets pledged to others.

(b) Investments in debt instruments without active markets

Items	December 31, 2017
Current item:	
Time deposits	$ 2,022,658

i. The Group recognised interest income of $22,751 for amortised cost in profit or loss for the year ended December 31, 2017.

ii. No investments in debt instruments without active markets held by the Group was pledged to others.

D. Information on the credit risk as of and for the year ended December 31, 2017 is as follows:

(a) Credit risk refers to the risk of financial loss to the Group arising from default by counterparties of financial instruments on the contract obligations. Credit risk arises from deposits with banks and financial institutions, as well as credit exposures to customers who commissioned the Group to research, including outstanding receivables and commitment transactions. For banks and financial institutions, only independently rated parties with stable credit rating are accepted.

(b) For the year ended December 31, 2017, no credit limits were exceeded during the reporting periods, and management does not expect any significant losses from non-performance by these counterparties.

(7) Effects of initial application of IFRS 15 and information on application of IAS 11 and IAS 18 in 2017

A. The significant accounting policies applied on revenue recognition for the year ended December 31, 2017 are set out below.

Revenue is recognised when the license agreements meet all of the following criteria for revenue recognition:

(a) Royalties are fixed or cannot be refunded.

(b) Contracts are irrevocable.

(c) Franchisee has the latitude in dealing with related license.

(d) Franchisor has no other obligation after giving the license.

If license agreements do not meet the above conditions, royalties are recognised as revenue using a reasonable and systematic method. The recognition should not be a one-time recognition.

B. The revenue recognised by using above accounting policies for the year ended December 31, 2017 are as follows:

	Year ended December 31, 2017
Revenue from sales of materials	$ 376

C. If the Group continued adopting the aforementioned accounting policy in the 2018, it would have had no significant impact on the balance sheet and comprehensive income statement.

13. SUPPLEMENTARY DISCLOSURES

(8) Significant transactions information

A. Loans to others: None.

B. Provision of endorsements and guarantees to others: None.

C. Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures): Please refer to table 1.

D. Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company's paid-in capital: None.

E. Acquisition of real estate reaching $300 million or 20% of paid-in capital or more: None.

F. Disposal of real estate reaching $300 million or 20% of paid-in capital or more: None.

G. Purchases or sales of goods from or to related parties reaching $100 million or 20% of paid-in capital or more: None.

H. Receivables from related parties reaching $100 million or 20% of paid-in capital or more: None.

I. Trading in derivative instruments undertaken during the reporting periods: None.

J. Significant inter-company transactions during the reporting periods: Please refer to table 2.

(9) Information on investees

Names, locations and other information of investee companies (not including investees in Mainland China): Please refer to table 3.

(10) Information on investments in Mainland China

A. Basic information: Please refer to table 4.

B. Significant transactions, either directly or indirectly through a third area, with investee companies in the Mainland Area: None.

14. SEGMENT INFORMATION

(11) General information

The Group operates business only in a single industry, new drug research. The Chief Operating Decision-Maker, who allocates resources and assesses performance of the Group as a whole, has identified that the Group has only one reportable operating segment.

(12) Measurement of segment information

A. The Chief Operating Decision-Maker evaluates the performance of the operating segments based on income before tax. The significant accounting policies and estimates of the operating segment and the accounting policies, estimates and assumptions described in Notes 4 and 5 of the consolidated financial statements are the same.

B. The financial information reported to the Chief Operating Decision-Maker and the financial information of the consolidated statements of comprehensive income are the same.

(13) Geographical information

Geographical information for the years ended December 31, 2018 and 2017 is as follows:

	Years ended December 31,			
	2018		2017	
	Revenue	Non-current assets	Revenue	Non-current assets
Taiwan	$ 13,339	$ 908,581	$ 376	$ 465,249
Others	-	230	-	1,100
	$ 13,339	$ 908,811	$ 376	$ 466,349