Applied BioCode ..... Stock Code.: 6598

Applied BioCode Corporation

2021

Annual Report

The contents of this annual report and the Company's information can be found on the following websites
Market Observation Post System: http://newmops.twse.com.tw
The Company's website: http://www.apbiocode.com.tw

Printed on 20 May, 2022

I. The Company's spokesperson, deputy spokesperson, litigation and non-litigation agents in Taiwan.

(1) Spokesperson:

Name:	Winston Z. Ho	Position:	President
TEL:	+886-2-8791-6833	Email:	who@apbiocode.com

(2) Proxy Spokesperson:

Name:	Yu-Lin Chen	Position:	Vice President of Taiwan's sub-subsidiary
TEL:	+886-2-8791-6833	Email:	ychen@apbiocode.com

(3) Litigation and non-litigation agents:

Name:	Winston Z. Ho	Position:	President
TEL:	+886-2-8791-6833	Email:	who@apbiocode.com

II. Address and Telephone Number of Head Office, Branch and Plant

(1) The Company

Name: Applied BioCode Corporation
Address: Grand Pavilion, Hibiscus Way, 802 West Bay Road, P.O. Box 31119, KY1-1205, Cayman Islands
Website: www.ApBioCode.com TEL: +886-2-8791-6833

(2) Subsidiary

1. Name of US subsidiary: Applied BioCode, Inc. (ABC-US)
   Address: 12130 Mora Drive, Unit 2, Santa Fe Springs, CA 90670, USA
   Website: www.ApBioCode.com TEL: +1-562-777-9800
2. Taiwan's subsidiary: Applied BioCode Corporation (ABC-TW)
   Address: 6F, No. 1, Lane 28, Xingzhong Road, Neihu District, Taipei
   Website: www.ApBioCode.com/tw TEL: +886-2-8791-6833

III. Name, Address, Website, and Contact Number of the Stock Agency:
Name: Stock Agency Department of SinoPac Securities
Address: 3F, No. 17, Bo'ai Road, Zhongzheng District, Taipei
Website: www.sinotrade.com.tw
TEL: +886-2-2381-6288
Website: www.sinotrade.com.tw

IV. Names of CPAs and the Name, Address, Website, and Contact Number of the Accounting Firm for the Latest Financial Statements:
Names of CPAs: Wendy Liang and Alan Chien
Name of the Accounting Firm: PwC Taiwan
Address: 27F, No. 333, Section 1, Keelung Road, Xinyi District, Taipei
TEL: +886-2-2729-6666
Website: http://www.pwc.tw/

V. Name of Exchange for Trading in Overseas Listed Securities and Information Inquiry for the Securities: Not applicable

VI. The Company's website: http://www.apbiocode.com.tw

VII. List of the Board of Directors

Position	Name	Nationality or Place of Registration	Major Work Experience (Education)
Chairman	George J. Lee	Taiwan / USA	Ph.D. in Chemistry, New York State University Master, Department of Agricultural Chemistry, National Taiwan University R&D Manager, Syntex USA Inc Chairman, Epitomics
Directors	Winston Z. Ho	Taiwan / USA	Bachelor of Chemistry, National Chung Hsing University Ph.D. of Physical chemistry and Master of Biochemistry, Arizona State University, U.S. Post-doctoral researcher, Columbia University, New York, U.S. - high-speed optics Researcher, optical center of University of Arizona, U.S. - non-linear optics Maxwell Sensors Incorporation Founder / CEO Director of smart optical system and sensor Director, Biomedical Sciences, Physical Optics Corp. US-NIH Grant review committee
Directors	Benjamin Jen	Taiwan	Master in Science and Technology Management, Massachusetts Institute of Technology Director, Strategy and Investment / Director, Marketing, Quanta Computer
Independent director	Wen-Jing Tsai	Taiwan	Bachelor in Accounting, National Taiwan University Master in Accounting, National Chengchi University Manager, Deloitte Taiwan CEO, the Tax Committee, Taipei CPA Association Deputy Chairman, the National Federation of CPA Associations of the R.O.C.
Independent director	Ben Liu	Taiwan	Ph.D. in Law, National Chengchi University Institute of Finance, National Taiwan University Department of Law, National Taiwan University Lawyer, Perkins Coie Lawyer, Yongyun International Law Firm Lawyer, Lee and Li
Independent director	Jack Hsiao	Taiwan	Deputy Chief Operating Officer, Show Chwan Health Care System Co-host, Telecare, Department of Health, Executive Yuan OmniHealth Group (US/TW) CEO

Applied BioCode Corporation

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I. Letter to Shareholders

Dear Shareholders:

First of all, I would like to express my gratitude to all directors for their support this past year. It has enabled the Company to operate smoothly and grow. With the world still covered by the shadow of the COVID-19 pandemic in 2021, our Group is nevertheless still expecting a fruitful year with the following important milestones:

1. In February, we collaborated with Johns Hopkins University to explore the possibility of installing Biocode 2500 in trucks for testing. This is one of the many projects developed by the United States Department of Defense.

2. In March, we worked with City of Hope to investigate the feasibility of using Liquid Biopsy on a PAP and BMB platform to perform genetic testing for cancer mutation.

3. In April, IDexx planned to purchase over US$ 4.7 M of barcoded magnetic beads (BMBs) and Biocode 2500 by the end of 2021.

4. In June, our Group purchased a MCLIA automated protein test system from Zhuhai Livzon Diagnostics to research and develop autoimmunity panels.

5. In August, Director Jen and Director Ho visited the IDexx headquarter in Maine to discuss the singulation process and the possibility of a deeper collaboration.

6. In September, the Group hired senior sales experts including the Director of Sales and Marketing, hoping to contribute to the future commercial policies and product development.

7. In October, Zhuhai Livzon Diagnostics successfully penatrated the Peking Union Medical College Hospital and the 1st Affiliated Hospital of Wenzhou Medical University, which will provide great contributions for the Group's BMB and royalty fees in the future.

8. In December, the Group received a U.S. FDA emergency use authorization (EUA) for Covid flu plus (7 in 1) and signed a distribution contract with Hardy Diagnostics Inc. with the hope of contributing to the sales revenue in the future.

(1) 2021 operating result

The Group's 2021 revenue income was NT$319,962 thousand, increased by NT$20,947 thousand compared to the revenue income of NT$299,015 thousand in 2020, a 7% growth rate. Among these, the barcoded magnetic beads increased by 107%, optical instruments by 171%, GPP test panels by 86% and RPP test panels by 45%. However, the COVID-19 test panels decreased by 67% due to increased vaccination coverage, which reduced testing demand.

The Group's revenue loss in 2021, not including non-operating income and expenditure, was NT$164,943 thousand, increased by NT$31,429 thousand compared to the revenue loss of NT$133,514 disclosed in the 2020 financial report. It was primarily attributed to the increasing operating expense of NT$27,272 thousand in 2020 incurred in planning the sales and marketing of the current products and recruitment of personnel for future development projects.

In terms of the current profits and losses, the current net losses in 2021 was NT$165,199 thousand, increased by NT$61,703 thousand, a 60% increment, compared to the current net losses of

NT$103,496 disclosed in the 2020 financial report. It was primarily attributed to the PPP loan forgiveness approved by the U.S. government in the amount of NT$28,062 thousand (non-operating income) due to the raging epidemic in 2020 and the elevated operating expense in the amount of NT$27,272 thousand in 2021.

(2) Financial analysis for 2021

As of 2021, the Group's debt to assets ratio was 11.4% (NT$116,010 thousand/NT$1,018,967 thousand), long-term capital to property, plant and equipment (NT$111,830 thousand) ratio was 857.57%, shareholders' equity was NT$902,957 thousand, loss per share was NT$(2.02). The total cash in the Group's books was NT$646,070 thousand.

(3) 2022 outlook:

1. The Group has received 2 EUAs for COVID-19 test panels from the U.S. FDA, including Sars-CoV-2 and Pooling in 2020. In December 2021, we received the 3rd EUA from the U.S. FDA for Covid Flu Plus. We are currently working on our 4th product Covid flu plus Direct. We have received positive feedback from the U.S. FDA in February 2022 and will conduct a clinical trial with 1,200 samples. It is estimated that a 510K application will be submitted to the U.S. FDA in the first quarter of 2023. This will benefit the Company's operation in the post-pandemic era where Covid-19 will transform into a flu-like disease.

2. In addition to our Covid-19 test products, Baylor Scott & White also contributed to the validation of our multiplex molecular fungal test panels and the composition of the test protocol in January 2022. Other than Baylor, Tricore and UCLA will also propose a protocol for the validation of our multiplex molecular fungal test panels. Upon the completion of the validation protocol for our 25~28 multiplex molecular fungal test panels, these panels can be transferred to hospital laboratories with a test demand, expanding the overall quantity of molecular test items. This will improve the utility of the automated diagnosis system MDx3000 in the hospital laboratories, creating overlaying effect on the revenues generated from multiple panels.

3. In addition to recruiting senior sales experts to build a sales team, the Group also signed a U.S. distribution contract with Hardy Diagnostic Inc., which will create positive benefits for the sales of our molecular tests panels.

4. On March 23, 2022, the Group recruited and appointed Chris Bernard as the CEO of our US subsidiary. Chris Bernard has 27 years of management experience in molecular diagnostics. The Company is expecting his performance to enhance the Company's commercialization capacity, create a niche in the multiplex diagnostic market, and work with the President, Winston Z. Ho, Ph.D., to lead our team into the competition of global in-vitro diagnostic leadership.

5. For this year, the Group is also extensively assessing the feasibility of developing immuno test products and cancer test products, hoping to generate revenue income from multiplex molecular and multiplex immuno (protein) test panels in the future.

6. Among our authorized clients, IDexx and Zhuhai Livzon Diagnostics have demonstrated a smooth commercialization process. In 2021, Hardy Diagnostic Inc. was also authorized by our Group to conduct research and development for food safety test panels. This will continue and significantly increase the revenue from BMBs and optical instruments.

(4) Future development strategy:

The Group's core development strategy is to develop its own in-vitro diagnostics assays and external licensing of the platform technology. The launch of a number of own-branded diagnostics panels can provide hospitals with a full array of tests, further enhancing the benefits of fully automated molecular analyzers (MDx3000). Taking such an approach will not only accelerate the market adoption of MDx3000, tests selections for our existing customers will also increase. We continue developing multiple molecular diagnostic products, including test panels for indications of sexually transmitted infections (STIs), antimicrobial resistance genes, urinary tract infections (UTIs) and opportunistic infections. We are also developing automated diagnostic instruments and panels in parallel for immuno and cancer diagnosis. The licensing business of the platform technology will also be successful thanks to the gradual commercialization of a number of customers. The licensing business will further increase the sales of consumables and instruments including royalty revenue from end products. The scope of use of our high-profit core technology platforms will be maximized to create value for our shareholders.

(5) Impact from external competitive environment, regulatory environment and overall business environment

1. Impact from the external competitive environment

   The seven major IVD manufacturers in the world are Roche, Abbott, Siemens, Hologic, Danaher/Cepheid, Qiagen and BioMerieux. These manufacturers have high market shares in medical diagnostic assays but lack innovative technology, especially in multiplex testing. Multiplex testing is the mainstream trend of the current market. Global manufacturers that lack this type of technology risk losing in the future's highly competitive diagnostic market. As such, these manufacturers are catching up by acquiring companies with multiple diagnostic technologies. For example, BioMerieux acquired Biofire in 2014 and the procurement of Cepheid by Danaher in 2016 (up to 4 tests). Roche acquired GenMark and DiaSorin acquired Luminex in 2021. This illustrates the emphasis of global major pharmaceutical companies on multiplex testing. Presently, except for Luminex and BioMerieux, none of the seven major manufacturers have technology platforms and products for multiplex detection (more than 4 labels). The Company is currently a technology leader in terms of high throughput, number of detection targets and high automation. Based on the above advantages, we will prioritize the sales to large hospitals and laboratories, while also closely keeping an eye on the countermeasures of competitors and latecomers that are being divided in the market in order to quickly adjust our marketing strategies, ensuring that the development target of our businesses can be achieved.

2. Impact from the regulatory environment

   Given that the Group's in-vitro diagnostic products and most of the final products developed by our licensed customers require a review by the competent authorities (FDA in each country), the decision to enter the market is determined by the FDA. For this reason, products with FDA clearance will significantly reduce external competition. As a result, the Group will continue to develop a variety of in-vitro diagnostics assays and with the clinical and trial experience of the first and second products, the time to enter the market will be gradually shortened.

3. Impact from the overall business environment

Given that the Group's principal place of operation is the U.S., changes in politics, economics and taxation in the U.S. affect the Group's overall operating performance. The COVID-19 outbreak has effected the overall economy, and the trade barriers created by geopolitics are all unfavorable factors for business in the short term. However, the medical industry is a steadily growing industry in the U.S. or even around the world, and the importance of testing assays for epidemic prevention further expands the market share. Through the advantages of our products, the expansion of our experienced sales and technical service teams, strategic alliances with licensed partners as well as diversified commercialization outlets, we will overcome challenges faced in the industry, creating maximum value for our shareholders.

II. Company Profile

1. Date of Incorporation and Corporate Profile

Applied BioCode Corporation (the Group or ABC-KY) is a holding company established in the Cayman Islands on 15 April, 2016. The denomination of shares issued by the Company is NT$10 per share. Applied BioCode, Inc. (ABC-US) and APPLIED BIOCODE TAIWAN LTD. (ABC-TW) are subsidiaries of the Group, which are collectively referred to as the "Group." ABC-KY's headquarters and the R&D Center are currently located in California, U.S.

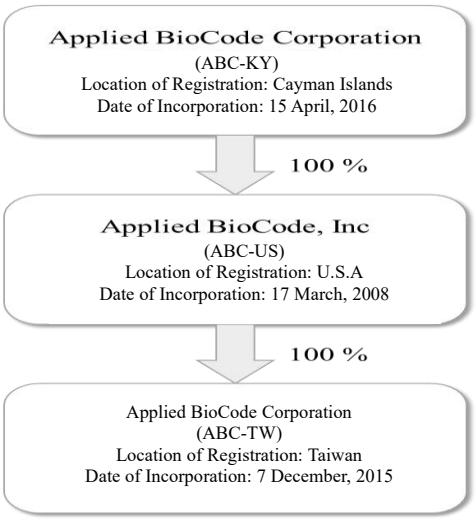
ABC-KY's core business is researching and developing multiplex diagnostic testing products as well as developing, producing and selling diagnostic testing instruments and assays, providing our partners with advanced digital biotechnology and digital multiplex diagnostic testing solutions. ABC-KY's Barcoded Magnetic Beads (BMB) platform is able to accurately identify hundreds of thousands of analytes while obtaining dozens or even hundreds of thousands of results in one single specimen. The applications of BMB are diverse. They cover infectious disease diagnosis, genetic disease diagnosis, allergen diagnosis, autoimmunity, oncology, precision medicine, animal testing, food testing, genetic medicine, life science research, gene expression profiling, drug, and biomarker screening.

The Group develops its own molecular diagnostics panels and has received USFDA clearance for the 17-plex Gastrointestinal Pathogen Panel (GPP) and MDx 3000 (an automated molecular diagnostic system) on September 29, 2018 (Taiwan time). Since the clearance, several major laboratories have introduced instruments, and many medical testing centers have entered procurement contracts. On December 24, 2019, the Group's Respiratory Infection Panel (RPP) received USFDA clearance and began shipping in 2020. In terms of the nucleic acid test for COVID-19 developed by the Group, not only did we receive the USFDA's EUA on June 16, 2020 and began its shipping in July 2020, on December 8, 2020, we also received the USFDA's EUA for Pooling Testing. On the December 16, 2021, we received an emergency authorization with the USFDA for our self-developed COVID-19 plus influenza virus assay. Our goal is to launch 1 infectious disease multiplex diagnostic testing product every year by using the same automated instrument with a number of testing assays, further enhancing testing efficiency.

Our innovative technology can improve the diagnostic accuracy rate, reduce the consumption of medical resources, and help patients receive the right care as early as possible. Its advantages of accuracy, real-time and wide application, have been successfully licensed to many global companies for multi-field development. These well-known companies include: IDEXX Technologies GmbH, PerkinElmer (an NYSE-listed company), Diatherix Laboratories - a subsidiary of Eurofins Scientific Group (a Euronext N.V.-listed company), Molecular Device - a subsidiary of Danaher Group (a

NYSE-listed company), Zhuhai Livzon Diagnostics - a subsidiary of Livzon Pharmaceutical Group (A shares that trade on SZSE and H shares that trade on the HKEX), Guangzhou Improve Medical Instruments (a ChiNext-listed company), Shanghai Kexin Biotech (a new OTC market-listed company), Genetic Analysis AS Norway, Imusyn Germany, ALPCO and Hardy Diagnostic Inc. We have also licensed Guoyao Group Beijing Medical Apparatus and Instruments to sell our Biocode 2500 and BMB. Our achievements have proven that our products are well-received by our partners.

2. Corporate Structure



3. Formation History

Time	Important Matters of ABC-KY History
March 2008	ABC-US is founded in Santa Fe Springs, Southern California, USA.
July 2008	ABC-US increased its capital by US$0.70 million in cash.
October 2009	ABC-US increased its capital by US$0.850 million in cash.
May 2010	Successfully developed and commercialized 128 plex Barcoded Magnetic Beads (BMB).
November 2010	Launched the instrument Biocode 1000 and obtained CE marking.
December 2010	Received US 7,858,307 BMB patent - exclusive, irrevocable and perpetual license from Maxwell Sensors for the production and structure of barcoded beads.
January 2011	Received US 7,871,770 BMB patent - exclusive, irrevocable and perpetual license from Maxwell Sensors for the production and structure of barcoded magnetic beads (BMB).
April 2011	ABC-US increased its capital by US$1.175 million in cash.
September 2011	ABC-US increased its capital by US$0.200 million in cash.
December 2011	ABC-US increased its capital by US$0.529 million in cash.
April 2012	Received US 8,148,139 patent - exclusive, irrevocable and perpetual license from Maxwell Sensors for the production and structure of polymeric barcoded magnetic beads.
June 2012	ABC-US increased its capital by US$0.508 million in cash.
July 2012	Received US 8,232,092 BMB scanner patent - exclusive, irrevocable and perpetual license from Maxwell Sensors for the production and structure of BMB of instruments.
November 2012	ABC-US increased its capital by US$7.000 million in cash.

Time	Important Matters of ABC-KY History
April 2013	Passed the quality system inspection by the Department of Health California and received a medical device manufacturing license.
July 2013	Successfully developed and commercialized 4,096 plex BMB (based on 12 barcodes)
August 2013	Passed FDA QSIT inspection as a Class II medical device manufacturer of IVD products
November 2013	Signed a non-exclusive license agreement with Genetic Analysis Norway for nucleic acid testing for intestinal ecological disorders and irritable bowel syndrome
March 2014	Attained China 102246037 BMB Patent - Polymer Materials for BMB
May 2014	Began development of IVD molecular diagnostic panels
July 2014	ABC-US increased its capital by US$9.256 million in cash
August 2014	Visit the FDA for Biocode 3000 - Pre-submission meeting on infectious colitis and obtaining the test protocol
December 2014	Signed a non-exclusive license agreement with PerkinElmer Group (NYSE-listed company) for the Asian infectious disease diagnostics market
September 2015	ABC-US increased its capital by US$5.150 million in cash
December 2015	Founded ABC-TW
January 2016	Signed a non-exclusive license agreement with Diatherix Laboratories for a third-party diagnostic laboratory
April 2016	Founded ABC-KY to apply for stock listing in Taiwan
June 2016	Attained US 9,255,922 BMB patent - polymeric barcoded magnetic beads
June 2016	ABC-US increased its capital by US$6.494 million in cash
June 2016	ABC-KY became the parent company with 100% ownership of ABC-US through share swapping
September 2016	ABC-KY held a shareholders meeting and elected 9 board members, including 3 independent directors. The Audit Committee and Remuneration Committee were established.
October 2016	BioCode 2500 Analyzer successful developed and commercialized.
October 2016	ABC-US increased its capital by US$6.230 million in cash
February 2017	Registered with the Emerging Stock Board
May 2017	Clinical trials began - CLA, U. of Maryland, Tampa M. C, Le Bonheur Children Medical Center and CDC.
July 2017	Signed a non-exclusive license agreement for diagnostic panels with Zhuhai Livzon Diagnostics, Livzon Pharmaceutical Group
September 2017	All samples required for the clinical trial of the GI panel were tested.
October 2017	ABC-US signed a supply agreement with IDexx Technologies GmbH.
December 2017	ABC-KY completed a cash capital increase of NT$140 million.
January 2018	A marketing application of 17-plex GI panel was submitted to the FDA for review.
April 2018	ABC-TW relocated to a new office and set up a BMB factory.
April 2018	Maxwell Sensors transferred four patents to ABC-KY: 7,871,770, 7,858,307, 8,232,092 and 8,148,139.

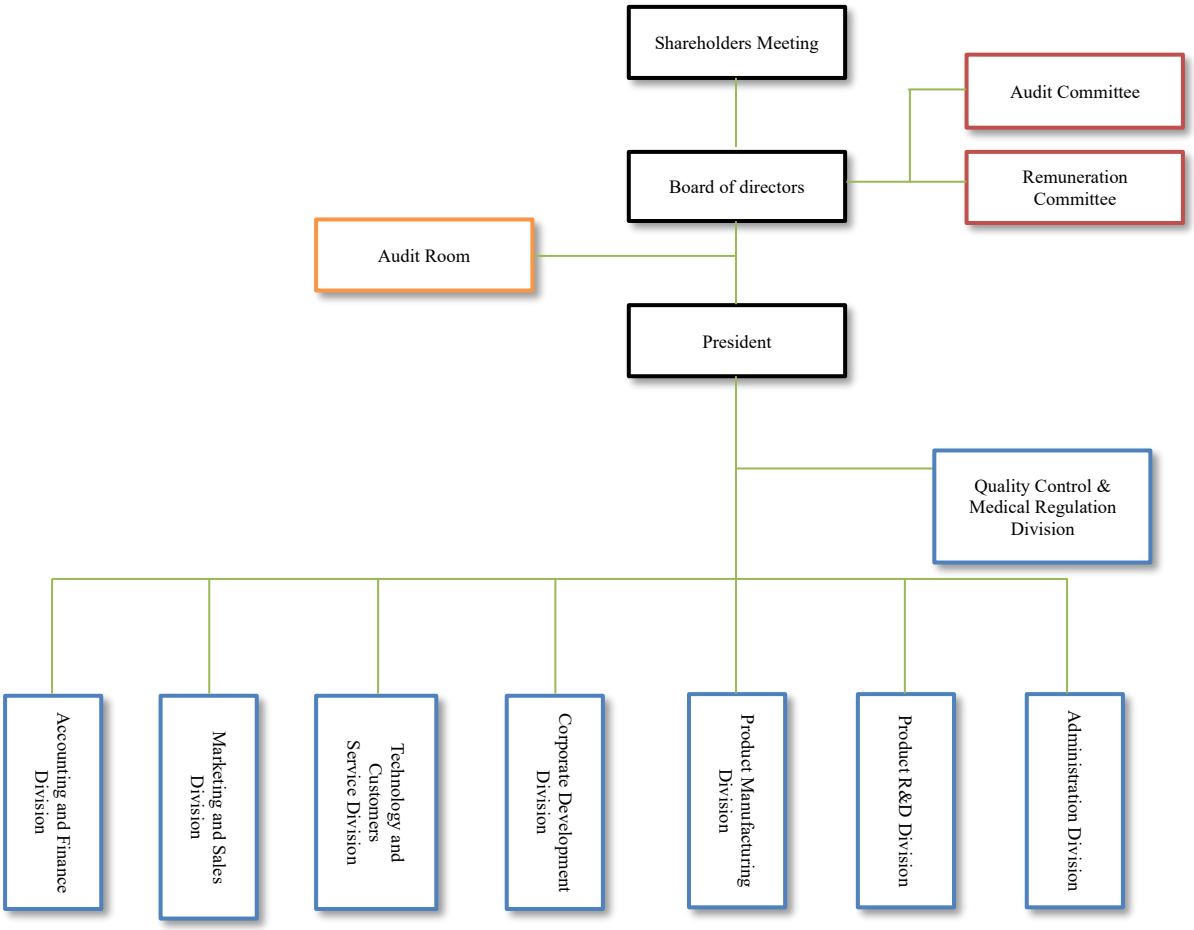
Time	Important Matters of ABC-KY History
October 2018	Received FDA 510(k) clearance for the 17-plex GI panel
October 2018	Received FDA 510(k) clearance for the MDx3000 (an automated molecular diagnostic system)
October 2018	ABC-KY completed a cash capital increase of NT$406,600,000.
March 2019	ABC-KY attained a letter of opinion of "Product or Technology Development is Successful and Marketable" from the Industrial Development Bureau, Ministry of Economic Affairs.
June 2019	Licensed Guoyao Group Beijing Medical Apparatus and Instruments for the sale of Biocode 2500 and BMB.
June 2019	Passed FDA 510(k) clearance for the GI Panel and MDx 3000 with MagNa Pure 96 pre-processing system.
June 2019	Attained patent EP2342561B1 from EUIPO.
September 2019	Submitted a marketing application to the FDA for the Respiratory Infection Panel (RPP) with MDx 3000 (an automated molecular diagnostic system).
September 2019	ABC-KY completed a cash capital increase of NT$342 million.
December 2019	ABC-KY completed a cash capital increase of NT$48.64 million.
December 2019	Submitted a marketing application to the FDA for the Respiratory Infection Panel (RPP) with an automated molecular diagnostic system (MDx 3000).
December 2019	Signed a non-exclusive license with Paitaike Co. Ltd. for the development of cytohormone assays in China.
January 2020	Signed a supply agreement with Tricore for gastrointestinal pathogen diagnostic panels.
March 2020	The listing of ABC-KY was approved by the board of directors of TWSE.
June 2020	ABC-KY was successfully listed.
June 2020	Received the EUA for the Group's self-developed molecular assays for COVID-19 from the USFDA.
July 2020	Molecular assays for COVID-19 began shipment.
August 2020	Benefitting from the shipment of COVID-19 molecular assays, the Group recorded its first single-month operating profit.
August 2020	Filed an application for EUA with the USFDA for COVID-19 molecular assays by Pooling Testing.
September 2020	Considering the high incidence of respiratory disease to occur in the fall and winter, the Group has applied for an EUA prequlification with the USFDA for the COVID-19 plus influenza virus assay.
December 2020	Received the EUA from the USFDA for COVID-19 molecular assays by Pooling Testing.
December 2020	Officially filed for the EUA with the USFDA for COVID-19 plus influenza virus assay.
February 2021	Collaborated with Johns Hopkins University to explore the possibility of installing Biocode 2500 in trucks for testing.
March 2021	Worked with City of Hope to investigate the feasibility of using Liquid Biopsy on a PAP and BMB platform to perform genetic testing for cancer mutation.

Time	Important Matters of ABC-KY History
June 2021	Signed a U.S. food safety non-exclusive authorization with Hardy Diagnostic Inc.
September 2021	Recruited senior sales experts including the Director of Sales and Marketing (Jason Scott and Parisa Hanachi).
October 2021	Completed the development of multiplex molecular fungal test panels.
December 2021	Received an EUA for Covid flu plus from the U.S. FDA.
December 2021	Signed a U.S. non-exclusive distribution contract with Hardy Diagnostic Inc.

4. Risk Disclosure: Please refer to Chapter Seven: 6. Risk Management and Assessment in this Annual Report on pages 137-142.

III. Corporate Governance Report

1. Organization Chart



Department Name	Duty
Board of Directors	Plans business operations and policies, sets operational targets, appoints primary managerial officers, and carries out business development for the Company based on the Company's Memorandum of Association.
Audit Committee	Oversees the Company’s business and financial condition, the appropriateness of the Company's financial statements and the effective implementation of internal controls.
Remuneration Committee	Establishes and reviews on a regular basis the performance evaluation of directors and managerial officers and the remuneration policy, system, standard and structure. Assesses and sets the content and amount of remuneration for directors and managerial officers on a regular basis and proposes such results to the Board of Directors.
Audit Room	Evaluates the effectiveness of internal controls; plans and carries out internal audits.
President	1. Submits business conditions and development plans to the board of directors and the annual general meeting (AGM) and performing matters resolved by the board of directors. 2. Integrates and enforces business targets and future development plans. 3. Plans and achieves the Group's important business policies and operational plans.
Quality Control and Medical Regulation Division	Carries out quality control and audit; reviews and signs for testing paperwork and trial SOPs; and analyzes statistics of clinical trials.
Administration Division	HR management; administrative operations; information management; general administration; legal compliance; stock affairs; listing-related business.
Product R&D Division	Designs development process; researches and develops R&D analyzers; designs and develops pathogen panels; executes product testing for R&D projects; clinical trial programs.
Product Manufacturing Division	Produces BMB, pathogen panels and instruments; supervises of outsourced product production; product trial production process.
Corporate Development Division	Compiles industry market information; executes product and technology licensing agreements; monitors the market information of competitors; establishes product specifications and introduces product market development directions.
Technology and Customers Service Division	Technical service; customer service.
Marketing and Sales Division	Establishes sales plans and budgets; product promotion and sales.
Accounting and Finance Division	Financial planning; accounting & bookkeeping; product project benefit analysis.

2. Profiles of Board of Directors, Supervisors, President, Vice President, Directors, Department and Branch Heads

(1) Directors and Supervisors

1. Information on Directors

April 15, 2022

Position	Nationality or Place of Registration	Name	Gender / Age	Date elected	Term of Office (year)	Date First Elected	Shareholding when Elected		Current shareholding		Current Shareholding of Spouse & Minor Children		Shares Held by Proxy		Major Work Experience (Education)	Current Concurrent Positions in the Group and Other Companies	Other Managers, Directors or Supervisors Who are Spouses or within Second-Degree of Kinship to Each Other			Remarks
							Shares	%	Shares	%	Shares	%	Shares	%			Position	Name	Relation	
Chairman	Taiwan / USA	George J. Lee	Male/ 71 - 80	2019.5.27	3	2016.6.30	-	-	-	-	-	-	3,571,060	4.37	Ph.D. in Chemistry, New York State University Master, Department of Agricultural Chemistry, National Taiwan University R&D Manager, Syntex USA Inc Chairman, Epitomics, Inc.	Chairman, ABC-US Chairman, ABC-TW Chairman, Genepharm, Inc Chairman, SunWay Biotech Co., Ltd. Director, Foresee Pharmaceuticals Co., Ltd. Chairman, Genepharm, Inc. Chairman, RevMAb, Inc. Director, BioKey Inc. Chairman, RevMAb Biosciences Taiwan, Inc.	-	-	-	None
Directors	Taiwan / USA	Winston Z. Ho	Male/ 61 - 70	2019.5.27	3	2016.4.15	-	-	103,750	0.13	4,953,316	6.07	4,905,900	6.00	Bachelor of Chemistry, National Chung Hsing University Ph.D. of Physical chemistry and Master of Biochemistry, Arizona State University, U.S. Post-doctoral researcher, Columbia University, New York, U.S. - high-speed optics Maxwell Sensors Incorporation Founder / CEO Director of smart optical system and sensor Director, Biomedical Sciences, Physical Optics Corp. US-NIH Grant review committee Research Scientist - Nonlinear Photonics, University of Arizona College of Optical Sciences	President, ABC-KY Director, President and Founder / Chief Technology Officer, ABC-US Director, Maxwell Sensors Inc Managerial Officer, Oceania, LLC	Director, Administrative Office	April Tang	Spouse	None

Position	Nationality or Place of Registration	Name	Gender / Age	Date elected	Term of Office (year)	Date First Elected	Shareholding when Elected		Current shareholding		Current Shareholding of Spouse & Minor Children		Shares Held by Proxy		Major Work Experience (Education)	Current Concurrent Positions in the Group and Other Companies	Other Managers, Directors or Supervisors Who are Spouses or within Second-Degree of Kinship to Each Other			Remarks
							Shares	%	Shares	%	Shares	%	Shares	%			Position	Name	Relation	
Directors	Taiwan	Benjamin Jen	Male/ 51 - 60	2019.5.27	3	2016.9.29	-	-	-	-	-	-	-	-	Master in Science and Technology Management, Massachusetts Institute of Technology Director, Strategy and Investment / Director, Marketing, Quanta Computer	Director, Centrillion Technologies Taiwan Director, Applied Biocode, Inc. Director, ABC-TW	-	-	-	None
Independent director	Taiwan	Wen-Jing Tsai	Male/ 51 - 60	2019.5.27	3	2016.9.29	-	-	-	-	-	-	-	-	Bachelor in Accounting, National Taiwan University Master in Accounting, National Chengchi University Manager, Deloitte Taiwan CEO, the Tax Committee, Taipei CPA Association Deputy Chairman, the National Federation of CPA Associations of the R.O.C.	President, Gaowei Accounting Firm Independent Director, Danen Technology Corporation Director, Topview Optronics Corporation	-	-	-	None
Independent director	Taiwan	Ben Liu	Male/ 51 - 60	2019.5.27	3	2016.9.29	-	-	-	-	-	-	-	-	Ph.D. in Law, National Chengchi University Institute of Finance, National Taiwan University Department of Law, National Taiwan University Lawyer, Perkins Coie Lawyer, Yongyun International Law Firm Lawyer, Lee and Li	Lawyer, InfoShare Tech Law Office Director, Aowei Medical Technology Inc. Director, Aulisa Medical Devices Technologies Inc. Supervisor, iCare Diagnostics International Co. Ltd. Independent Director, Mutto Optronics Corporation	-	-	-	None
Independent director	Taiwan	Jack Hsiao	Male/ 51 - 60	2019.5.27	3	2018.1.3	-	-	-	-	-	-	-	-	PhD, Boston University School of Medicine Deputy Chief Operating Officer, Show Chwan Health Care System Co-host, Telecare, Department of Health, Executive Yuan OmniHealth Group (US/TW) CEO	Chief Operating Officer, Hsiao Chung-cheng Hospital General Manager, TriHealth Enterprise, Inc. Director, TriHealth Enterprise, Inc. Director, ThinkCloud Technology. Inc. Director, FU-DE Biomedical Technology Inc. Chairman, JU-SHENG Biomedical Technology Inc. Supervisor, Ai Wan Lin Biotechnology Co., Ltd. Director, SinoCell Technologies Inc. Chairman, En-Qi Co., Ltd. Chairman, Ding-Qun Intellectual Property Integration Co., Ltd. Director, Wellink Investments Limited Chairman, Fu-Ze Health Co., Ltd.	-	-	-	None

2. Supervisors: The Group has an Audit Committee; therefore, there are no supervisors.
3. Major shareholders of corporate shareholders: None.
4. Major shareholders of corporate shareholders are juristic persons' major shareholders: None.
5. Directors or Supervisors' professional qualifications and their independence:

Qualification / Name	Professional Qualification (Note 1)	Experience (Note 1)	Independence Criteria (conforms to the criteria set out in Note 2)	Number of Other Public Companies in Which the Individual is Concurrently Serving as an Independent Director
George J. Lee	Required working experience at least five years in commerce, law, finance, accounting or other fields required by the business of the Company.	Ph.D. in Chemistry, New York State University R&D Manager, Syntex USA Inc Chairman, Epitomics, Inc.	Not applicable	-
Winston Z. Ho	Required working experience at least five years in commerce, law, finance, accounting or other fields required by the business of the Company.	Ph.D. of Physical chemistry and Master of Biochemistry, Arizona State University, U.S. Maxwell Sensors Incorporation Founder / CEO Director of smart optical system and sensor Director, Biomedical Sciences, Physical Optics Corp.	Not applicable	-
Benjamin Jen	Required working experience at least five years in commerce, law, finance, accounting or other fields required by the business of the Company.	Master in Science and Technology Management, Massachusetts Institute of Technology Director, Strategy and Investment / Director, Marketing, Quanta Computer	Not applicable	-
Wen-Jing Tsai	Professional or technical specialists who have passed a national examination or hold a license in accounting or another profession required for the Company's business operations with at least five years' experience.	Bachelor in Accounting, National Taiwan University Master in Accounting, National Chengchi University Manager, Deloitte Taiwan CEO, the Tax Committee, Taipei CPA Association Deputy Chairman, the National Federation of CPA Associations of the R.O.C.	(1) No; (2) None; (3) No; (4) None; (5) Yes	1

Ben Liu	Lecturer or above in commerce, law, finance, accounting or other subjects required for the Company's business operations in public or private colleges or universities, at least five years' experience in commerce, law, finance, accounting, or another profession required for the Company's business operations, and professional or technical specialists who have passed a national examination or hold a license in law or another profession required for the Company's business operations.	Ph.D. in Law, National Chengchi University Department of Law, National Taiwan University Lawyer, Perkins Coie Lawyer, Yongyun International Law Firm Lawyer, Lee and Li	(1) No; (2) None; (3) No; (4) None; (5) Yes	2
Jack Hsiao	Required working experience at least five years in commerce, law, finance, accounting or other fields required by the business of the Company.	PhD, Boston University School of Medicine Deputy Chief Operating Officer, Show Chwan Health Care System Co-host, Telecare, Department of Health, Executive Yuan OmniHealth Group (US/TW) CEO	(1) No; (2) None; (3) No; (4) None; (5) Yes	-

Note 1: Professional qualifications and experiences: Description of director and supervisor qualifications and experiences. If Audit Committee members have professional expertise in accounting or finance, their background and work experience in these fields shall be described in detail.

Note 2: Independent directors shall provide a detailed description of their conformity to independence criteria including but not limited to the following: (1) Does the candidate, his/her spouse, or one of his/her relatives within the second degree of kinship serve as director, supervisor, or employee at the Company or one if its affiliates? (2) How many company shares does the candidate, his/her spouse, or one of his/her relatives within the second degree of kinship (or the candidate under others' names) hold and what is the shareholding ratio? (3) Does the candidate serve as director, supervisor, or employee of a company that has a specific relationship with this Company (as stipulated in Article 3, Paragraph 1, Subparagraph 5-8 of the Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies)? (4) Cumulative compensation received for the provision of commercial, law, financial, and accounting services to this Company or its affiliates within the past two years; (5) Do one of the circumstances specified in Article 30 of the Company Act apply?

6. Board diversity and independence:

(1) Board diversity:

As for the composition of the board of directors of the Company, board diversity is considered in multiple dimensions pursuant to the Corporate Governance Principles and the Regulations for Election of Directors. The board is composed of six directors (incl. three independent directors). All board members have extensive experience and professional expertise in a wide range of fields including commerce, law, finance, accounting, production technologies, and management. One board member (17%) is an employee of the Company; one independent director has served for four years; two independent directors have served for 5-6 years; none of the independent directors has served for more than three consecutive terms. One director is aged above 70; one director is aged between 61 and 70; the other four directors are aged between 51 and 60. All directors are male. Six are ROC nationals, and two of them are also US nationals. Management goal achieved in 2021. Additional details regarding board diversity:

Position	Name	Core competencies related to diversity							
		Operational judgments	Accounting and finance	Business management	Crisis management	Industry knowledge	International market perspective	Leadership ability	Decision-making ability
Chairman	George J. Lee	✓	✓	✓	✓	✓	✓	✓	✓
Directors	Winston Z. Ho	✓	✓	✓	✓	✓	✓	✓	✓
Directors	Benjamin Jen	✓	✓	✓	✓	✓	✓	✓	✓
Independent director	Wen-Jing Tsai	✓	✓	✓	✓	✓	✓	✓	✓
Independent director	Ben Liu	✓	✓	✓	✓	✓	✓	✓	✓
Independent director	Jack Hsiao	✓	✓	✓	✓	✓	✓	✓	✓

(2) Board member independence:

The board is composed of six directors (incl. three independent directors accounting for 50%). Based on the kinship diagram provided by the independent directors, it can be determined that none of the circumstances specified in Article 26-3, Paragraphs 3 and 4 of the Securities and Exchange Act exist and no spousal or familial relationship within the second degree of kinship exists between the directors of the Company.

(2) Profile of Presidents, Vice Presidents, Assistant Managers, and Heads of Departments and Branches:

April 15, 2022

Position	Nationality	Name	Gender	Date of Assumption of Office	Shareholding		Shareholding of Spouse & Minor Children		Shares Held by Proxy (Note)		Major Work Experience (Education)	Current Concurrent Positions in Other Companies	Spouse or Relatives of Second Degree or Closer Acting as Managerial Officers			Remarks
					Shares	%	Shares	%	Shares	%			Position	Name	Relation	
President and Founder/ Chief Technology Officer	Taiwan / USA	Winston Z. Ho (Note 1)	Male	2008.03	103,750	0.13	4,953,316	6.07	4,905,900	6.00	Bachelor of Chemistry, National Chung Hsing University Ph.D. of Physical chemistry and Master of Biochemistry, Arizona State University, U.S. Post-doctoral researcher, Columbia University, New York, U.S. - high-speed optics Maxwell Sensors Founder / CEO Director of smart optical system and sensor Director, Biomedical Sciences, Physical Optics Corp. - US-NIH Grant Review Committee Researcher, optical center of University of Arizona, U.S. - non-linear optics	Director & Presidents, ABC-US Director, ABC-TW Director, Maxwell Sensors, Inc. Managerial Officer, Oceania, LLC	Director, Administrative Office	April Tang	Spouse	None
Chief of Scientist	United States	Michael Aye	Male	2013.02	225,000	0.28	-	-	-	-	Ph.D. in Microbiology, University of California, Irvine Director of Molecular Analysis, Focus Diagnostics	-	-	-	-	None
Product Manufacturing Division Vice-Chairman	United States	Donald Wong (Note 2)	Male	2010.12	69,580	0.07	-	-	-	-	Bachelor in Biology, University of California, Los Angeles Biological Director, Manufacturing/QC, ProteoGenix, Inc. QC/Calibration, BioCentrex, LLC Corporate Director, CareSide Manager, R&D Department, SmithKline Beecham Clinical Labs	-	-	-	-	None
Regulatory Affairs and Clinical Affairs Division Director	United States	Tara Viviani (Note 3)	Female	2020.08	-	-	-	-	-	-	Bachelor in Biology, University of California, Irvine Quality Assurance / Monitoring Services, Beckman Coulter IVD Product Quality Assurance / Monitoring Services, Focus Diagnostics (Quest)					None
Technology & Customer Service Division Director	United States	Michael Ho	Male	2015.07	159,791	0.20	-	-	-	-	Ph.D., University of California, Davis Technical Services, Quest Diagnostics EraGen Biosciences (Luminex) Field Application / Training Manager, Technical Support Manager, Customer Support Manager Team Leader and Senior Scientist, Cepheid Project Leader, Thermo Fisher	-	-	-	-	None

Position	Nationality	Name	Gender	Date of Assumption of Office	Shareholding		Shareholding of Spouse & Minor Children		Shares Held by Proxy (Note)		Major Work Experience (Education)	Current Concurrent Positions in Other Companies	Spouse or Relatives of Second Degree or Closer Acting as Managerial Officers			Remarks
					Shares	%	Shares	%	Shares	%			Position	Name	Relation	
Product R&D Division Director	United States	Gerald Kowalski	Male	2014.07	8,000	0.01	-	-	-	-	Bachelor in Technology in Electronic Instrumentation Engineering, Michigan Technological University Software team leader, BECKMAN COULTER INC. Senior Software Engineer, BAXTER International Inc.	-	-	-	-	None
Product Manufacturing Division Senior Director	Canada	Gao Chen (Note 2)	Male	2014.10	143,000	0.17	-	-	-	-	Ph.D. in Molecular Biology and Immunology, Gembloux Agro-Bio Tech, Belgium Researcher, University of California, Los Angeles Senior Researcher, R&D Department, Maxwell Sensors Incorporation	-	-	-	-	None
Administration Division Director	Taiwan / USA	April Tang	Female	2008.03	47,416	0.06	5,009,650	6.13	4,905,900	6.00	Bachelor in English, Chung Hsing University Master, Virginia Polytechnic Institute and State University Joint founder of Maxwell Sensors Incorporation	Director, Maxwell Sensors, Inc. Managerial Officer, Oceania, LLC	President	Winston Z. Ho	Spouse	None
CFO	Taiwan	Liang-Kai Huang	Male	2018.02	10,000	0.01	-	-	-	-	Bachelor in Accounting, Soochow University CFO, BTL Corporate CFO, Landseed International Medical Group Vice President, Tianjin TEDA Biomedical Engineering Company Limited	-	-	-	-	None
Marketing and Sales Division Director	United States	Debra Linguist (Note 3)	Female	2017.06	-	-	-	-	-	-	Bachelor in Medical Technology, Michigan State University Director of Sales, DiaSorn Molecular / Focus Diagnostics South Central Region, USA Director of Sales, Focus Diagnostics Ireland, Europe	-	-	-	-	None
Administration Division Director	United States	Ingrid Joseph	Female	2020.08	9,500	0.01	-	-	-	-	Bachelor, Management at Cerritos College Procurement Supervisor of Maxwell Sensors Incorporation	-	-	-	-	None
Human Resources (Employee Services) Director	United States	Frank Mitchell	Male	2020.08	-	-	-	-	-	-	Master, Pepperdine University HR Manager of Gary's HR Manager of Adir International	-	-	-	-	None
Taiwan sub-subsidiary Vice President	Taiwan	Yu-Lin Chen	Male	2016.05	6,500	0.01	-	-	-	-	Bachelor in Electrical Engineering, George Washington University Deputy General Manager, Opto-Sensor Ltd. Business Engineer, Opto-Sensor Ltd.	-	-	-	-	None
Director, Public Listing Affairs	Taiwan	Chia-Chi Chang (Note 4)	Male	2017.12	-	-	-	-	-	-	Bachelor in International Trade, Tamkang University Master in International Business, Tamkang University Senior Manager, Capital Securities Corporation.	-	-	-	-	None

Position	Nationality	Name	Gender	Date of Assumption of Office	Shareholding		Shareholding of Spouse & Minor Children		Shares Held by Proxy (Note)		Major Work Experience (Education)	Current Concurrent Positions in Other Companies	Spouse or Relatives of Second Degree or Closer Acting as Managerial Officers			Remarks
					Shares	%	Shares	%	Shares	%			Position	Name	Relation	
Accounting Supervisor	Taiwan	Jau-Tung Pan	Female	2019.08	2,000	0.00	-	-	-	-	Bachelor in Accounting, National Chengchi University Assistant Manager, Merck KGaA Assistant Manager, Deloitte Taiwan Assistant Manager, PwC Taiwan	-	-	-	-	None
Internal Auditer	Taiwan	Zong-Han You	Male	2019.09	-	-	-	-	-	-	Bachelor in of Accounting, National Taiwan University Assistant Manager, Merck KGaA Assistant Manager, Deloitte Taiwan	-	-	-	-	None
Director, Product R&D Division	United States	Colleen Knoth (Note 5)	Female	2021.05	-	-	-	-	-	-	PhD in Plant Molecular Biology and Genetics, University of California - Riverside Technical Support Manager, Focus Diagnostics Senior Researcher, Veridex, LLC.	-	-	-	-	None
Quality Assurance Division Director	United States	Roland Strickland (Note 6)	Male	2021.08	-	-	-	-	-	-	PhD in Chemistry, University of California, San Diego Quality Assurance Project Leader, Abbott Point of Care Medical Law and Clinical Experiment Manager, Bioamerica, Inc.	-	-	-	-	None
Director, Marketing Division	United States	Parisa Hanachi (Note 7)	Female	2021.11	-	-	-	-	-	-	PhD in Molecular Microbiology, University of California, Davis CMO, HiPic Inc. Senior Associate Manager, Marketing Division, Alere Inc.	-	-	-	-	None
Director, Sales Division	United States	Michael Jason Scott (Note 7)	Male	2021.11	-	-	-	-	-	-	Master in Engineering Technology (Occupational Health and Safety), Middle Tennessee State University Business Development, Korvis Marketing Team Leader, Karius Diagnostics	-	-	-	-	None
US Subsidiary CEO	United States	Christopher Bernard (Note 8)	Male	2022.03	-	-	-	-	-	-	Bachelor in Psychobiology, Hiram College CEO, Oncogenesis CEO, Curetis USA Inc.	-	-	-	-	None

Note 1: Director and President Winston Z. Ho and his spouse Ruei-E Tang jointly set up the ZAAD Living Trust. They are both the trustees of this trust. The ZAAD Living Trust has total ownership of Maxwell Sensors and Oceanina, LLC. Maxwell Sensors holds 8,307,042 shares of ABC-KY, or 10.16%, and Oceania, LLC holds 1,504,758 shares of ABC-KY, or 1.84%.

Note 2: Managerial officer Donald Wong was relieved from his duties in March 2022. His duties were taken over by Managerial officer Gao Chen.

Note 3: Managerial officer Tara Viviani left the job on April 30, 2021. Managerial officer Debra Linguist left the job on July 3, 2021.

Note 4: Managerial officer Jia-Chi Jang left the job on April 6, 2021.

Note 5: Managerial officer Colleen Knoth was promoted on May 2021, and left the job on March 3, 2022.

Note 6: Managerial officer Roland Strickland was newly appointed in August 2021.

Note 7: Managerial officer Parisa Hanachi and Michael Jason Scott were newly appointed in November 2021.

Note 8: Christopher Bernard was appointed as the new CEO of the US subsidiary in March 2022.

3. Remuneration of Board of Directors, Supervisors, President and Vice Presidents for the last fiscal year

(1) Remuneration of general directors and independent directors for the most recent fiscal year (2021)

December 31, 2021; unit: NT$ thousand

Position	Name	Remuneration to Directors								Total of A, B, C and D as a percentage of net income after tax		Relevant remuneration received by Directors who are also employees								Total of A, B, C, D, E, F and G as a percentage of net income after tax		Remuneration paid to Directors from an invested company other than the Company's subsidiary or from the parent company
		Remuneration (A)		Severance Payment and Pension (B)		Remuneration to directors (C)		Fees for Performance of Work (D)				Salary, Bonuses, and Allowances (E)		Severance Payment and Pension (F)		Remuneration to Employees (G)						
																The Group		Companies Included in the Financial Statements				
		The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	Cash Amount	Stock Amount	Cash Amount	Stock Amount	The Group	Companies Included in the Financial Statements	
Chairman	George J. Lee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	None
Directors	Winston Z. Ho	-	-	-	-	-	-	-	-	-	-	-	4,370	-	131	-	-	-	-	-	4,501 (2.72)%	None
Directors	Benjamin Jen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	None
Independent director	Wen-Jing Tsai	360	360	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	-	-	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	None
Independent director	Ben Liu	360	360	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	-	-	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	None
Independent director	Jack Hsiao	360	360	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	-	-	-	-	-	-	-	-	360 (0.22)%	360 (0.22)%	None

(1) Please explain the policy, system, standards and structure by which independent director remuneration is paid, and the association between the amount paid and independent directors' responsibilities, risks and time committed: The Group's remuneration to directors is determined concerning the practice of public companies in Taiwan and the participation of the independent directors in the Audit Committee, Remuneration Committee and the Board meeting. After the directors of this Board have been elected, it was discussed and approved by general directors at the Board meeting that remuneration shall be paid after NT$30,000 each month.

(2) Remuneration received by directors for providing service to any company listed in the financial statements (e.g. consultancy service without the title of an employee for the parent company/any company listed in the financial statements/joint ventures) for the last fiscal year, except those disclosed in the above table: None.

Breakdown of Remuneration

Remuneration to individual directors in respective brackets along the remuneration scale	Name of director			
	Total remuneration (A+B+C+D)		Total remuneration (A+B+C+D+E+F+G)	
	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements
Below NT$1,000,000	Wen-Jing Tsai, Ben Liu, Jack Hsiao	Wen-Jing Tsai, Ben Liu, Jack Hsiao	Wen-Jing Tsai, Ben Liu, Jack Hsiao	Wen-Jing Tsai, Ben Liu, Jack Hsiao
NT$1,000,000 (inclusive) - NT$2,000,000 (exclusive)	-	-	-	-
NT$2,000,000 (inclusive) - NT$3,500,000 (exclusive)	-	-	-	-
NT$3,500,000 (inclusive) - NT$5,000,000 (exclusive)	-	-	-	Winston Z. Ho
NT$5,000,000 (inclusive) - NT$10,000,000 (exclusive)	-	-	-	-
NT$10,000,000 (inclusive) - NT$15,000,000 (exclusive)	-	-	-	-
NT$15,000,000 (inclusive) - NT$30,000,000 (exclusive)	-	-	-	-
NT$30,000,000 (inclusive) - NT$50,000,000 (exclusive)	-	-	-	-
NT$50,000,000 (inclusive) - NT$100,000,000 (exclusive)	-	-	-	-
Above NT$100,000,000	-	-	-	-
Total	3 persons	3 persons	3 persons	4 persons

(2) Remuneration to supervisors: The Group has an Audit Committee; therefore, there are no supervisors.
(3) Remuneration to the president and vice president for the most recent fiscal year (2021)

December 31, 2021; unit: NT$ thousand

Position	Name	Salary (A)		Severance Payment and Pension (B)		Bonuses and special allowances, etc. (C)		Remuneration to employees (D)				Total of A, B, C and D as a percentage (%) of net income after tax		Remuneration paid to Directors from an invested company other than the Company's subsidiary or from the parent company
		The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group		Companies Included in the Financial Statements		The Group	Companies Included in the Financial Statements	
								Cash Amount	Stock Amount	Cash Amount	Stock Amount			
President	Winston Z. Ho	-	4,370	-	131	-	-	-	-	-	-	-	4,501 (2.72)	-
Vice President	Michael Aye	-	5,532	-	176	-	941	-	-	-	-	-	6,649 (4.02)	-
Vice President	Donald Wong	-	4,638	-	148	-	473	-	-	-	-	-	5,259 (3.18)	-
Vice President	Liang-Kai Huang	-	2,939	-	108	-	-	-	-	-	-	-	3,047 (1.84)	-
Vice President	Yu-Lin Chen	-	1,565	-	99	-	180	-	-	-	-	-	1,844 (1.12)	-

Breakdown of Remuneration

Remuneration to presidents and vice presidents in respective brackets along the remuneration scale	President and vice president name	
	The Group	Companies Included in the Financial Statements
Below NT$1,000,000	-	-
NT$1,000,000 (inclusive) - NT$2,000,000 (exclusive)	-	Yu-Lin Chen
NT$2,000,000 (inclusive) - NT$3,500,000 (exclusive)	-	Liang-Kai Huang
NT$3,500,000 (inclusive) - NT$5,000,000 (exclusive)	-	Winston Z. Ho
NT$5,000,000 (inclusive) - NT$10,000,000 (exclusive)	-	Donald Wong, Michael Aye
NT$10,000,000 (inclusive) - NT$15,000,000 (exclusive)	-	-
NT$15,000,000 (inclusive) - NT$30,000,000 (exclusive)	-	-
NT$30,000,000 (inclusive) - NT$50,000,000 (exclusive)	-	-
NT$50,000,000 (inclusive) - NT$100,000,000 (exclusive)	-	-
Above NT$100,000,000	-	-
Total	-	5 persons

(4) Top 5 managers with the highest remuneration:

Position	Name	Salary (A)		Severance Payment and Pension (B)		Bonuses and special allowances, etc. (C)		Remuneration to employees (D)				Total of A, B, C and D as a percentage (%) of net income after tax		Remuneration paid to Directors from an invested company other than the Company's subsidiary or from the parent company
		The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group	Companies Included in the Financial Statements	The Group		Companies Included in the Financial Statements		The Group	Companies Included in the Financial Statements	
								Cash Amount	Stock Amount	Cash Amount	Stock Amount			
Vice President	Michael Aye	-	5,532	-	176	-	941	-	-	-	-	-	6,649 (4.02)	-
Vice President	Donald Wong	-	4,638	-	148	-	473	-	-	-	-	-	5,258 (3.18)	-
Director	Michael Ho	-	4,526	-	136	-	471	-	-	-	-	-	5,133 (3.11)	-
Director	Gerald Kowalski	-	4,860	-	144	-	177	-	-	-	-	-	5,181 (3.14)	-
Director	Colleen Knoth (Note)	-	4,281	-	133	-	469	-	-	-	-	-	4,883 (2.96)	-

Breakdown of Remuneration

Remuneration to presidents and vice presidents in respective brackets along the remuneration scale	President and vice president name	
	The Group	Companies Included in the Financial Statements
Below NT$1,000,000	-	-
NT$1,000,000 (inclusive) - NT$2,000,000 (exclusive)	-	-
NT$2,000,000 (inclusive) - NT$3,500,000 (exclusive)	-	-
NT$3,500,000 (inclusive) - NT$5,000,000 (exclusive)	-	Colleen Knoth
NT$5,000,000 (inclusive) - NT$10,000,000 (exclusive)	-	Michael Aye, Donald Wong, Michael Ho, Gerald Kowalski
NT$10,000,000 (inclusive) - NT$15,000,000 (exclusive)	-	-
NT$15,000,000 (inclusive) - NT$30,000,000 (exclusive)	-	-
NT$30,000,000 (inclusive) - NT$50,000,000 (exclusive)	-	-
NT$50,000,000 (inclusive) - NT$100,000,000 (exclusive)	-	-
Above NT$100,000,000	-	-
Total	-	5 persons

Note: The Manager was promoted in May 2021 and resigned on March 24, 2022.

(5) Names of managerial officers who received employee remuneration for the most recent fiscal year (2021): None.

(6) Compare and analyze the total remuneration as a percentage of net income after tax stated in the parent company only financial reports or individual financial reports, paid by this group and by all consolidated entities (including this company) for the most recent 2 fiscal years to each of this group's directors, supervisors, presidents, and vice presidents, and describe the policies, standards, and packages for payment of remuneration, the procedures for determining remuneration, and its linkage to business performance and future risk exposure.

1. The total remuneration as a percentage of net income after tax paid by this group and by all consolidated entities (including this group) for the most recent 2 fiscal years to each of this group's directors, presidents, and vice presidents

Unit: NT$ thousand

Year / Item	2020		2021	
	The Group	As a percentage of net income after tax	The Group	As a percentage of net income after tax
Directors, presidents and vice presidents	31,272	(30.22)%	22,380	(13.55)%

Remuneration policy, standards and composition, procedures and the correlation with operational performance and future risks:

(1) Principle of payment of remuneration to directors

The remuneration to directors includes travel expenses, business execution expenses and earnings distribution. The remuneration to the directors of the consolidated company is determined according to the Company's Articles of Incorporation. The Board of Directors is authorized to determine the remuneration based on the directors' participation in the consolidated company's operations, the value of their contributions and the industry standard.

(2) President and Vice President

The remuneration to the president and vice president includes salary and employee bonus. The salary level is determined based on the Company's contribution and the reference to the industry standard.

(3) Operating performance and the relevance of future risks

The Group has established the Remuneration Committee that is made up of all independent directors. These independent directors review and evaluate on a regular basis the performance of directors and managerial officers as well as the remuneration policy, system, standard and structure.

4. Implementation of Corporate Governance

(1) Functionality of the Board of Directors

The 3rd term Board of Directors of the Group convened 12 times between 2021 and 2022 and three times in the reporting year until the annual report's publication date. The board convened a total of 15 times (A) in the most recent 2 fiscal years until the annual report's publication date. Director attendance records were as follows:

Position	Name	Actual Attendance (B)	Proxy Attendance	Actual Attendance Ratio (B/A) (%)	Remarks
Chairman	George J. Lee	15	0	100%	
Directors	Winston Z. Ho	15	0	100%	
Directors	Richard Chang	2	2	50%	Resigned on August 31, 2020; he should have attended 4 meetings in 2020.
Directors	Benjamin Jen	13	2	87%	
Independent director	Wen-Jing Tsai	15	0	100%	
Independent director	Ben Liu	15	0	100%	
Independent director	Jack Hsiao	15	0	100%	

Supplementary Information:

1. For Board of Directors meetings that meet any of the following descriptions, state the date, session, the content of motions, independent directors' opinions and how the company has responded to such opinions:

(1) Matters listed in Article 14-3 of the Securities and Exchange Act:

Meeting Date and Session	Content of motions	Independent directors' opinions and how the Company has responded to such opinions:
2020/03/12 3rd Board 6th Session	1. Motion of 2019 business report and 2019 consolidated financial statements 2. Motion of 2019 loss appropriation 3. Motion of 2017 consolidated financial report (compiled with reference to the 2016 pro forma financial statements) 4. Internal Control System Statement 5. The independence and appropriateness of CPAs 6. Motion of the appointment of CPAs 7. Amendments to the Group's Articles of Incorporation 8. Motion of the Group’s capital reduction for the cancellation of employees restricted new shares 9. Motion of setting a date, location, shareholder proposal procedures and agenda for the 2020 Annual General Meeting 10. Motion of the plan for 2020 employee stock warrants	Passed by all independent directors.
2020/05/11 3rd Board 7th Session	1. Motion of the Q1 2020 consolidated financial statements Motion for common share subscription for managerial officers through cash capital increase prior to initial listing	Passed by all independent directors.
2020/07/10 3rd Board 8th Session	1. Motion for amendments to the plan for 2020 employee stock warrants 2. Motion of amendments to the plan of a sound business	Passed by all independent directors.

		3. Motion for 2020 distribution of employee stock warrants (1st distribution) 4. Incentive program for managerial officers 5. Motion of capital increase for Taiwan's sub-subsidiary	
	2020/08/11 3rd Board 9th Session	1. Motion of the Q2 2020 consolidated financial statements 2. Motion for amendments to the plan for 2020 employee stock warrants 3. Motion of the U.S. subsidiary's capital increase 4. Motion for the appointment of an associate manager for medical compliance and clinical affairs and their salary and remuneration plan 5. Motion for the appointment of an associate manager for raw material and salary management and their salary and remuneration plan 6. Motion for the appointment of an associate manager for employee services (human resources) and their salary and remuneration plan 7. Remuneration and bonus plan for managerial officers 8. Motion for 2020 distribution of employee stock warrants (2nd distribution) 9. Sales incentive plan for Sales Division for the second half of 2020	Passed by all independent directors.
	2020/11/11 3rd Board 10th Session	1. Motion of the Q3 2020 consolidated financial statements 2. Motion for 2020 amendments to the utilization of raised IPO funds 3. Motion of amendments to the plan of a sound business 4. Motion of cash capital increase 5. Motion for changing of seal	Passed by all independent directors.
	2020/12/24 3rd Board 11th Session	1. Motion of 2021 budget 2. 2021 audit plan 3. Motion of the implementation of remuneration packages for managerial officers for 2021 4. Sales incentive plan for Sales Division for the first half of 2021 2. Motion for 2020 distribution of employee stock warrants (3rd distribution)	Passed by all independent directors.
	2021/01/06 3rd Board 12th Session	1. Motion for the withdrawal of the Group's second cash capital increase application for 2020	Passed by all independent directors.
	2021/03/17 3rd Board 13th Session	1. Motion of 2020 business report and 2020 consolidated financial statements 2. Motion of 2020 loss appropriation 3. Internal Control System Statement 4. The independence and appropriateness of CPAs 5. Motion of the appointment of CPAs 6. Motion of amendments to the plan of a sound business 7. Motion of amendments to the Group's "Procedures for Acquisition or Disposal of Assets" 8. Motion of setting a date, location, shareholder proposal procedures and agenda for the 2021 Annual General Meeting 9. Motion for 2020 distribution of employee stock warrants (4th distribution)	Passed by all independent directors.
	2021/05/13 3rd Board 14th Session	1. Motion of the Q1 2021 consolidated financial statements 2. Expanded rental plan of US subsidiary 3. Motion of capital increase for Taiwan's sub-subsidiary	Passed by all independent directors.

		4. Contract revision stipulating provision of assistance by lead securities underwriters in the compliance by the Company with applicable laws and regulations 5. Sales incentive plan for Sales Division for the second half of 2021 6. Motion for 2020 distribution of employee stock warrants (5th distribution) 7. Retroactive recognition of Principal Scientist (Director of Science) promotion 8. Retroactive recognition of Associate manager (Product R&D Division) promotion	
	2021/06/09 3rd Board 15th Session	1. 2021 Postponement of Annual General Meeting	Passed by all independent directors.
	2021/08/24 3rd Board 16th Session	1. Implementation status of the plan of a sound business in Q2 2021 2. Motion of amendments to the plan of a sound business 3. Motion of the plan for 2021 employee stock warrants 4. Motion for 2021 distribution of employee stock warrants (1st distribution) 5. Motion for the appointment of an associate QA manager and their salary and remuneration plan	Passed by all independent directors.
	2021/11/08 3rd Board 17th Session	1. Motion of the Q3 2021 consolidated financial statements 2. Motion of 2022 budget 3. 2022 audit plan 4. Motion for the determination of remuneration packages for managerial officers in 2022 5. 2022 sales incentive plan for Sales Division 6. Motion for amendments to the plan for 2021 employee stock warrants 7. Motion for 2021 distribution of employee stock warrants (2nd distribution) 8. Motion for the appointment of an associate marketing manager and their salary and remuneration plan 9. Motion for the appointment of an associate sales manager and their salary and remuneration plan	Passed by all independent directors.
	2022/03/23 3rd Board 18th Session	1. Motion of 2021 business report and 2021 consolidated financial statements 2. Motion of 2021 Loss Appropriation 3. Internal Control System Statement 4. The independence and appropriateness of CPAs 5. Amendment to the “Company's Memorandum and Articles of Association” 6. Amendment to the Company’s “Rules and Procedures of Shareholders’ Meeting” 7. Amendment to the Company’s “Operational Procedures for Acquisition and Disposal of Assets” 8. Amendment to the Company’s Corporate Governance Best Practice Principles 9. Motion of setting a date, location, shareholder proposal and nomination procedures, and agenda for the 2022 Annual General Meeting 10. Motion for 2021 distribution of employee stock warrants (3rd distribution) 11. Appointment of associate administration manager (internal transfer)	Passed by all independent directors.

	12. Appointment of a CEO for the US subsidiary 13. Appointment of a senior associate manager, Product Manufacturing Division (personnel transfer) 14. Promotion of financial controller	
2022/04/28 3rd Board 19th Session	1. Election of New Directors and New Independent Directors 2. Release Non-Competition Covenants from All Newly Elected Directors (Including Independent Directors) 3. Proposed Meeting Time, Location, Procedures of Receiving Shareholders' Proposals and nominations and Agenda Items for 2022 Shareholders' Annual General Meeting (Meeting Location Confirmed)	Passed by all independent directors.
2022/05/10 3rd Board 20th Session	1. 2022 Q1 Consolidated Financial Statements 2. Capital injection to Applied BioCode Taiwan Ltd. 3. 2021 Employee Stock Option Allocation Plan (The Fourth Allocation) 4. The Loan to Applied BioCode Taiwan Ltd.	Passed by all independent directors.

(2) Any other documented objections or qualified opinions raised by independent directors against board resolutions in relation to matters other than those described above: None.

2. In the case of recusal of a director in a motion related to his/her own interests, please specify the director's names, the content of motions, the reasons for the recusal and the voting results: None.

3. TWSE/TPEx Listed Companies should disclose information on the evaluation content of the board's self (or peer) evaluation:

Evaluation Cycle	Once a year
Evaluation Period	January 1, 2021 - December 31, 2021
Evaluation Scope	Board of directors, individual directors and functional committees
Evaluation method	Internal self-evaluation by the board of directors and self-evaluation by the board members
Evaluation content	1. Performance evaluation of the board of directors: Participation in the operation of the company, improvement of the quality of the board of directors' decision making, composition and structure of the board of directors, election and continuing education of the directors, and internal control. 2. Performance evaluation of the board members: Alignment of the goals and missions of the Company, awareness of the duties of a director, participation in the operation of the Company, management of internal relationships and communication, the director's professionalism and continuing education, and internal control. 3. Performance evaluation of the functional committees: Participation in the operation of the Company, awareness of the duties of the functional committee, quality of decisions made by the functional committee, makeup of the functional committee and election of its members, and internal control.
Evaluation outcome	1. Performance evaluation of the board of directors Excellent. 2. Performance evaluation of the board members: Excellent. 3. Performance evaluation of the functional committees: Excellent.

4. Measures the objectives to strengthen the board's functionality (e.g. establish Audit Committee, enhance information transparency) and execution status in the current and the most recent fiscal year: The Group has formulated the “Rules of Procedure for Board Meetings” as guidelines for the operation of Board meetings. The Group has 3 independent directors and has established the Audit Committee and Remuneration Committee. In the future, the Group will disclose related information on its website and on the MOPS to improve the transparency of information required by the law.

(2) The operation of the Audit Committee

The 2nd term Audit Committee of the Group convened 11 times between 2020 and 2021 and twice in the reporting year until the annual report's publication date. The committee convened a total of 13 times (A) in the most recent 2 fiscal years until the annual report's publication date. Independent director attendance records were as follows:

Position	Name	Actual Attendance (B)	Proxy Attendance	Actual Attendance Ratio (B/A) (%)	Remarks
Independent director	Wen-Jing Tsai	13	0	100%	
Independent director	Ben Liu	13	0	100%	
Independent director	Jack Hsiao	13	0	100%	

Supplementary Information:

1. Where Audit Committee meetings meet any of the following criteria, the date and session of the convened Audit Committee meeting, the content of motions, dissenting or qualified opinions or major recommendations by independent directors, Audit Committee resolutions, and the handling of such opinions shall be clearly specified:

(1) The items listed in Article 14-5 of the Securities and Exchange Act:

Meeting Date and Session	Content of motions	How the Company has responded to the Audit Committee's opinions:
2020/03/12 2nd Board 5th Session	1. Motion of 2019 business report and 2019 consolidated financial statements 2. Motion of 2019 loss appropriation 3. Motion of 2017 consolidated financial report (compiled with reference to the 2016 pro forma financial statements) 4. Internal Control System Statement 5. Motion of the Group's capital reduction for the cancellation of employees restricted new shares 6. Motion of the plan for 2020 employee stock warrants 1. Motion of the appointment of CPAs	Passed by all members of the Audit Committee
2020/05/11 2nd Board 6th Session	7. Motion of the Q1 2020 consolidated financial statements	Passed by all members of the Audit Committee
2020/07/10 2nd Board 7th Session	1. Motion for amendments to the plan for 2020 employee stock warrants 2. Motion of amendments to the plan of a sound business 1. Motion of capital increase for Taiwan's sub-subsidiary	Passed by all members of the Audit Committee
2020/08/11 2nd Board 8th Session	1. Motion of the Q2 2020 consolidated financial statements 2. Motion for amendments to the plan for 2020 employee stock warrants 3. Motion of the U.S. subsidiary's capital increase	Passed by all members of the Audit Committee

	2020/11/11 2nd Board 9th Session	1. Motion for the Q3 2020 consolidated financial statements 2. Motion for 2020 amendments to the utilization of raised IPO funds 3. Motion of amendments to the plan of a sound business 3. Motion of cash capital increase	Passed by all members of the Audit Committee
	2020/12/24 2nd Board 10th Session	1. Motion of 2021 budget 4. 2021 audit plan	Passed by all members of the Audit Committee
	2021/01/06 2nd Board 11th Session	2. Motion for the withdrawal of the Group's second cash capital increase application for 2020	Passed by all members of the Audit Committee
	2021/03/17 2nd Board 12th Session	1. Motion of 2020 business report and 2020 consolidated financial statements 2. Motion of 2020 loss appropriation 3. Internal Control System Statement 4. Motion of the appointment of CPAs 5. Motion of amendments to the plan of a sound business 6. Motion of amendments to the Group's "Procedures for Acquisition or Disposal of Assets"	Passed by all members of the Audit Committee
	2021/05/13 2nd Board 13th Session	6. Motion of the Q1 2021 consolidated financial statements 7. Expanded rental plan of US subsidiary 8. Expanded rental plan of US subsidiary	Passed by all members of the Audit Committee
	2021/08/24 2nd Board 14th Session	1. Motion of the Q2 2021 consolidated financial statements 2. Motion of amendments to the plan of a sound business 3. Motion of the plan for 2021 employee stock warrants 4. Motion for 2020 distribution of employee stock (1st distribution)	Passed by all members of the Audit Committee
	2021/11/08 2nd Board 15th Session	1. Motion of the Q3 2021 consolidated financial statements 2. Motion of 2021 budget 3. 2022 audit plan 4. Motion for amendments to the plan for 2020 employee stock warrants 5. Motion for 2020 distribution of employee stock warrants (2nd distribution)	Passed by all members of the Audit Committee
	2022/03/23 2nd Board 16th Session	1. Motion of 2021 business report and 2021 consolidated financial statements 2. Motion of 2021 Loss Appropriation 3. Internal Control System Statement 4. Amendment to the Company's "Rules and Procedures of Shareholders' Meeting" 5. Amendment to the Company's "Operational Procedures for Acquisition and Disposal of Assets"	Passed by all members of the Audit Committee

	6. Amendment to the Company's Corporate Governance Best Practice Principles 7. Motion for 2020 distribution of employee stock warrants (3rd distribution)	
2022/05/10 2nd Board 17th Session	1. 2022 Q1 Consolidated Financial Statements 2. Capital injection to Applied BioCode Taiwan Ltd. 3. 2021 Employee Stock Option Allocation Plan (The Fourth Allocation) 4. The Loan to Applied BioCode Taiwan Ltd.	Passed by all members of the Audit Committee

(2) Other than those described above, any resolutions not approved by the Audit Committee passed by more than two-thirds of directors: None.

2. In case of an independent director's recusal in a motion related to his/her own interests, please specify the director's names, the content of motions, the reasons for the recusal, and the voting results: None.

3. State of communication between independent directors, internal audit supervisor and CPA (such as significant items, methods and results of communications on the Group's finances and business status): The Group's Audit Committee meetings are convened in accordance with the "Audit Committee Charter." Through related motions, financial reports audited by CPAs are regularly reviewed. The internal audit implementation status and results are regularly reported to the Audit Committee. The Audit Committee also keeps a smooth communication channel with the independent directors.

(3) Corporate governance execution status and deviations from "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies"

Evaluation Item	Implementation Status			Difference from the Corporate Governance Best-Practice Principles for TWSE/TEPx Listed Companies and the reasons
	Yes	No	Summary	
1. Whether the Company establishes and discloses its corporate governance rules in accordance with the Corporate Governance Best-Practice Principles for TSE/TPEx Listed Companies?	✓		The Group has established its Corporate Governance Best-Practice Principles to implement vital corporate governance principles to protect shareholders' equity and interests, strengthen the functions of the Board of Directors and enhance the transparency of information. The Group has also formulated related corporate governance rules, such as the Rules of Procedure for Board Meetings, the Audit Committee Charter, the Remuneration Committee Charter, the Procedures for Handling Material Inside Information and Prevention of Insider Trading, the internal audit system, and the Ethical Corporate Management Best Practice Principles. The Group discloses material information as required by applicable laws and regulations and discloses financial and nonfinancial information regularly. 3 independent directors have also been set up; therefore, the Group's practical operations are handled in accordance with corporate governance rules.	No material nonconformity
2. Equity structure and shareholders' equity (1) Has the Company established internal procedures to handle shareholders' proposals, doubts, disputes, and litigation matters; also, have the procedures been implemented accordingly?	✓ ✓		(1) The Group has appointed a professional stock transfer agency in Taiwan to handle stock affairs. It has set up a spokesperson and deputy spokesperson that are available to deal with shareholders' suggestions, doubts and disputes.	No material nonconformity
(2) Does the Company have the list of the Company's major shareholders and the list of the ultimate controllers of the major shareholders?	✓ ✓		(2) Through the insider reporting system, the Group is aware of the changes in the list of major shareholders and ultimate controllers of major shareholders.	No material nonconformity
(3) Has the Company established and implemented the risk control and firewall mechanisms with affiliated enterprises?			(3) The Group has formulated the "Management Measures Governing Transactions between Enterprises, Certain Companies and Related Parties." Related	No material nonconformity

Evaluation Item	Implementation Status			Difference from the Corporate Governance Best-Practice Principles for TWSE/TEPx Listed Companies and the reasons
	Yes	No	Summary	
			matters are handled accordingly to enforce risk control.	
(4) Has the Company set up internal norms to prohibit insiders from utilizing undisclosed information to trade securities?			(4) The Group has formulated the Procedures for Handling Material Inside Information and Prevention of Insider Trading to prevent insiders from trading marketable securities using information that is not yet open to the public. The Group also strengthens the promotion of legal compliance of insiders to be aware of and follow applicable regulations.	No material nonconformity
3. The composition, duties of the Board of Directors				
(1) Has the board of directors formulated a diversity policy and concrete management objectives and have this policy and objectives been implemented?	✓ ✓		(1) The Group's current Board is made up of 3 directors and 3 independent directors, who share backgrounds of biotechnology, healthcare, business management, and finance and accounting.	No material nonconformity
(2) Apart from establishing the Remuneration Committee and audit committee by the law, has the Company established other functional committees voluntarily?	✓		(2) Currently, we have established the Remuneration Committee and Audit Committee. In the future, the Group may set up other functional committees according to business needs.	May be established according to future needs.
(3) Has the company established the Regulations Governing the Board Performance Evaluation and its evaluation methods, and does the company conduct a regular performance evaluation each year and submit the results of performance evaluations to the Board of Directors (or peer) and use them as a reference in determining remuneration for individual directors, their nomination, and additional office terms?	✓		(3) The Group has established the Regulations Governing the Board Performance Evaluation and its evaluation methods and conducts a regular performance evaluation as required. The first quarter of 2020 has been evaluated by all members of the board and the result has been submitted to the Board.	No material nonconformity
(4) Has the company assessed the independence of the CPAs regularly?			(4) We appoint CPAs through approval by the Board and carry out regular evaluations on the independence of the CPAs. The accounting firm of the Group's CPAs is a large accounting firm that audits the Group's financial statements with their substantial	No material nonconformity

Evaluation Item	Implementation Status			Difference from the Corporate Governance Best-Practice Principles for TWSE/TEPx Listed Companies and the reasons
	Yes	No	Summary	
			independence and is in compliance with laws and regulations.	
4. Has the company designated an appropriate number of personnel that specializes (or are involved) in corporate governance affairs (including but not limited to providing directors/supervisors with the information needed and assist directors and supervisors in complying with the laws and regulations to perform their duties, convention of board meetings and shareholders meetings, preparation of board meeting and shareholders meeting minutes, etc.)?	✓		The Group currently does not meet the criteria of establishing a corporate governance department or personnel required by the competent authority; however, there are part-time corporate governance personnel responsible for related affairs.	May be established according to future needs.
5. Has the company established channels for communication with the stakeholders (including but not limited to shareholders, employees, customers, and suppliers), and set up a section for stakeholders on the official website of the Company with a proper response to the concerns of the stakeholders on issues related to corporate social responsibility?	✓		The Group has set up dedicated personnel and email to respond to CSR issues concerning stakeholders properly.	No material nonconformity
6. Has the company appointed a professional stock transfer agency to handle stock affairs related to shareholders meetings?	✓		The Group has appointed a professional stock transfer agency in Taiwan to handle stock affairs and affairs related to shareholders meetings.	No material nonconformity
7. Information Disclosure (1) Does the company have a website set up and the financial business and corporate governance information disclosed?	✓		(1) The Group has a website in both Chinese and English where Company information will continue to be disclosed. The Group also discloses related information on MOPS as required by regulations.	No material nonconformity
(2) Has the company adopted other information disclosure methods (such as establishing an English website, designating a responsible person for collecting and disclosing information of the Company, substantiating the spokesperson system, and upload the procedure of institutional investor conference on its website, etc.)?	✓		(2) The Group has a website in both Chinese and English and provides information on the Group's business and corporate governance. The information is also disclosed on MOPS to facilitate external inquiries about the Group's financial and business information. Dedicated personnel have been appointed to collect	No material nonconformity

Evaluation Item	Implementation Status			Difference from the Corporate Governance Best-Practice Principles for TWSE/TEPx Listed Companies and the reasons
	Yes	No	Summary	
			and disclose the company's information. The Group has also established a spokesperson and deputy spokesperson system and will convene institutional investor conferences in the future as required by regulations.	
(3) Has the company published and reported its annual financial report within two months after the end of a fiscal year, and published and reported its financial reports for the first, second, and third quarters, as well as its operating status for each month before the specified deadline?			(3) The Group published and reported its financial reports before the specified deadline.	No material nonconformity
8. Is there any important information (including but not limited to employee rights and benefits, employee care, investor relations, supplier relations, stakeholder rights, the continuing education of the directors and supervisors, risk management policy and risk assessment implementation, the pursuit of customer policy, and the purchase of liability insurance for the company's directors and supervisors) that is helpful in understanding the corporate governance operation of the company?	✓		(1) Employee rights and benefits, employee care: We attach great importance to the rights and benefits of employees and maintains smooth communication channels while providing adequate education and training and reasonable remuneration and benefits.	No material nonconformity
			(2) Investor relations: We publish all information on MOPS and the Group's website. Spokesperson and deputy spokesperson have also been set up to maintains investor relations.	No material nonconformity
			(3) Supply relations: We have clear agreements with suppliers and customers to regulate each other's rights and obligations.	No material nonconformity
			(4) Stakeholder rights: Stakeholders may communicate with and make suggestions to us through our website, spokesperson and deputy spokesperson to protect their legitimate rights and interests.	No material nonconformity
			(5) The directors and supervisors' continuing education: Continuing education is provided to directors as required by regulations.	No material nonconformity
			(6) Risk management policy and risk assessment implementation: We have established an internal	No material nonconformity

Evaluation Item	Implementation Status			Difference from the Corporate Governance Best-Practice Principles for TWSE/TEPx Listed Companies and the reasons
	Yes	No	Summary	
			control system and management measures and carry out operating procedures required by regulations. (7) The pursuit of customer policy: We implement quick response and quality customer service mechanism so as to become our customers' permanent business partner. (8) The purchase of liability insurance for the Company's directors and supervisors: The Group currently purchases liability insurance for directors.	No material nonconformity No material nonconformity
9. Please explain the improvements made, based on the latest Corporate Governance Evaluation results published by TWSE Corporate Governance Center, and propose enhancement measures for any issues that are yet to be rectified: (companies that are not included in the evaluation list do not need to fill in this field): The Group is not listed as an evaluation company, so filling in is not required.				

(4) If the company has established a remuneration committee, its composition, duties and operations should be disclosed:

1. Information of members of the Remuneration Committee

Qualification / Identity	Name	Professional Qualification	Experience	Independence Criteria (conforms to the criteria set out in the Note)	Number of Other Public Companies Where the Member is Also a Member of Their Remuneration Committee
Independent director (Convener)	Wen-Jing Tsai	Professional or technical specialists who have passed a national examination or hold a license in accounting or another profession required for the Company's business operations with at least five years' experience.	Bachelor in Accounting, National Taiwan University Master in Accounting, National Chengchi University Manager, Deloitte Taiwan CEO, the Tax Committee, Taipei CPA Association Deputy Chairman, the National Federation of CPA Associations of the R.O.C.	(1) No; (2) None; (3) No; (4) None; (5) Yes	1
Independent director	Ben Liu	Lecturer or above in commerce, law, finance, accounting or other subjects required for the Company's business operations in public or private colleges or universities, at least five years' experience in commerce, law, finance, accounting, or another profession required for the Company's business operations, and professional or technical specialists who have passed a national examination or hold a license in law or another profession required for the Company's business operations.	Ph.D. in Law, National Chengchi University Department of Law, National Taiwan University Lawyer, Perkins Coie Lawyer, Yongyun International Law Firm Lawyer, Lee and Li	(1) No; (2) None; (3) No; (4) None; (5) Yes	2
Independent director	Jack Hsiao	Required working experience at least five years in commerce, law, finance, accounting or other fields required by the business of the Company.	PhD, Boston University School of Medicine Deputy Chief Operating Officer, Show Chwan Health Care System Co-host, Telecare, Department of Health, Executive Yuan OmniHealth Group (US/TW) CEO	(1) No; (2) None; (3) No; (4) None; (5) Yes	-

Note: Independent directors shall provide a detailed description of their conformity to independence criteria including but not limited to the following: (1) Does the candidate, his/her spouse, or one of his/her relatives within the second degree of kinship serve as director, supervisor, or employee at the Company or one if its affiliates? (2) How many company shares does the candidate, his/her spouse, or one of his/her relatives within the second degree of kinship (or the candidate under others' names) hold and what is the shareholding ratio? (3) Does the candidate serve as director, supervisor, or employee of a company that has a specific relationship with this Company (as stipulated in Article 3, Paragraph 1, Subparagraph 5-8 of the Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies)? (4) Cumulative compensation received for the provision of commercial, law, financial, and accounting services to this Company or its affiliates within the past two years; (5) Do one of the circumstances specified in Article 30 of the Company Act apply?

2. Information on the operation of the Remuneration Committee
   (1) The Group's Remuneration Committee is made up of 3 persons.
   (2) Current term: May 27, 2019 to May 26, 2022. The Remuneration Committee convened 9 times between 2020 and 2021 and once in the current year until the printing of the annual report for publication. The committee convened a total of 10 times in the most recent 2 fiscal years until the printing of the annual report for publication. Committee member attendance records were as follows:

Position	Name	Actual Attendance (B)	Proxy Attendance	Actual Attendance Ratio (%) (B/A)	Remarks
Convener	Wen-Jing Tsai	10	-	100%	
Member	Ben Liu	10	-	100%	
Member	Jack Hsiao	10	-	100%	

Supplementary Information:

1. If the Board of Directors declines to adopt or modify a recommendation of the Remuneration Committee, the date, session, the content of motions, and the resolution of the Board meeting and handling of the resolution of the Remuneration Committee shall be specified (if the compensation package approved by the Board is better than the recommendation made by Remuneration Committee, please specify the discrepancy and its reason): None.
2. If a particular member holds an adverse opinion or qualified opinion on the resolution of the Remuneration Committee on record or in a written declaration, specify the date, the session, the content of motions, the opinions of all members, and the responses to the opinions of the members: None.

(5) Promotion of sustainable development and deviation from the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies and the reasons thereof

Evaluation Item	Implementation Status			Deviation from the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies and the reasons thereof
	Yes	No	Summary	
1. Has the Company established a governance framework for the promotion of sustainable development and has it designated units that are directly or concurrently responsible for the promotion of sustainable development? Has the board of directors authorized senior management to handle relevant matters and does it fulfill its supervisory duties?	✓		The Group has adopted Corporate Social Responsibility Best Practice Principles, which encompass sustainable development planning and internal control systems and relevant management measures of the Group's operating bodies formulated in accordance with the actual operations and needs of the environment in which they operate.	No material nonconformity
2. Has the company performed risk assessments on environmental, social, and corporate issues in relation to the Company's operations according to material principles and formulated relevant risk management policies or strategies?	✓		Although we have not yet set up a designated (or part-time) department to promote CSR, we explain to our employees the environmental management system to raise their awareness regarding environmental protection through education and training.	May be established according to future needs.
3. Environmental issues	✓			
(1) Does the company have an appropriate environmental management system established in accordance with its industrial character?			(1) We place great importance on environmental protection and have established an appropriate environmental management system in accordance with its industrial character.	No material nonconformity
(2) Has the company committed efforts to upgrade the efficient use of resources and using recycled materials, causing less burden to the environment?			(2) We strive to enhance the efficient use of resources and foster good habits such as low-carbon office, water and power conservation among our employees.	No material nonconformity
(3) Does the company assess potential risks and opportunities associated with climate change and undertake measures in response to climate issues?			(3) As we are primarily engaged in the production and sales of vitro diagnostic products, we are not directly related to climate change. However, the management team keeps a close eye on the target market regarding the impact of climate change in order to formulate and adopt relevant measures	No material nonconformity

Evaluation Item	Implementation Status			Deviation from the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies and the reasons thereof
	Yes	No	Summary	
(4) Does the company maintain statistics on greenhouse gas emissions, water usage and total waste volume in the last two years and implement policies to reduce energy, carbon, greenhouse gas, water and waste?			accordingly. (4) We are committed to reducing the impact of the Group's operation on the environment. We pay attention to the temperature in the office in an attempt to reduce carbon emissions while promoting energy conservation, recycling and reusing.	No material nonconformity
4. Social issues (1) Does the company have the relevant management policies and procedures stipulated in accordance with the applicable laws and regulations and international conventions on human rights?	✓		(1) We protect employees' legal rights and interests by formulating personnel management rules, work rules, and other policies and procedures as required by labor laws and regulations.	No material nonconformity
(2) Has the company established and implemented reasonable measures for employee benefits (including: remuneration, holidays and other benefits) and appropriately reflect the business performance or achievements in the employee remuneration?			(2) We have established and implemented reasonable employee benefit measures (including remuneration, holidays and other benefits), and reflect our business performance or achievements in the employee remuneration.	No material nonconformity
(3) Does the company provide employees with a safe and healthy work environment and regularly provide safety and health education to employees?			(3) We provide our employees with a safe and healthy workplace. We organize labor safety education and training periodically.	No material nonconformity
(4) Has the company established a training program for helping employees with effective career planning?			(4) We organize internal education and training from time to time and encourage our employees to take part in external education and training so that employees are able to improve their working ability.	No material nonconformity
(5) Has the company complied with laws and international standards with respect to customers' health, safety and privacy, marketing and labeling in all products and services offered, and			(5) Our marketing and labeling of products and services comply with applicable laws, regulations, and international standards.	No material nonconformity

Evaluation Item	Implementation Status			Deviation from the Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies and the reasons thereof
	Yes	No	Summary	
implemented consumer and client protection policies and complaint procedures? (6) Has the company implemented a supplier management policy that regulates suppliers' conduct with respect to environmental protection, occupational safety and health or work rights/human rights issues, and tracked suppliers' performance on a regular basis?			(6) Although the Group's contracts currently entered into with its major suppliers do not cover the contents listed on the left, ABC-KY performs audits on suppliers' basic information as required by the internal control system and applicable management measures. Until now, ABC-KY has no suppliers with significant environmental protection concerns, occupational safety and health, or labor and human rights.	May be established according to future needs.
5. Does the company prepare a corporate social responsibility report or any non-financial information report based on international reporting standards or guidelines? Are the abovementioned reports supported by the assurance or opinion of a third-party verification unit?		✓	The Group has not prepared a CSR report.	May be established according to future needs.
6. If the Company has formulated its own sustainable development best practice principles in accordance with the "Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies," please clearly specify the state of implementation and any deviations: The Group has adopted its own Corporate Social Responsibility Best Practice Principles There are no significant deviations from the "Sustainable Development Best Practice Principles for TWSE/TPEx Listed Companies."				
7. Any other important information that may help the understanding of the performance of sustainable development promotion better: Not only do we attach great importance to legal compliance to protect all stakeholders, as a group concerned by society, but it has also become the Group's culture to strive to fulfill its corporate social responsibility while setting an example.				

(6) Ethical Corporate Management Best Practice Principles and Deviations from Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies and Reasons

Evaluaation Item	Implementation Status			Deviations from Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies and Reasons
	Yes	No	Summary	
1. Ethical Management Policies and Action Plans (1) Has the company established an ethical management policy that its Board of Directors has passed, and clearly specified in its rules and external documents the ethical corporate management policies and the commitment by the Board of Directors and senior management on the rigorous and thorough implementation of such policies and methods?	✓ ✓ ✓		(1) The Group has formulated the Ethical Corporate Management Best Practice Principles and the Conduct Guidelines, in which the policy, method and commitment of ethical management are clearly listed.	No material nonconformity
(2) Has the company established a risk assessment mechanism against unethical behavior, analyzed and assessed business activities within their business scope regularly that are at a higher risk of being involved in unethical behavior, and established prevention programs at least covering the preventive measures specified in Paragraph 2, Article 7 "Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies"?			(2) The Group has formulated the Ethical Corporate Management Best Practice Principles and the Conduct Guidelines, in which the regulations are clearly listed.	No material nonconformity
(3) Has the company specified operational procedures, behavioral guidelines, disciplines of violations, as well as an appeal system in the program against unethical behavior, and implemented such programs, and reviewed and revised the previous program on a regular basis?			(3)The Group has established the Guidelines for the Adoption of Codes of Ethical Conduct and foster the idea of corporate ethics to the employee. The Group's management regulations have clear, relevant reward and disciplinary measures.	No material nonconformity
2. Implementation of Ethical Management (1) Does the company evaluate the integrity of all counterparties it	✓		(1) The Company carries out a review on the basic information of whom	No material nonconformit

Evaluaation Item	Implementation Status			Deviations from Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies and Reasons
	Yes	No	Summary	
has business relationships with? Are there any integrity clauses in the agreements it signs with business partners?	✓		the Company does business with, as required by the internal control system and applicable management measures. So far, there is no significant irregularity in the content of purchase and sales or payment and receipt. Therefore, the main counterparties should have no unethical record. Although ABC-KY does not specify integrity terms in the contract entered into with counterparties, both the Company and counterparties carry out operating procedures in accordance with our respective internal norms. ABC-KY also enforces the regulations stipulated in the Ethical Corporate Management Best Practice Principles and the Conduct Guidelines.	y/ The Company will specify ethical terms and conditions in the contract according to future needs.
(2) Has the company set up a dedicated, responsible unit to promote corporate ethical management under the Board of Directors, and has such unit reported its execution in terms of ethical management policy and preventive programs against unethical behaviors and the supervision status to the Board of Directors on a regular basis (at least once a year)?	✓		(2) Although the Group has not established a dedicated unit to promote corporate ethical management under the Board of Directors, all of the Group's operating activities adhere to the spirit of ethical Corporate Management Best Practice Principles and the Conduct Guidelines, and implement ethical management policy while proactively preventing any unethical conduct.	May be established according to future needs.
(3) Does the company have any policy that prevents conflict of interest and channels that facilitate the reporting of conflicting interests?	✓		(3) The Group has established the Guidelines for the Adoption of Codes of Ethical Conduct for the employee to follow, to prevent them from sacrificing the Company's interests for their personal gains.	No material nonconformity
(4) Has the company established an effective accounting system and internal control system in order to implement ethical management, and propose relevant audit plans according to	✓		(4) The Group has established an effective accounting system and internal control system. These	No material nonconformity

Evaluaation Item	Implementation Status			Deviations from Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies and Reasons
	Yes	No	Summary	
the assessment results of the risks of unethical behaviors, and review the compliance status of the prevention of unethical behaviors, or entrust an accountant to carry out the review? (5) Does the company organize internal or external training on a regular basis to maintain ethical management?			systems are regularly reviewed for compliance by internal auditors. (5) The Group has established rules for ethical management and promotes the importance of ethical management to the employee from time to time.	No material nonconformity
3. Whistleblowing system (1) Does the company have a specific whistleblowing and reward system established, a convenient report channel established, and a responsible staff designated to handle the individual being reported? (2) Has the company implemented any standard procedures and/or subsequent measures after carrying out an investigation or confidentiality measures for handling reported misconducts? (3) Has the company taken appropriate measures to protect the whistle-blower from suffering any consequences of reporting an incident?	✓ ✓ ✓		(1) Applicable operations have been stipulated in the Group's Ethical Corporate Management Best Practice Principles and the Conduct Guidelines. However, there has not been any whistleblowing incidents. (2) Applicable operations have been stipulated in the Group's Ethical Corporate Management Best Practice Principles and the Conduct Guidelines. (3) Applicable operations have been stipulated in the Group's Ethical Corporate Management Best Practice Principles and the Conduct Guidelines.	No material nonconformity No material nonconformity No material nonconformity
4.Information Disclosure Strengthening Has the company disclosed the content of its ethical corporate management best practice principles and the results of implementation on its official website and MOPS?	✓		The Group's information is released in a timely and transparent manner, and information related to ethical corporate management is fully disclosed in the annual report.	No material nonconformity

Evaluaation Item	Implementation Status			Deviations from Ethical Corporate Managemen t Best Practice Principles for TWSE/TPE x Listed Companies and Reasons
	Yes	No	Summary	
5. For companies who have established Ethical Corporate Management Best Practice Principles in accordance with the "Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies," please describe the current practice and any deviations from the code of conduct: So far, there are no significant differences in the operation.				

6. Other important information that helps to understand the practice of ethical management of the company: (e.g., the review and revision of Ethical Corporate Management Best Practice Principles): The Group arranges corporate governance courses for directors on a regular basis and promotes the ethical management policy through internal meetings from time to time.

Note: Regardless of clicking "yes" or "no," it should be explained in the summary field.

(7) If the Company established the Corporate Governance Principles and related articles, please disclose the inquiry method:

We have formulated measures including the Ethical Corporate Management Best Practice Principles and Guidelines for the Adoption of Ethical Conduct codes. Not only are these measures disclosed on MOPS as required by the competent authority, we have also set up a corporate governance section on the website to fully disclose information on the Group's corporate governance.

(8) Other important information that is sufficient to enhance the understanding of the operation of corporate governance: None.

(9) Internal control system implementation status

1. Internal Control System Statement

Applied BioCode Corporation

內部控制制度聲明書

日期：111年3月23日

本公司民國110年度1月1日至12月31日之內部控制制度，依據自行評估的結果，謹聲明如下：

一、本公司確知建立、實施和維護內部控制制度係本公司董事會及經理人之責任，本公司業已建立此一制度。其目的係在對營運之效果及效率(含獲利、績效及保障資產安全等)、報導具可靠性、及時性、透明性及符合相關規範暨相關法令規章之遵循等目標的達成，提供合理的確保。

二、內部控制制度有其先天限制，不論設計如何完善，有效之內部控制制度亦僅能對上述三項目標之達成提供合理的確保；而且，由於環境、情況之改變，內部控制制度之有效性可能隨之改變。惟本公司之內部控制制度設有自我監督之機制，缺失一經辨認，本公司即採取更正之行動。

三、本公司係依據「公開發行公司建立內部控制制度處理準則」（以下簡稱「處理準則」）規定之內部控制制度有效性之判斷項目，判斷內部控制制度之設計及執行是否有效。該「處理準則」所採用之內部控制制度判斷項目，係為依管理控制之過程，將內部控制制度劃分為五個組成要素：1.控制環境，2.風險評估，3.控制作業，4.資訊與溝通，及5.監督作業。每個組成要素又包括若干項目。前述項目請參見「處理準則」之規定。

四、本公司業已採用上述內部控制制度判斷項目，評估內部控制制度之設計及執行的有效性。

五、本公司基於前項評估結果，認為本公司於民國110年12月31日之內部控制制度（含對子公司之監督與管理），包括瞭解營運之效果及效率目標達成之程度、報導係屬可靠、及時、透明及符合相關規範暨相關法令規章之遵循有關的內部控制制度等之設計及執行係屬有效，其能合理確保上述目標之達成。

六、依「臺灣證券交易所股份有限公司外國發行人第一上市後管理作業辦法」第四條之規定，本公司依據「處理準則」第二十八條之規定，委託會計師專案審查上開期間與外部財務報導之可靠性及與保障資產安全(使資產不致在未經授權之情況下取得、使用或處分)有關的內部控制制度，如前項所述，其設計及執行係屬有效，並無影響財務資訊之記錄、處理、彙總及報告可靠性之重大缺失，亦無影響保障資產安全，使資產在未經授權之情況下遂行取得、使用或處分之重大缺失。

七、本聲明書將成為本公司年報及公開說明書之主要內容，並對外公開。上述公開之內容如有虛偽、隱匿等不法情事，將涉及證券交易法第二十條、第三十二條、第一百七十一條及第一百七十四條等之法律責任。

八、本聲明書業經本公司民國111年3月 23 日董事會通過，出席董事6人中，有0人持反對意見，餘均同意本聲明書之內容，併此聲明。

Applied BioCode Corporation

董事長： 簽章

總經理： 簽章

If an accountant is entrusted to perform a special audit on the internal control system, the audit report shall be disclosed

pwc 資誠

Applied BioCode Corporation
內部控制制度審查報告

資會綜字第 21018601 號

後附 Applied BioCode Corporation 民國 111 年 3 月 23 日謂經評估認為其與外部財務報導及保障資產安全有關之內部控制制度，於民國 110 年 12 月 31 日係有效設計及執行之聲明書，業經本會計師審查竣事。維持有效之內部控制制度及評估其有效性係公司管理階層之責任，本會計師之責任則為根據審查結果對公司內部控制制度之有效性及上開公司之內部控制制度聲明書表示意見。

本會計師係依照「公開發行公司建立內部控制制度處理準則」及一般公認審計準則規劃並執行審查工作，以合理確信公司上述內部控制制度是否在所有重大方面維持有效性。此項審查工作包括瞭解公司內部控制制度、評估管理階層評估整體內部控制制度有效性之過程、測試及評估內部控制制度設計及執行之有效性，以及本會計師認為必要之其他審查程序。本會計師相信此項審查工作可對所表示之意見提供合理之依據。

任何內部控制制度均有其先天上之限制，故 Applied BioCode Corporation 上述內部控制制度仍可能未能預防或偵測出業已發生之錯誤或舞弊。此外，未來之環境可能變遷，遵循內部控制制度之程度亦可能降低，故在本期有效之內部控制制度，並不表示在未來亦必有效。

依本會計師意見，依照「公開發行公司建立內部控制制度處理準則」之內部控制有效性判斷項目判斷，Applied BioCode Corporation 與外部財務報導及保障資產安全有關之內部控制制度，於民國 110 年 12 月 31 日之設計及執行，在所有重大方面可維持有效性；Applied BioCode Corporation 於民國 111 年 3 月 23 日所出具謂經評估認為其上述與外部財務報導及保障資產安全有關之內部控制制度係有效設計及執行之聲明書，在所有重大方面則屬允當。

資 誠 聯 合 會 計 師 事 務 所

許林爵

會計師 梁婉女

前行政院金融監督管理委員會證券期貨局
核准簽證文號：金管證審字第0990047105號
前行政院金融監督管理委員會
核准簽證文號：金管證審字第0990001654號

中 華 民 國 111 年 3 月 25 日

資誠聯合會計師事務所 PricewaterhouseCoopers, Taiwan
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(10) If there has been any legal penalty against the company or its internal personnel, or any disciplinary penalty by the company against its internal personnel for violation of the internal control system, during the last fiscal year or during the current fiscal year up to the publication date of the annual report, where the result of such penalty could have a material effect on shareholders' equity or securities prices, the annual report shall disclose the penalty, the main shortcomings, and condition of improvement: None.

(11) Material resolutions of a shareholders meeting or a board of directors meeting during the last fiscal year and up to the date of publication of the annual report:

Date of Meeting	Session	Content of motions	Resolution
2021/01/06	12th meeting of the 3rd board	Motion for the withdrawal of the Group's second cash capital increase application for 2020	Motion has been passed
2021/03/17	13th meeting of the 3rd board	(1) Motion of 2020 Business Report and 2020 Consolidated Financial Statements (2) Motion of 2020 loss appropriation	Motion has been passed
2021/05/13	14th meeting of the 3rd board	(1) Motion of the Q1 2021 consolidated financial statements (2) Motion of capital increase for Taiwan's sub-subsidiary	Motion has been passed
2021/06/09	15th meeting of the 3rd board	2021 Postponement of Annual Shareholders General Meeting	Motion has been passed
2021/07/05	2021 Annual General Meeting	(1) Motion of 2020 Business Report and 2020 Consolidated Financial Statements (2) Motion of 2020 loss appropriation	Motion has been passed
2021/08/24	16th meeting of the 3rd board	(1) Motion of the Q2 2021 consolidated financial statements (2) Motion of the plan for 2021 employee stock warrants	Motion has been passed
2021/11/08	17th meeting of the 3rd board	(1) Motion of the Q3 2021 consolidated financial statements (2) Motion of 2022 budget (3) 2022 audit plan (4) Motion for amendments to the plan for 2021 employee stock warrants	Motion has been passed
2022/03/23	18th meeting of the 3rd board	(1) Motion of 2021 business report and 2021 consolidated financial statements (2) Motion of 2021 Loss Appropriation (3) Amendment to the "Company's Memorandum and Articles of Association"	Motion has been passed
2022/04/28	19th meeting of the 3rd board	(1) Election of New Directors and New Independent Directors (2) Release Non-Competition Covenants from All Newly Elected Directors (Including Independent Directors)	Motion has been passed

2022/05/10	20th meeting of the 3rd board	(1) 2022 Q1 Consolidated Financial Statements (2) Capital injection to Applied BioCode Taiwan Ltd. (3) The Loan to Applied BioCode Taiwan Ltd.	Motion has been passed

(12) Any other documented objections or qualified opinions raised by directors or supervisors against board resolutions in relation to matters, and their content for the most recent fiscal year and as of the publication date of the annual report: None.

(13) Separation or discharge of chairman, president and managerial staff of accounting, finance, internal audit, and research and development for the most recent fiscal year and as of the publication date of the annual report: None.

5. Information of CPA Professional Fees

(1) Information of CPA Professional Fees

Unit: NT$ thousand

Name of the Accounting Firm	Name of the CPAs	CPA audit period	Audit Fee	Non-Audit Fee	Total	Remarks
PwC Taiwan	Wendy Liang	2021	5,883	0	5,883	
	Alan Chien					
	Wendy Liang	Issuance of employee stock warrants	0	196	196	
	Gary Hsu	Special internal control audit	980	0	980	

(2) When the company changes its accounting firm and the audit fees paid for the financial year in which the change took place are lower than those paid for the financial year immediately preceding the change, the amount of the audit fees before and after the change and the reason shall be disclosed: None.

(3) Over 10% decrease in audit fee compared to the previous year, the decreased amount, percentage and reason of the audit fee shall be disclosed: None.

6. Change of CPAs: The Group's original CPAs were Andy Chang and Wendy Liang of PwC Taiwan. Due to the rotation requirement, from the first quarter of 2021, the CPAs for the Company have been changed to Wendy Liang and Alan Chien.

7. Status of whether the company's chairman, president, or any managerial officer in charge of finance or accounting matters has for the last fiscal year held a position at the accounting firm of its auditing CPAs or at an affiliate: None.

8. Information of shares transfers or pledges from Board of Directors, Managers, and shareholders with more than 10% shareholding

(1) Changes in shareholding and changes in pledge of shares by directors, supervisors, managerial officers and major Shareholders:

Unit: Shares

Position	Name	2020		2021		As of March 31, 2022	
		Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged
Chairman	George J. Lee	-	-	-	-	-	-
Director and President	Winston Z. Ho	5,000	-	-	-	-	-
Directors	Richard Chang (Note 1)	-	-	-	-	-	-
Directors	Benjamin Jen	-	-	-	-	-	-
Independent director	Wen-Jing Tsai	-	-	-	-	-	-
Independent director	Jack Hsiao	-	-	-	-	-	-
Independent director	Ben Liu	-	-	-	-	-	-
Vice President	Michael Aye	140,000	-	30,000	-	-	-
Vice President	Donald Wong (Note 2)	50,000	-	(18,500)	-	-	-
Vice President	Liang-Kai Huang	10,000	-	-	-	-	-
Vice President	Yu-Lin Chen	(100,000)	-	6,500	-	-	-
Vice President	Christopher Bernard (Note 3)	-	-	-	-	-	-
Director	Steve Partono (Note 3)	(8,708)	-	-	-	-	-
Director	Tara Viviani (Note 4)	-	-	-	-	-	-
Director	Michael Ho	-	-	-	-	-	-
Director	Gerald Kowalski	-	-	(3,500)	-	-	-
Director	Gao Chen	5,000	-	-	-	-	-
Director	Ingrid Joseph	9,500	-	-	-	-	-
Director	Frank Mitchell	-	-	-	-	-	-
Director	April Tang	20,000	-	-	-	5,000	-
Director	Debra Linguist (Note 4)	(27,998)	-	-	-	-	-
Director	Chia-Chi Chang (Note 4)	18,000	-	(4,000)	-	-	-
Director	Roland Stricland (Note 5)	-	-	-	-	-	-
Director	Parisa Hanachi (Note 6)	-	-	-	-	-	-
Director	Michale Jason Scott (Note 6)	-	-	-	-	-	-
Manager	Jau-Tung Pan	-	-	-	-	-	-
Manager	Zong-Han You	-	-	-	-	-	-

Position	Name	2020		2021		As of March 31, 2022	
		Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged	Net Change in Shareholding	Net Change in Shares Pledged
Shareholders holding more than 10% of the shares	Maxwell Sensors	-	-	-	-	-	-

Note 1: Director, Richard Chang resigned on August 30, 2020.
Note 2: Managerial officer Donald Wong was relieved from his duties in March 2022. His duties were taken over by Managerial officer Gao Chen.
Note 3: Managerial officer Christopher Bernard was newly appointed in March 2022.
Note 4: Managerial officer, Steve Partono resigned on November 14, 2020.
Note 5: Managerial officer, Tara Viviani resigned on April 30, 2021. Managerial officer, Debra Linguist resigned on July 3, 2021. Managerial officer, Chia-Chi Chang resigned on April 6, 2021.
Note 6: Managerial officer Roland Strickland was newly appointed in August 2021.
Note 7: Managerial officers Parisa Hanachi and Michael Jason Scott were newly appointed in November 2021.

(2) Information on transfer of shares or pledge of shares to related parties: Not applicable.

9. Information of Relationship between top 10 shareholder

April 15, 2022; Unit: share; %

Name	Shareholding		Shareholding of Spouse & Minor Children		Number of shares held under another person's name		Names and relationship of top ten shareholders who are related parties, spouses or within second-degree of kinship to each other		Remarks
	Shares	%	Shares	%	Shares	%	Name	Relation	
Maxwell Sensors Inc.	8,307,042	10.16	-	-	-	-	Oceania, LLC.	-	-
(Representative: Winston Z. Ho)	103,750	0.13	4,953,316	6.06	4,905,900	6.00	-	-	-
Fu-Lung Shiu	6,854,723	8.38	-	-	-	-	-	-	-
GVT Fund, L.P.	4,169,131	5.10	-	-	-	-	-	-	-
(Representative: Benjamin Jen)	-	-	-	-	-	-	-	-	-
Eureka BioVenture Partners	3,571,060	4.37	-	-	-	-	-	-	-
(Representative: George J. Lee)	-	-	-	-	3,571,060	4.37	-	-	-
Celerus Diagnostics Inc.	2,729,061	3.34	-	-	-	-	-	-	-
Jih-Yuan Venture & Investment Inc.	2,088,427	2.56	-	-	-	-	-	-	-
(Representative: Richard Chang)	-	-	-	-	-	-	-	-	-
Wistron Corporation	2,075,000	2.54	-	-	-	-	-	-	-
(Representative: Shian-Ming Lin)	-	-	-	-	-	-	-	-	-
Wise Cap Limited Company	1,724,514	2.11	-	-	-	-	Wistron Corporation	-	-
(Representative: Fu-Chian Lin)	-	-	-	-	-	-	-	-	-
Min-De Huang	1,625,766	1.99	-	-	-	-	-	-	-
Oceania, LLC.	1,504,758	1.84	-	-	-	-	-	-	-
(Representative: Winston Z. Ho)	103,750	0.13	4,953,316	6.06	4,905,900	6.00	Maxwell Sensors	-	-

10. Number of shares and shareholding percentage of an invested entity held by the company, the company's board members, supervisors, managers and directly or indirectly controlled entities

December 312021; Unit: thousand shares; %

Investment business	Group Investment		Directors, supervisors, managers and investments in direct or indirectly controlled entities		Consolidated Investment	
	Shares	Shares Ratio	Shares	Shares Ratio	Shares	Shares Ratio
Applied BioCode, Inc.	43,140	100.00	-	-	43,140	100.00
ABC-TW (Note)	8,885	100.00	-	-	8,885	100.00

Note: Originally named Wei-Cih Biotechnology Corporation; changed its name on August 12, 2016.

IV. Fundraising

1. Capital and Shares

(1) Source of Share Capital

1. Formation of Share Capital

Unit: NT$; Shares

Year / Month	Issue Price	Authorized Share Capital		Paid-up Share Capital		Remarks		
		Shares	Amount	Shares	Amount	Source of Share Capital	Paid in properties other than cash	Others
2016.04	USD 0.0001	35,470,000	USD 3,547	1	USD 0.0001	Share Capital at establishment	None	—
Denomination of NT$10 (Note 1)								
2016.06	-	39,000,000	390,000,000	30,919,658	309,196,580	Share conversion	ABC-US Equity	Note 2
2016.07	-	39,000,000	390,000,000	30,909,658	309,096,580	Cancellation of 10,000 shares of restricted stock	None	—
2016.08	-	39,000,000	390,000,000	30,907,762	309,077,620	Cancellation of 1,896 shares of restricted stock	None	—
2016.10	USD 2.7751	90,000,000	900,000,000	33,152,605	331,526,050	Cash capital increase	None	—
2016.11	-	90,000,000	900,000,000	46,413,646	464,136,460	Capital surplus transferred to capital increase	Additional paid-in capital	—
2017.07	USD 0.036, 0.107, 0.286	90,000,000	900,000,000	46,437,509	464,375,090	Conversion of 23,863 shares of employee stock warrants	None	—
2017.8	USD 0.036, 0.107, 0.286	90,000,000	900,000,000	46,507,432	465,074,320	Conversion of 69,923 shares of employee stock warrants	None	—
2017.09	USD 0.036, 0.286	90,000,000	900,000,000	46,571,389	465,713,890	Conversion of 63,957 shares of employee stock warrants	None	—
2017.12	-	90,000,000	900,000,000	46,567,901	465,679,010	Cancellation of 3,488 shares of restricted stock	None	—
2017.12	NT$35	90,000,000	900,000,000	50,567,901	505,679,010	Cash capital increase to issue 4,000,000 new shares	None	Note 3
2018.01	USD 0.107, 0.286	90,000,000	900,000,000	50,598,233	505,982,330	Conversion of 30,332 shares of employee stock warrants	None	—
2018.03	USD 0.036, 0.039, 0.107, 0.286	90,000,000	900,000,000	50,764,174	507,641,740	Conversion of 165,941 shares of employee stock warrants	None	—
2018.06	0	90,000,000	900,000,000	51,092,174	510,921,740	Issued 328,000 employees restricted new shares	None	—

Year / Month	Issue Price	Authorized Share Capital		Paid-up Share Capital		Remarks		
		Shares	Amount	Shares	Amount	Source of Share Capital	Paid in properties other than cash	Others
2018.07	USD 0.036, 0.107, 0.286	90,000,000	900,000,000	51,258,744	512,587,440	Conversion of 166,570 shares of employee stock warrants	None	—
2018.08	USD 0.286	90,000,000	900,000,000	51,267,441	512,674,410	Conversion of 8,697 shares of employee stock warrants	None	—
2018.10	NT$ 38	90,000,000	900,000,000	61,967,441	619,674,410	Cash capital increase to issue 10,700,000 new shares	None	Note 4
November 2018	USD 0.286	90,000,000	900,000,000	61,970,024	619,700,240	Conversion of 2,583 shares of employee stock warrants	None	—
2018.12	USD 0.286	90,000,000	900,000,000	61,990,752	619,907,520	Conversion of 20,728 shares of employee stock warrants	None	—
2018.12	0	90,000,000	900,000,000	62,010,752	620,107,520	Issued 20,000 employees restricted new shares	None	—
2019.03	USD 0.286, 0.571	90,000,000	900,000,000	62,013,887	620,138,870	Conversion of 3,135 shares of employee stock warrants	None	—
2019.05	-	90,000,000	900,000,000	62,008,887	620,088,870	Cancellation of 5,000 shares of restricted stock	None	—
2019.09	NT$ 38	90,000,000	900,000,000	71,008,887	710,088,870	Cash capital increase to issue 9,000,000 new shares	None	Note 5
2019.12	NT$ 38	90,000,000	900,000,000	72,288,887	722,888,870	Cash capital increase to issue 1,280,000 new shares	None	Note 6
2019.12	USD 0.286	90,000,000	900,000,000	72,292,950	722,929,500	Conversion of 4,063 shares of employee stock warrants		
2020.02	USD 0.286	90,000,000	900,000,000	72,295,763	722,957,630	Conversion of 2,813 shares of employee stock warrants	None	—
2020.03	USD 0.286	90,000,000	900,000,000	72,297,764	722,977,640	Conversion of 2,001 shares of employee stock warrants	None	—
2020.03	-	90,000,000	900,000,000	72,290,264	722,902,640	Cancellation of 7,500 shares of restricted stock	None	—
2020.06	NT$ 48	90,000,000	900,000,000	81,340,264	813,402,640	Cash capital increase to issue 9,050,000 new shares	None	—
2020.06	USD 0.107, 0.286, 0.571	90,000,000	900,000,000	81,413,265	814,132,650	Conversion of 73,001 shares of employee stock warrants	None	—

Year / Month	Issue Price	Authorized Share Capital		Paid-up Share Capital		Remarks		
		Shares	Amount	Shares	Amount	Source of Share Capital	Paid in properties other than cash	Others
2020.07	USD 0.107, 0.571; NT$ 37.8	90,000,000	900,000,000	81,535,848	815,358,480	Conversion of 122,583 shares of employee stock warrants	None	—
2020.08	USD 0.107; NT$ 37.8	90,000,000	900,000,000	81,579,598	815,795,980	Conversion of 43,750 shares of employee stock warrants	None	—
2020.09	USD 0.286; NT$ 37.8	90,000,000	900,000,000	81,592,998	815,929,980	Conversion of 13,400 shares of employee stock warrants	None	—
2020.10	NT$ 37.8	90,000,000	900,000,000	81,597,998	815,979,980	Conversion of 5,000 shares of employee stock warrants	None	—
2020.12	USD 0.286; NT$ 35.6, 37.8	90,000,000	900,000,000	81,638,998	816,389,980	Conversion of 41,000 shares of employee stock warrants	None	—
2021.01	USD 0.286; NT$ 35.6, 37.8	90,000,000	900,000,000	81,660,718	816,607,180	Conversion of 21,720 shares of employee stock warrants	None	—
2021.03	USD 0.286	90,000,000	900,000,000	81,690,718	816,907,180	Conversion of 30,000 shares of employee stock warrants	None	—
2021.04	NT$ 37.8	90,000,000	900,000,000	81,697,218	816,972,180	Conversion of 6,500 shares of employee stock warrants	None	—
2021.08	USD 0.286; NT$ 37.8	90,000,000	900,000,000	81,729,218	817,292,180	Conversion of 32,000 shares of employee stock warrants	None	—
2022.03	USD 0.286	90,000,000	900,000,000	81,734,218	817,342,180	Conversion of 5,000 shares of employee stock warrants	None	—
2022.04	USD 0.286	90,000,000	900,000,000	81,763,218	817,632,180	Conversion of 29,000 shares of employee stock warrants	None	—

Note 1: The capital currency of ABC-KY was changed to New Taiwan Dollars at the shareholders meeting held on June 25, 2016. The capital of USD 0.0001 at the establishment was recovered for cancellation.
Note 2: At the shareholders meeting held on June 25, 2016, it was resolved to transfer ABC-US shares into ABC-KY shares.
Note 3: Effective on November 10, 2017 by Order No. Jin-Guan-Zheng-Fa-Zhi 1060042480.
Note 4: Effective on 5 July, 2018 by Order No. Jin-Guan-Zheng-Fa-Zhi 1070324292.
Note 5: Effective on April 26, 2019 by Order No. Jin-Guan-Zheng-Fa-Zhi 1080312561. The share capital after increase includes 7,500 shares that have been recovered but not yet cancelled.
Note 6: Effective on November 18, 2019 by Order No. Jin-Guan-Zheng-Fa-Zhi 1080336143. The share capital after increase includes 7,500 shares that have been recovered but not yet cancelled.

2. The Company's private placement of common stock for the past 3 years and as of the publication date of the annual report: The Group was not engaged in the private placement of common stock for the past 3 years and as of the publication date of the annual report.

3. Types of shares issued

April 15, 2022; Unit: share

Types of shares	Authorized Share Capital			Remarks
	Outstanding shares	Unissued shares	Total	
Ordinary share	81,763,218	8,236,782	90,000,000	

4. General information about the reporting system: Not applicable.

(2) Shareholder Structure

April 15, 2022

Shareholder Structure / Count	Government agency	Financial institution	Other corporations	Individual	Foreign institutions and foreigners	Total
Number of personnel	-	1	30	7,940	55	8,026
No. of shares held	-	13,000	10,466,048	43,269,946	28,014,224	81,763,218
Shares Ratio	-	0.02	12.80	52.92	34.26	100.00
Shareholders from PRC: -, shareholding ratio: -.						

Note: The definitions of "individual" and "foreign institutions and foreigners" are based on whether or not their nationality is Taiwan. Therefore "individual" in this table refers to individuals with Taiwan nationality, while "foreign institutions and foreigners" refer to individuals and corporations without Taiwan nationality (including the U.S.).

(3) Distribution of Share Ownership

Denomination of NT$10 per share; April 15, 2022

Range of shares	Number of shareholders (persons)	Shares held (shares)	Shareholding percentage (%)
1 to 999	498	74,466	0.09
1,000 to 5,000	6,373	11,862,763	14.51
5,001 to 10,000	628	5,026,602	6.15
10,001 to 15,000	153	2,005,687	2.45
15,001 to 20,000	119	2,216,720	2.71
20,001 to 30,000	85	2,219,206	2.71
30,001 to 40,000	36	1,324,060	1.62
40,001 to 50,000	27	1,289,819	1.58
50,001 to 100,000	42	2,966,744	3.63
100,001 to 200,000	26	3,622,773	4.43
200,001 to 400,000	12	3,465,108	4.24
400,001 to 600,000	10	4,617,188	5.65
600,001 to 800,000	3	2,282,000	2.79
800,001 to 1,000,000	3	2,832,594	3.46
Above 1,000,001	11	35,957,488	43.98
Total	8,026	81,763,218	100.00

(4) List of major shareholders

April 15, 2022; Unit: share

Name of major shareholder / Share	No. of shares held	Shares Ratio
Maxwell Sensors Inc.	8,307,042	10.16%
Fu-Lung Shiu	6,854,723	8.38%

Share / Name of major shareholder	No. of shares held	Shares Ratio
GVT Fund, L.P. (investment account of GRC SinoGreen Fund under the custody of Bank SinoPac)	4,169,131	5.10%
Eureka BioVenture Partners	3,571,060	4.37%
Celerus Diagnostics Inc	2,729,061	3.34%
Jih-Yuan Venture & Investment Inc.	2,088,427	2.55%
Wistron Corporation	2,075,000	2.54%
Wise Cap Limited Company	1,724,514	2.11%
Min-De Huang	1,625,766	1.99%
Oceania, LLC.	1,504,758	1.84%

1. The status of directors, supervisors and shareholders holding more than 10 percent of outstanding shares waived their subscription right to the cash capital increase during the most recent 2 fiscal years and in the current fiscal year.

(1) The status that directors, supervisors and shareholders holding more than 10 percent of outstanding shares had waived their subscription right to the cash capital increase:

Position	Name	2020		2021	
		Numbers of shares for subscription	Number of shares subscribed	Numbers of shares for subscription	Number of shares subscribed
Directors	Winston Z. Ho	Shareholders waived their rights to subscribe common stock for cash prior to public listing resolved by the shareholders' meeting		No seasoned equity offering was carried out in the current year	
Major shareholder	Maxwell Sensors				

(2) If the subscription to the cash capital increase being waived was subscribed by a related person who was designated for such subscription, the name of such related person, its relationship with the company, directors, supervisors and shareholders holding more than 10 percent of outstanding shares, and the number of the shares thus subscribed shall also be disclosed: Not applicable as the Group's major shareholders who waived their subscription right during 2020-2021 were non-related persons.

(5) Market price, net worth, earnings, dividends per share and other relevant information forthe most recent 2 fiscal years

Unit: thousand shares; NT$

Item / Year			2020	2021
Market price per share (Note 1)	Highest		182.5	61.2
	Lowest		53.5	30.05
	Average		104.47	43.58
Net worth per share	Before dividends		13.31	11.05
	After dividends		13.31	11.05
Earnings per Share	Number of weighted average shares		77,570	81,701
	Earnings (loss) per share		(1.33)	(2.02)
Dividends per share	Cash dividends		-	-
	Bonus	Retained shares distribution	-	-

(Note 2)	shares	Stock dividends from capital surplus	-	-
	Cumulative undistributed dividends		-	-
Return on investment analysis (Note 3)	Price earnings ratios		-	-
	P/E ratio		-	-
	Cash Dividend Yield		-	-

Note 1: The Group was listed on June 9, 2020.

Note 2: From 2017, the Group hast not distributed dividends yet.

Note 3: No cash dividends were issued due to the fact that the Group recorded losses in the current and previous fiscal year

(6) Company dividend policy and implementation status

1. Dividend policy in Articles of Incorporation

It is determined based on the Group's dividend policy, and the Board understands that the Group's operations are in a growth stage. Determined dividends or other distributable amounts (if any) are agreed upon by shareholders in a fiscal year, and the Board of Directors:

(1) Must take into account the Group's earnings, overall development, financial planning, capital needs, industry outlook, and future prospects for the fiscal year to ensure the rights and interests of shareholders; and

(2) As required by Article 14.4 of the Company's Articles of Incorporation, not only remuneration to employees and directors shall be distributed. The following shall also be set aside from the current net income: (i) losses to be made up; (ii) 10% of the general reserve (the "legal reserve"); and (iii) the special reserve required by the Board of Directors in accordance with the rules for public companies promulgated by the Securities Authority, or the surplus resolved in Article 15.1 of the Company's Articles of Incorporation.

Without violating the Company Law of the Cayman Islands, after remuneration to employees and directors in accordance with Article 14.4 of the Company's Articles of Incorporation and an amount deemed appropriate by the Board of Directors in accordance with Article 14.5 of the Company's Articles of Incorporation are set aside, the Board of Directors shall set aside not less than 10% of the distributable amount of the earnings from the previous fiscal year (excluding the accumulated earnings from previous years) as dividends for shareholders. These dividends must be resolved by the shareholders meeting prior to distribution. Distribution of dividends to shareholders and remuneration to employees shall be determined by the Board of Directors and distributed in cash, or by the amount of the unissued shares in such amount, or both. However, dividends to shareholders may not be less than 10% of the total dividends and shall be distributed in cash. The Group does not pay interest on undistributed dividends and remuneration.

2. The proposed distribution of dividends for the year

The Group suffered a loss in 2021; therefore, there is no distribution of the previous year's earnings in 2022.

(7) The impact of bonus shares on company operating performance and earnings per share for the current fiscal year: None.

(8) Remuneration to employees, directors and supervisors

1. The percentage or scope of remuneration to employees, directors and supervisors stipulated in the Articles of Incorporation

As stipulated in the Group's Articles of Incorporation, if the Group makes a "profit" (as defined below) in the year, no more than 12% of the profit shall be set aside as remuneration to employees ("employee remuneration"). Employee remuneration is paid to employees of the Group and of its subsidiaries who are subject to meet certain criteria. The Group may set aside no more than 3% of the said profit as remuneration to directors (directors' remuneration) (excluding independent directors). The motion of the employee remuneration and directors'

remuneration shall be approved by a resolution made by the Board of Directors' meeting attended by two-thirds of the total number of directors and approved by a majority of the directors present at the meeting. Then it will be submitted to the shareholders meeting. Where the Group still has accumulated losses, the amount of remuneration shall be retained in advance. Employee remuneration and directors' remuneration shall be set in accordance with the aforementioned ratio. The term "profit" refers to the Group's profit before tax. So as to avoid confusion, the term "profit before tax" refers to the amount before the payment of employee remuneration and directors' remuneration.

2. The accounting of the difference between the estimates of remuneration to employees, directors and supervisors, the basis for the calculation of outstanding shares for dividend payment and the accounting treatment of the discrepancy, if any, between the actual distributed amount and the estimated figure:

   The Group suffered a loss in 2021; therefore, there is no allocated remuneration to employees and directors.

3. Remuneration to employees passed by the Board of Directors: None.

4. Remuneration distribution and the result reported by the shareholders meeting: None.

5. If there is any discrepancy between actual distribution (including the number of shares distributed, amount and stock price) and the recognized remuneration for employees, directors and supervisors for the previous year, please specify the discrepancy, cause, and how it is treated: None.

(9) Repurchase of shares:

Until now, the Group has not repurchased or acquired the Group's shares from the market as approved by the Board of Directors. Therefore, the Group has not been engaged in matters stipulated in Article 28-2 of the Securities and Exchange Act. However, since the Company began its public offering in Taiwan in January 2017, only employees restricted new shares owned by an employee were withdrawn due to their departure as required by the issuance regulations. Currently, there are no ongoing repurchasing procedures.

2. Corporate Bonds (overseas included): None.

3. Preferred Shares: None.

4. Global Depository Receipts: None.

5. Employees Incentive Stock Options

(1) For employee stock warrants issued by the Company but not yet mature, the date of effective registration from the competent authority; issue date, number of units issued; the ratio of the number of issued shares for subscription to total number of issued shares; subscription period, exercise method; period and ratio in which subscription is restricted; the number of shares that have been obtained through exercise of subscription rights, NT dollar amount of the shares subscribed, number of shares that have not been subscribed, subscription price per share of the unsubscribed shares, and the ratio of the number of unsubscribed shares to the number of issued and outstanding shares up to the publication date of the annual report, and effect on shareholders' equity:

April 15, 2022

Type of employee stock warrants	2008 1st Employee Incentive Plan (amended in 2016)				
Effective date of application	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Date of issuance	2014/1/14	2014/6/16	2014/9/26	2015/3/20	2015/6/26
Expected life	10 years	10 years	10 years	1 year	10 years
Total number of units for issuance	80,000 shares	100,000 shares	70,000 shares	26,500 shares (of which 4,886 shares have lapsed)	60,000 shares (of which 20,000 shares have lapsed)

Type of employee stock warrants	2008 1st Employee Incentive Plan (amended in 2016)				
Ratio of the number of issued shares for subscription to total number of issued shares	0.10%	0.12%	0.09%	0.03%	0.05%
Subscription period	10 years	10 years	10 years	10 years	10 years
Exercise method	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares
Vesting conditions for duration and ratio of new restricted employee shares	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; 1/48 of the total grant of shares will vest each month using the straight-line method.	0 to 4 years; vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	0 to 4 years; vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter. (3) 1-year vesting schedule; 1/12 of the total grant of shares will vest each month using the straight-line method.	0 to 4 years; vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter. (3) 1-year vesting schedule; 1/12 of the total grant of shares will vest each month using the straight-line method.
Number of shares that have been obtained through the exercise of subscription rights	80,000 shares	100,000 shares	30,000 shares	21,614 shares	20,000 shares
Amount of the shares subscribed	USD 8,560.00	USD 10,700.00	USD 8,580.00	USD 6,181.60	USD 5,720.00
Number of shares that have not been subscribed	-	-	40,000 shares	-	20,000 shares
Subscription price per share of the unsubscribed shares (Note)	USD 0.107	USD 0.107	USD 0.286	USD 0.286	USD 0.286
Ratio of the number of unsubscribed shares to the	-	-	0.05%	-	0.02%

Type of employee stock warrants	2008 1st Employee Incentive Plan (amended in 2016)				
number of issued (%)					
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The exercise price is the exercise price adjust by the anti-dilution terms and conditions to accommodate the capital increase proposal of the capital company resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

April 15, 2022

Type of employee stock warrants	2008 1st Employee Incentive Plan (amended in 2016)					
Effective date of application	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Date of issuance	2015/10/16	2016/2/29	2016/6/8	2016/9/18	2016/9/29	2016/11/2
Expected life	10 years	10 years	10 years	10 years	10 years	10 years
Total number of units for issuance	47,400 shares (of which 15,000 shares have lapsed)	211,700 shares (of which 45,295 shares have lapsed)	112,800 shares (of which 32,892 shares have lapsed)	13,100 shares (of which 4,167shares have lapsed)	20,000 shares	7,000 shares (of which 5,032 shares have lapsed)
Ratio of the number of issued shares for subscription to total number of issued shares	0.04%	0.20%	0.10%	0.01%	0.02%	0.00%
Subscription period	10 years	10 years	10 years	10 years	10 years	10 years
Exercise method	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares
Vesting conditions for duration and ratio of new restricted employee shares	0 to 4 years; vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will	1 to 4 years; vesting conditions include: (1) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each	0 to 4 years; vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.

Type of employee stock warrants	2008 1st Employee Incentive Plan (amended in 2016)					
	vest each month thereafter. (3) 2-year vesting schedule; 1/24 of the total grant of shares will vest each month using the straight-line method. (4) 6-month vesting schedule; 1/6 of the total grant of shares will vest each month using the straight-line method.	month thereafter. (2) 1-year vesting schedule; 1/12 of the total grant of shares will vest each month using the straight-line method.	vest each month thereafter.			
Number of shares that have been obtained through the exercise of subscription rights	2,400 shares	105,695 shares	69,908 shares	8,799 shares	20,000 shares	1,968 shares
Amount of the shares subscribed	USD 686.40	USD 30,228.77	USD 19,993.69	USD 5,024.23	USD 5,720	USD 1,123.73
Number of shares that have not been subscribed	30,000 shares	60,709 shares	10,000 shares	134 shares	-	-
Subscription price per share of the unsubscribed shares (Note)	USD	USD	USD	USD	USD	USD
	USD 0.286	USD 0.286	USD 0.286	USD 0.571	USD 0.286	USD 0.571
Ratio of the number of unsubscribed shares to the number of issued (%)	0.04%	0.07%	0.01%	0.00%	-	-
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The exercise price is the exercise price adjust by the anti-dilution terms and conditions to accommodate the capital increase proposal of the capital company resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

Type of employee stock warrants	2017 1st Employee Incentive Plan			
Effective date of application	2018/5/22	2018/5/22	2018/5/22	2018/5/22
Date of issuance	2018/7/2	2018/9/28	2018/12/11	2019/4/11
Expected life	10 years	10 years	10 years	10 years
Total number of units for issuance	215,000 shares (of which 58,000 shares have lapsed)	172,000 shares (of which 8,000 shares have lapsed)	51,000 shares (of which 11,500 shares have lapsed)	26,500 shares (of which 22,000 shares have lapsed)
Ratio of the number of issued shares for subscription to total number of issued shares	0.19%	0.20%	0.05%	0.01%
Subscription period	10 years	10 years	10 years	10 years
Exercise method	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares
Vesting conditions for duration and ratio of new restricted employee shares	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.
Number of shares that have been obtained through the exercise of subscription rights	48,500 shares	11,000 shares	10,000 shares	-
Amount of the shares subscribed	NT$1,833,300	NT$415,800	NT$356,000	-
Number of shares that have not been subscribed	108,500 shares	153,000 shares	29,500 shares	4,500 shares
Subscription price per share of the unsubscribed shares (Note)	NT$37.80	NT$37.80	NT$35.60	NT$41.00
Ratio of the number of unsubscribed shares to the number of issued (%)	0.13%	0.19%	0.04%	0.01%
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: Pursuant to Article 60 of the Regulations Governing the Offering and Issuance of Securities by Foreign Issuers, employee stock warrants issued after 2017 are price-adjusted in the event of a change in conformity to applicable regulations in the shares of the Company's common stock. The price for such stock options is adjusted in accordance with the Company's stock option regulations.

Type of employee stock warrants	2020 1st Employee Incentive Plan			
Effective date of application	2020/7/21	2020/7/21	2020/7/21	2020/7/21
Date of issuance	2020/7/21	2020/8/11	2021/1/5	2021/3/18
Expected life	10 years	10 years	10 years	10 years
Total number of units for issuance	347,360 shares (of which 107,560 shares have lapsed)	72,000 shares (of which 51,000 shares have lapsed)	25,500 shares (of which 4,000 shares have lapsed)	10,500 shares (of which 6,000 shares have lapsed)
Ratio of the number of issued shares for subscription to total number of issued shares	0.29%	0.03%	0.03%	0.01%
Subscription period	10 years	10 years	10 years	10 years
Exercise method	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares
Vesting conditions for duration and ratio of new restricted employee shares	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.
Number of shares that have been obtained through the exercise of subscription rights	-	-	-	-
Amount of the shares subscribed	-	-	-	-
Number of shares that have not been subscribed	239,800 shares	21,000 shares	21,500 shares	4,500 shares
Subscription price per share of the unsubscribed shares	NT$98.30	NT$101	NT$57.20	NT$49.81
Ratio of the number of unsubscribed shares to the number of issued (%)	0.29%	0.03%	0.03%	0.01%
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: Pursuant to Article 60 of the Regulations Governing the Offering and Issuance of Securities by Foreign Issuers, employee stock warrants issued after 2017 are price-adjusted in the event of a change in conformity to applicable regulations in the shares of the Company's common stock. The price for such stock options is adjusted in accordance with the Company's stock option regulations.

Type of employee stock warrants	2020 1st Employee Incentive Plan	2021 Employee Incentive Plan		
Effective date of application	2020/7/21	2021/9/3	2021/9/3	2021/9/3
Date of issuance	2021/5/14	2021/9/6	2021/11/8	2022/3/23
Expected life	10 years	10 years	10 years	10 years
Total number of units for issuance	331,800 shares (of which 57,500 shares have lapsed)	34,500 shares (of which 1,000 shares have lapsed)	83,500 shares	327,500 shares
Ratio of the number of issued shares for subscription to total number of issued shares	0.36%	0.04%	0.10%	0.40%
Subscription period	10 years	10 years	10 years	10 years
Exercise method	Issuance of new shares	Issuance of new shares	Issuance of new shares	Issuance of new shares
Vesting conditions for duration and ratio of new restricted employee shares	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 50% of the stock options after two years of employment and 1/24 of the total grant of shares will vest each month thereafter.
Number of shares that have been obtained through the exercise of subscription rights	-	-	-	-
Amount of the shares subscribed	-	-	-	-
Number of shares that have not been subscribed	274,300 shares	33,500 shares	83,500 shares	327,500 shares
Subscription price per share of the unsubscribed shares	NT$50	NT$37.85	NT$31.90	NT$33.15
Ratio of the number of unsubscribed shares to the number of issued (%)	0.36%	0.04%	0.10%	0.40%
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: Pursuant to Article 60 of the Regulations Governing the Offering and Issuance of Securities by Foreign Issuers, employee stock warrants issued after 2017 are price-adjusted in the event of a change in conformity to applicable regulations in the shares of the Company's common stock. The price for such stock options is adjusted in accordance with the Company's stock option regulations.

(2) Names of managerial officers having acquired employee stock warrants and names of employees ranking top ten in convertible shares:

April 15, 2022

Item	Position (Note 1)	Name	Number of acquired shares that have been subscribed	Ratio of the number of acquired shares that have been subscribed to the number of issued (%)	Subscribed				Not subscribed			
					Number of shares subscribed	Subscription price (USD) (Note 2)	Subscription amount (USD) (Note 2)	Ratio of the number of shares that have been subscribed to the number of issued (%)	Volume of shares subscribed	Subscription price (USD) (Note 2)	Subscription amount USD (Note 2)	Ratio of the number of shares that have been subscribed to the number of issued (%)
Managerial officer	President	Winston Z. Ho	1,476,340	1.81	649,791	0.036~ 0.286; NTD 37.80	98,823.99	0.79	746,999	0.036~ 0.286; NTD 31.90~ 101	1,169,156.03	0.91
	Vice President	Michael Aye										
	Vice President	Donald Wong										
	Vice President	Liang-Kai Huang										
	Vice President	Yu-Lin Chen										
	Vice President	Christopher Bernard (Note 3)										
	Director	Gao Chen										
	Director	Michael Ho										
	Director	April Tang										
	Director	Gerald Kowalski										
	Director	Debra Linguist (Note 4)										
	Director	Chia-Chi Chang (Note 4)										
	Director	Ingrid Joseph										
	Director	Frank Mitchell										
	Director	Tara Viviani (Note 5)										
	Director	Colleen Knoth (Note 6)										
	Director	Roland Stricland (Note 7)										
	Director	Michael Jason Scott (Note 8)										
	Director	Parisa Hanachi (Note 8)										
	Accounting Supervisor	Jau-Tung Pan										
	Internal Auditer	Zong-Han You										
Employee	Scientist	Chung-Jen Hou	475,340	0.58	175,500	0.036~ 0.286; NTD 37.80	32,473.49	0.21	258,940	0.286; NTD 35.60~ 98.30	436,481.83	0.32
	Engineer	Peter Low										
	Engineer	Shu Huang										
	Information	Cliff Chang										

Item	Position (Note 1)	Name	Number of acquired shares that have been subscribed	Ratio of the number of acquired shares that have been subscribed to the number of issued (%)	Subscribed				Not subscribed			
					Number of shares subscribed	Subscription price (USD) (Note 2)	Subscription amount (USD) (Note 2)	Ratio of the number of shares that have been subscribed to the number of issued (%)	Volume of shares subscribed	Subscription price (USD) (Note 2)	Subscription amount USD (Note 2)	Ratio of the number of shares that have been subscribed to the number of issued (%)
	Specialist											
	Scientist	Jakob Kirchner (Note 9)										
	Engineer	Jie Chen										
	Engineer	Marc Macon										
	Scientist	Anh Pham										
	Engineer	Brandon Phan										
	Scientist	Roger Wang										

Note 1: Including managerial officers and employees (please indicate if they have left the job or are deceased) - their respective names and titles shall be disclosed, but their acquisition and subscriptions shall be disclosed in an aggregate manner.

Note 2: The subscription price is the subscription price adjust by the anti-dilution terms and conditions to accommodate the capital increase proposal of the capital group resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

Note 3: The Manager was newly appointed on March 23, 2022

Note 4: Managerial officer Debra Linguist left the job on July 3, 2021. Managerial officer Jia-Chi Jang left the job on April 6, 2021.

Note 5: Managerial officer left the job on April 30, 2021.

Note 6: By resolution of the Group's board of directors on May 13, 2021, the employee was promoted to managerial officer. Said employee resigned on March 24, 2022.

Note 7: The employee was newly appointed in August 2021.

Note 8: Managerial officers Parisa Hanachi and Michael Jason Scott were newly appointed in November 2021.

Note 9: The employee has left the job on July 1, 2021.

(3) Information shall be furnished on the status of any private placement of employees incentive stock options in the most recent 3 fiscal years and as of the publication date of the annual report, disclosing the date on which the private placement was approved at a shareholders meeting and the amount thus approved; the basis for and reasonableness of the pricing; the manner in which the specified persons were selected (where the offerees have already been arranged, the names of the offerees and relationship between the offerees and the company shall also be described); the reasons why the private placement was necessary; the targets of the private placement, their qualifications, subscription amounts, relationship with the company, participation in the operations of the company, actual subscription price, the difference between the actual subscription price and the reference price; the effect of the private placement on shareholders' equity; and for the period from receipt of payment in full to the completion of the related capital allocation plan, the status of use of the capital raised through the private placement of employees incentive stock options, the implementation progress of the plan, and the realization of the benefits of the plan: None.

6. Employees Restricted New Shares

(1) Dates of effective registration from the competent authority for all employees restricted new shares under which the vesting conditions have not been fully met; issue date; number of shares issued; number of shares still available for issuance; issue price; vesting conditions; restricted rights;

custody status; measures to be taken when vesting conditions are not met; number of shares that have been redeemed or bought back; number of shares in which the restrictions on rights have been released; number of shares in which the restrictions on rights have not been released; and the ratio of the number of shares in which the restrictions on rights have not been released to the number of total issued shares and the effect on shareholders' equity:

April 15, 2022

Types of employees restricted new shares	2008 1st Employee Incentive Plan (amended in 2016)		
Effective date of application	Not applicable	Not applicable	Not applicable
Date of issuance	2010/12/5	2011/3/27	2011/8/7
Number of employees restricted new shares issued (Note)	346,500 shares	42,000 shares	10,500 shares
Issue Price	USD 0.15	USD 0.15	USD 0.15
Ratio of the number of employees restricted new shares issued to the issued shares	0.42%	0.05%	0.01%
Vesting conditions	Vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter. (3) 2-year vesting schedule; 1/24 of the total grant of shares will vest each month using the straight-line method. (4) 6-month vesting schedule; 1/6 of the total grant of shares will vest each month using the straight-line method.	Immediate vesting.	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.
Restricted rights of new restricted employee shares	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.
Custody of employees restricted new shares	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency

Types of employees restricted new shares	2008 1st Employee Incentive Plan (amended in 2016)		
Method for handling with employees who have not reached the vesting conditions after being allocated or subscribed for new shares	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.
Employees restricted new shares returned or bought back (Note)	91,000 shares	-	3,500 shares
Number of shares with restrictions on rights released (Note)	255,500 shares	42,000 shares	7,000 shares
Number of shares with restrictions on rights not released (Note)	-	-	-
Ratio of the number of shares with restrictions on rights not released to the total number of shares issued (%)	-	-	-
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The adjustment of increasing shares for Capital surplus transferred to capital as resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

April 15, 2022

Types of employees restricted new shares	2008 1st Employee Incentive Plan (amended in 2016)		
Effective date of application	Not applicable	Not applicable	Not applicable
Date of issuance	2012/1/21	2013/6/21	2013/11/3
Number of employees restricted new shares issued (Note)	314,300 shares	1,125,600 shares	16,800 shares
Issue Price	USD 0.15	USD 0.15	USD 0.15
Ratio of the number of employees restricted new shares issued to the issued shares	0.38%	1.38%	0.02%
Vesting conditions	Vesting conditions include: (1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter. (3) 2-year vesting schedule; 1/24 of the total grant of shares will vest each month using the straight-line method. (4) 1-year vesting schedule; 1/12 of the	Vesting conditions include: (1) Four-year vesting schedule; 1/48 of the total grant of shares will vest each month using the straight-line method. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.

Types of employees restricted new shares	2008 1st Employee Incentive Plan (amended in 2016)		
	total grant of shares will vest each month using the straight-line method.		
Restricted rights of new restricted employee shares	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.
Custody of employees restricted new shares	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency
Method for handling with employees who have not reached the vesting conditions after being allocated or subscribed for new shares	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.
Employees restricted new shares returned or bought back (Note)	63,934 shares	1,046,719 shares	14,176 shares
Number of shares with restrictions on rights released (Note)	250,366 shares	78,881 shares	2,624 shares
Number of shares with restrictions on rights not released (Note)	-	-	-
Ratio of the number of shares with restrictions on rights not released to the total number of shares issued (%)	-	-	-
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The adjustment of increasing shares for Capital surplus transferred to capital as resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

April 15, 2022

Types of employees restricted new shares	2008 1st Stock Plan (amended in 2016)		
Effective date of application	Not applicable	Not applicable	Not applicable
Date of issuance	2014/1/14	2014/6/16	2014/9/26
Number of employees restricted new shares issued (Note)	162,400 shares	46,900 shares	46,200 shares
Issue Price	USD 0.15	USD 0.15	USD 0.40
Ratio of the number of employees restricted new shares issued to the issued shares	0.20%	0.06%	0.06%
Vesting conditions	Four-year vesting schedule; certificate	Vesting conditions include:	Vesting conditions include:

Types of employees restricted new shares	2008 1st Stock Plan (amended in 2016)		
	holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	(1) Immediate vesting. (2) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter.	(1) Four-year vesting schedule; certificate holders are granted 25% of the stock options after one year of employment and 1/48 of the total grant of shares will vest each month thereafter. (2) 1-year vesting schedule; 1/12 of the total grant of shares will vest each month using the straight-line method. (3) 3-month vesting schedule; 1/3 of the total grant of shares will vest each month using the straight-line method.
Restricted rights of new restricted employee shares	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.
Custody of employees restricted new shares	The Group does not print physical stock certificates, which are registered by the Company and the stock agency.	The Group does not print physical stock certificates, which are registered by the Company and the stock agency.	The Group does not print physical stock certificates, which are registered by the Company and the stock agency.
Method for handling with employees who have not reached the vesting conditions after being allocated or subscribed for new shares	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.
Employees restricted new shares returned or bought back (Note)	42,629 shares	919 shares	28,000 shares
Number of shares with restrictions on rights released (Note)	119,771 shares	45,981 shares	18,200 shares
Number of shares with restrictions on rights not released (Note)	-	-	-
Ratio of the number of shares with restrictions on rights not released to the total number of shares issued (%)	-	-	-
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The adjustment of increasing shares for Capital surplus transferred to capital as resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

April 15, 2022

Types of employees restricted new shares	The plan of the first employees restricted new shares in 2017	The plan of the second employees restricted new shares in 2017	The plan of the first employees restricted new shares in 2017
Effective date of application	2018/5/22	2018/5/22	2018/5/22
Date of issuance	2018/6/1	2018/6/15	2018/12/20
Number of employees restricted new shares issued (Note)	167,000 shares	161,000 shares	20,000 shares
Issue Price	NT$0	NT$0	NT$0
Ratio of the number of employees restricted new shares issued to the issued shares	0.20%	0.20%	0.02%
Vesting conditions	Two-year vesting schedule; certificate holders are granted 50% of the stock options after one year of employment, and the remaining 50% of shares will vest after a year.	Immediately vested at the passing of GPP/BioCode MDx 3000 from the FDA.	Two-year vesting schedule; certificate holders are granted 50% of the stock options after one year of employment, and the remaining 50% of shares will vest after a year.
Restricted rights of new restricted employee shares	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.	No transfer is allowed within the vesting period. However, the voting rights and the rights to participate in dividend distribution are not restricted.
Custody of employees restricted new shares	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency	The Group does not print physical stock certificates, which are registered by the Company and the stock agency
Method for handling with employees who have not reached the vesting conditions after being allocated or subscribed for new shares	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.	Employees who leave their job during the vesting period must return the shares, but not dividends received.
Employees restricted new shares returned or bought back (Note)	7,500 shares	5,000 shares	-
Number of shares with restrictions on rights released (Note)	159,500 shares	156,000 shares	20,000 shares
Number of shares with restrictions on rights not released (Note)	-	-	-
Ratio of the number of shares with restrictions on rights not released to the total number of shares issued (%)	-	-	-
Effect on shareholders' equity	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant	The effect on the dilution of original common shareholders is not significant

Note: The adjustment of increasing shares for Capital surplus transferred to capital as resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.

(2) Names and acquisition status of managerial officers who have acquired employees restricted new shares and of employees who rank among the top ten in the number of employees restricted new shares acquired, cumulative to the date of publication of the annual report:

April 15, 2022

Item	Position (Note 1)	Name	Number of employees restricted new shares acquired (shares) (Note 2)	Ratio of the number of employees restricted new shares acquired a total number of issued shares (%)	Restrictions on rights released				Restrictions on rights not released			
					Number of shares released from restrictions (Note 2)	Issue Price (USD)	Issue amount (USD)	Ratio of the number of shares released from restrictions to the total number of issued shares (%)	Number of shares not released from restrictions (Note 2)	Issue Price (USD)	Issue amount (USD)	Ratio of the number of shares not released from restrictions to the total number of issued shares (%)
Managerial officer	Director	Gao Chen	555,500	0.68	555,500	0.00~0.15; NTD 0	83,325	0.68	-	-	-	-
	Vice President	Michael Aye										
	Director	April Tang										
	Vice President	Donald Wong										
	President	Winston Z. Ho										
	Director	Debra Linguist (Note 3)										
	Director	Michael Ho										
	Director	Gerald Kowalski										
	Vice President	Liang-Kai Huang										
	Director	Chia-Chi Chang (Note 4)										
	Accounting Supervisor	Jau-Tung Pan										
	Vice President	Yu-Lin Chen										
	Director	Ingrid Joseph (Note 5)										
	Director	Colleen Knoth (Note 6)										
Employee	Engineer	Shu Huang	278,100	0.34	231,900	0.00~0.15; NTD 0	34,785	0.04	-	-	-	-
	Scientist	Chung-Jen Hou										
	Scientist	Jakob Kirchner (Note 7)										
	Procurement Specialist	Amy Huynh										
	Information Specialist	Cliff Chang										
	Chief Information Officer	Yu-Tsung Chou										
	Senior Research Assistant	Oliver Soller										
	Software Engineer	Jie Chen										
	Manufacturing Assistant	Adriana Quezada										
	Scientist	Kassturi Jeevaprakash										

Note 1: Including managerial officers and employees (please indicate if they have left the job or are deceased) - their respective names and titles shall be disclosed, but their acquisition and subscriptions shall be disclosed in an aggregate manner.
Note 2: The adjustment of increasing shares for Capital surplus transferred to capital as resolved at the shareholders meeting held on November 7, 2016. The base date for the capital increase of the capital reserve ex-rights is November 15, 2016.
Note 3: The employee has left the job on July 3, 2021.
Note 4: The employee has left the company on April 6, 2020.
Note 5: By resolution of the Group's board of directors on August 11, 2020, the employee was promoted to managerial officer.
Note 6: By resolution of the Group's board of directors on May 13, 2021, the employee was promoted to managerial officer. Said employee resigned on March 24, 2022.
Note 7: The employee has left the job on July 1, 2021.

7. New shares issued for merger or acquisition: None.

8. Usage of Injected Capital

Not applicable as the Group did not issue new shares for merger or acquisition or issue any corporate bonds. Also, the Group has completed the cash capital increase in 2019 and 2020, and related funds raised have been fully utilized for working capital. Related plans and their execution are analyzed as follows:

(1) Contents of Plans

1. In 2019, the Company issued 9,000,000 shares for the 1st cash capital increase. The shares were issued at NT$38 per share for a total of NT$342,000,000. After completion, it was planned to fully fund the Company's working capital.
2. In 2019, the Company issued 1,280,000 shares for the 2nd cash capital increase. The shares were issued at NT$38 per share for a total of NT$48,640,000. After completion, it was planned to fully fund the Company's working capital.
3. In 2020, the Company issued 9,050 thousand common shares through cash capital increase prior to initial listing. Based on the weighted average price of NT$90.21 per share in the auction and the underwriting price of NT$48 per share, the total proceeds amounted to NT$709,409 thousand. The total fund raised has been planned to enrich the working capital after the completion.

(2) Implementation

1. First public sale of 9,000,000 shares issued through cash capital increase in 2019

(1) Progress of raised funds utilization

Unit: NT$ thousand

<table>
<tr><th>Plans</th><th colspan="3">Execution</th><th>Is the progress ahead or behind, the reason and the improvement plan</th></tr>
<tr><td rowspan="4">Enriching working capital</td><td rowspan="2">Amount</td><td>Estimated amount</td><td>342,000</td><td rowspan="6">The Group's first cash capital increase in 2019 raised NT$342,000 thousand, which was fully utilized to fund working capital.</td></tr>
<tr><td>Actual amount</td><td>342,000</td></tr>
<tr><td rowspan="2">Execution progress (%)</td><td>Estimated amount</td><td>100%</td></tr>
<tr><td>Actual amount</td><td>100%</td></tr>
<tr><td rowspan="2">Total</td><td rowspan="2">Amount</td><td>Estimated amount</td><td>342,000</td></tr>
<tr><td>Actual amount</td><td>342,000</td></tr>
</table>

	Execution progress (%)	Estimated amount	100%	
		Actual amount	100%	

(2) Execution benefits of raised funds

Analysis item \ Year		End of June 2019	End of 2018
Financial structure	Debt ratio (%)	49.36	38.03
	Long-term fund to property, plant and equipment (%)	709.37	1,192.07
Solvency	Current ratio (%)	229.21	300.13
	Quick ratio (%)	178.01	262.11

Source: Compiled from the Group's financial statements audited or reviewed by CPAs.

The Group has raised NT$342,000,000, which has been used to fund working capital primarily to strengthen the financial structure and improve solvency. As the above table suggests, after the completion of the cash capital raising in September 2019, the Group's debt ratio at the end of June 2019 has decreased to 38.03% from 49.36%; long-term fund to property, plant, and equipment ratio after the completion of the cash capital raising at the end of June 2019 has increased to 1,192.07% from 709.37%. As for solvency, the current ratio after completing the cash capital raising at the end of June 2019 has increased to 300.13% from 229.21%; quick ratio after the completion of the cash capital raising at the end of June 2019 increased to 262.11% from 178.01%. The cash capital increase has fully strengthened the Group's financial structure and solvency while also enhancing the Group capital deployment flexibility and reducing overall operating risks.

2. Second public sale of 1,280,000 shares issued through cash capital increase in 2019

(1) Progress of raised funds utilization

Unit: NT$ thousand

Plans	Execution			Is the progress ahead or behind, the reason and the improvement plan
Repayment of loans	Amount	Estimated amount	48,640	The Group's second cash capital increase in 2019 raised NT$48,640 thousand, which was fully utilized to fund working capital and repay loans.
		Actual amount	48,640	
	Execution progress (%)	Estimated amount	100%	
		Actual amount	100%	
Total	Amount	Estimated amount	48,640	
		Actual amount	48,640	
	Execution progress (%)	Estimated amount	100%	
		Actual amount	100%	

(2) Execution benefits of raised funds

Lending institutions	Interest rate (%)	Agreement period	Original loan purpose	Original loan amount in December 2019	Repayment amount in December 2019	Reduced interest in December 2019	Estimated annual interest reduction (Note)
Chailease Finance Co., Ltd.	3.55	2019/02/19-2021/02/18	Enriching working capital	55,800	48,640	96	1,727
Total	-	-	-	55,800	48,640	96	1,727

Note: It is assumed that each bank loan in this table will be automatically extended at maturity.

The Group's second cash capital increase in 2019 raised NT$48,640 thousand which has been fully collected in December and repaid loans. Based on the assumption that the loan contract will be extended at maturity, the Group expects to save an annual interest expense of approximately NT$1,727,000 in the future.

4. First public offering of 9,050,000 shares issued through cash capital increase in 2020

(1) Progress of raised funds utilization

Unit: NT$ thousand

Plans	Implementation			Is the progress ahead or behind, the reason and the improvement plan
Enriching working capital	Amount	Estimated amount	709,409	The funds raised through cash capital increase has been utilized to enrich working capital, improve its financial structure and increase the flexibility to deploy capital. The benefit of the funds raised to strengthen the financial structure has been demonstrated in Q2 2020. However, as the actual amount of NT$709,409 thousand raised was NT$401,709 thousand more than the expected amount of NT$307,700 thousand, the extra amount will be used for R&D and operating expenses within the working capital funds.
		Actual amount	709,409	
	Execution progress (%)	Estimated amount	100.00	
		Actual amount	100.00	

(2) Execution benefits of raised funds

Unit: %

Item	Year	Q1 2020 (prior to the fundraising)	Q2 2020 (after the fundraising)
Solvency	Current ratio	454.95	1,325.77
	Quick ratio	392.13	1,212.40
Financial structure	Debt ratio	27.43	13.40
	Long-term fund to property, plant and equipment	622.59	1,262.83

Source: The Group's consolidated financial reports audited by CPAs for Q1 and Q2 2020.

The Group raised a total of NT$709,409 thousand through cash capital increase. The fund has been utilized to enrich working capital in the second quarter of 2020 to strengthen the financial structure and improve the Company's capital deployment flexibility to increase operational efficiency. With the injection of the funds raised through cash capital increase, the Group's current ratio and quick ratio increased by 454.95% and 392.13% to 1,325.77% and 1,212.40%, respectively; debt to assets ratio decreased to 27.43% from 13.40%; and long-term funds to property, plant and equipment ratio increased to 622.59% from 1,262.83%. Not only has the fund been used for enriching the working capital, the Group's financial structure has at the same time been strengthened, its flexibility in capital deployment increased and overall operating risks reduced, demonstrating the benefits of the funds raised through cash capital increase.

V. Operation Overview

1. Business Scope

1. Scope of business affairs

(1) Main contents of business affairs

A. Our corporation has successfully applied the digital barcode technology, commonly used in supermarkets, logistics and shopping industry, into the realm of "Digital Biotechnology." By shrinking the length and width of the barcode by about a 1,000 fold with advanced technology, we can precisely identify hundreds of analytes in a single specimen.

B. Our corporation has mass-produced Barcoded Magnetic Beads (BMB) using an innovative semiconductor silicon wafer fabrication process.

C. Instrument MDx 3000, developed by our corporation, offers a fully-automatic and high-throughput analysis product for use by major hospitals and laboratories.

Our Barcoded Magnetic Beads (BMB) technology platform is able to encode 4,096 (2^{12}) numbers and chemically bond molecular probes or antibodies/antigens from various diseases onto the BMB, allowing rapid and precise analysis of single or multiple analytes. For example, we can detect thousands of bacteria, viruses, parasites, DNA and RNA from a single specimen or any of the proteins, hormones and allergens present in the specimen.

Our BMB technology platform has been awarded multiple international patents. They cover applications from immune and nucleic acid test analysis to wider market applications like clinical diagnosis, academic research, agriculture testing, animal health testing and environmental testing. Due to its high application value, we have successfully licensed our BMB technology to various international manufacturers for use as a platform for testing diverse product development. To name a few examples, these well-known companies include: IDEXX Technologies GmbH, PerkinElmer (an NYSE-listed company), Diatherix Laboratories - a subsidiary of Eurofins Scientific Group (a Euronext N.V.-listed company), Molecular Device - a subsidiary of Danaher Group (a NYSE-listed company), Livzon Pharmaceutical Group - a subsidiary of Livzon Pharm (A shares that trade on SZSE and H shares that trade on the HKEX), Guangzhou Improve Medical Instruments (a ChiNext-listed company), Shanghai Kexin Biotech (a new OTC market-listed company), Genetic Analysis AS Norway, Imusyn Germany, ALPCO USA, Paitaike Beijing, Hardy Diagnostics USA. It is expected that these international manufacturers will continue to contribute to the revenue gains of our Group, which include the sale of BMB and instruments and royalties from future product sales.

In addition to the diverse applications developed by our authorized partners, the Group is also working on molecular diagnostic panels for infectious diseases with rapid growth and high test demands over the years, including multiplex test panels with high clinical demand such as gastritis tests, respiratory tract tests, coronavirus tests, coronavirus pooling tests, Covid-Flu-Plus, Cov-2 Flu Plus Direct (clinical trials in

preparation), fungal tests (LDT protocol complete), sexually transmitted infection tests under development, antimicrobial resistance gene markers, urinary tract infection tests, opportunistic infection tests, and more. These tests are established on the fully-automatic MDx 3000 instrument system, which integrates systems like the polymerase chain reaction (PCR), molecular hybridization, automatic operation and molecular imaging and interpretation system. The Instrument MDx 3000, developed by our corporation, is one of the few products available on the global clinical diagnostic market that offers a fully-automatic and high-throughput analysis solution for use by major hospitals and laboratories. Our Group also plans to invest in immune diagnostics, focusing the primary development target on allergen tests, including over 400 allergen test panels and automated immune diagnostic systems. In addition, we are also conducting assessments to investigate the feasibility of liquid biopsy tumor panels.

(2) Operating proportion of primary products

Unit: NT$ thousand

Year / Primary products	2019		2020		2021	
	Net revenue	Operating proportion (%)	Net revenue	Operating proportion (%)	Net revenue	Operating proportion (%)
Barcoded Magnetic Beads (BMB)	57,444	54.87	44,755	14.97	92,462	28.9
Instrument	8,127	7.76	25,487	8.52	69,009	21.57
Reagent/In-vitro diagnostic assay(Panel)	33,333	31.84	210,908	70.54	138,513	43.29
Others	5,790	5.53	17,865	5.97	19,978	6.24
Total	104,694	100.00	299,015	100.00	319,962	100.00

(3) The Company’s current products (services)

Our core business affairs are Barcoded Magnetic Beads (BMB) analysis technology platform and related products, which primarily include BMB, instruments, development, and sale of in-vitro diagnostic assays. Our BMB technology offers high precision and diverse test services for a single analysis, and significantly saves costs of in-vitro diagnostic assays. Instrument MDx 3000, our corporation’s latest development, is characterized by fully-automatic, high throughput and diversified analysis applications, easy to operate and small footprint. Coupled with our BMB and test assays, these systems form a technology platform that will satisfy the current market needs. Following is a summary description of products developed by the Group:

Product	Introduction	Application
Barcoded Magnetic Beads (BMB)	The BMB technology contains 4,096 encoded barcodes. Each	A wide-ranging analysis platform provides detection of

Product	Introduction	Application
	BMB allows binding to DNA, antibodies or antigens, and specific binding identification with target molecules.	bacteria, viruses, parasites, hormones, allergens, DNA, RNA or proteins from a single test specimen. It can be applied to diverse disciplines such as academic research, agricultural testing, animal health testing and environmental testing.
Instrument (Optical Scanner and Automatic Analyzer)	The Instrument is used in decoding each BMB and fluorescent signal. Our corporation's Instrument systems - BioCode 1000, BioCode 2500 and MDx 3000, are characterized by high sensitivity and user-friendly analysis software operation. MDx 3000 is a fully-automated multiplex test system.	Provides a test analysis platform for proteins and nucleic acids.
Reagent/In-vitro diagnostic assay(Panel)	Currently, the 17-Plex Gastrointestinal Pathogen Panel and 20-Plex Respiratory Infection Panel have been approved for market sale by the USFDA, and EUAs have been granted for the SARS-CoV-2 and SARS-CoV-2 Pooling Test Kits, Cov-2 Flu Plus Direct (EUA), Fungal ASR.	Provides diagnostic reference and medication guidelines.
Consumables	Assay buffers, DNA extraction reagents and detection buffers.	Provide higher quality analysis results for diagnostic tests.
Technical Service	A fixed percentage of the system pricing is collected each year for system maintenance and the analytical instrument's service charges.	Technical support and customized product services.

Our corporation’s BMB multiplex analysis technology platform has been awarded multiple patents. In addition to clinical diagnostics, it can be applied to diverse disciplines such as academic research, agricultural testing, animal health testing and environmental

testing. Due to its high application values, our corporation have issued licenses to the following:

Subject	Discipline	Main field of license	Types of license
PerkinElmer Health Science Inc. (U.S.)	Infectious diseases - genotype analysis of Hepatitis B and C viruses	Asia	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
DIATHERIX Laboratories, LLC/Eurofins group (U.S.)	3rd party molecular test laboratory	Global	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Molecular Devices Inc./Danaher group (U.S.)	Proteomics research	Global	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Genetic Analysis AS (Norway)	Irritable bowel diseases (IBD), Gut microbiota analysis	Global	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and sale royalties.
Imusyn GmbH & Co. KG (Germany)	Organ transplant, human leukocyte antigen pairing (HLA Proteins)	Europe	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Improve Medical Instrumentation Co., Guangzhou Improve/Hecin Scientific. Inc (China)	Respiratory track research, cancer research	China	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Shanghai Kexin Biotech Co., Ltd. (China)	Autoimmune diseases, infectious disease test	China	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Zhuhai Livzon Diagnostics Inc. (China)	Autoimmune diseases, tumor test	China	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment,

Subject	Discipline	Main field of license	Types of license
			consumables fees, instrument fees and royalties from sales.
IDEXX Technologies GmbH (Switzerland)	Non-human animal testing	Global	1. Exclusive License 2. Client is responsible for consumable fees and instrument fees.
ALPCO	Gut microbiota and inflammation analysis	United States	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Paitaike	Development of autoimmune and cytokine biomarkers	China	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.
Hardy Diagnostic	Food safety test	United States	1. Non-Exclusive License 2. Client is responsible for the initial royalty payment, consumables fees, instrument fees and royalties from sales.

(4) Planning of new product development (service)

The Group utilized a core technology platform – barcoded magnetic beads (BMB) for our 3 self-developed diagnostic pipelines. One of which is a diagnostic panel for infectious disease, with the primary consideration of specific diagnostic demands for infectious disease and insurance reimbursement. Currently, most major infectious disease panels are eligible for healthcare reimbursement in the U.S. Test panels in our molecular diagnostic development pipeline include Cov-2 Flu Plus Direct and a series of test products for gynecological health and opportunistic infections. Our goal for Cov-2 Flu Plus Direct is to apply for the U.S. FDA 510(k) license. We received the guidelines for clinical trials from the U.S. FDA in February 2022 after the pre-submission process and are currently preparing for clinical sample collection. In response to the female health demands, the Company is also working on the development of molecular testing for sexually transmitted infections. Test panels with an unmet market demand include multiplex tests for commonly seen sexually transmitted diseases combined with the test for resistance genes. Urinary tract infection tests also have a huge market. Urinary infections with a negative rapid test result must be quickly identified with semi-quantification or even quantification of pathogens. Opportunistic infection tests focus on

immunosuppressed populations, such as the elderly and patients on cancer treatment, selecting a number of developed pathogen tests (fungus, bacteria) to put together a rapid, precise test product for the source of infections. These products are intended to be launched as RUO products. All of the above products can work with our self-developed automated molecular diagnostic system MDx3000. We are also working on upgrading the MDx3000 by adding an integrated extraction step and through the development of consumables for sample collection, which will allow the more convenient collection of laboratory samples that are difficult to process, such as diarrhea samples and vaginal swaps, thereby enhancing the efficiency of laboratory testing.

The second category is immune test panels and automated immunoassay instruments that focus on multiplex allergy diagnostic panels with the goal of exceeding the maximum number of tests per round offered by competitor products. Take the leader of allergy test products, Thermo Fisher, for example. Their current assay tests one item at a time and provides at most 20 test results for each blood collection. Our Company plans to test 50 to 120 allergens per assay to help identify the possible allergens more rapidly and significantly enhance product value.

The third category is liquid biopsy tumor panels which detect circulating tumor DNA (ct-DNA) in the blood, thereby determining the incidence of tumor formation or treatment effectiveness. This will be a novel application for molecular tests. Most products on the market analyze tumor DNA using a genetic sequencing approach which is time consuming and requires bioinformatic service to translate the data for interpretation. In line with the diverse test features offered by the barcoded magnetic beads, we hope to isolate multiple types of ct-DNAs for MDx3000 (by PCR), hoping to reduce the test time and lower the cost of test. A feasibility study is currently being conducted.

Product	Introduction
Cov-2 Flu-Plus Direct Test	A nuclear acid test without an extraction step will enhance the test speed and convenience and cut down the cost of extraction instruments, reagents, and manpower. For one-time testing of COVID-19, type A influenza and its subtypes (H1, H1N1 2009pdm, H3), type B influenza and respiratory syncytial virus (RSV), and to distinguish between COVID-19 and recurrent influenza.
Sexually transmitted infections (STIs)	According to the WHO data, at least 0.3 billion and 7 thousand people are infected with infectious diseases per year, for which the treatment cycles after infection are longer for women than men. These infections are also positively associated with female infertility. Currently, there are single-test products available for most major STIs but lack multiplex tests. Our multiplex STI tests will include Chlamydia, gonorrhea, herpes simplex virus-1 and herpes simplex virus-2, trichomonas vaginalis and

Product	Introduction
	mycoplasma.
Sexually transmitted infections - Antimicrobial Resistance Gene markers	Drug resistance of pathogens is considered by public health experts to be one of the major threats to the modern human society. Due to the widespread usage of anti-biotics and mutation of pathogens after multiple infections, there are more pathogens nowadays that have begun developing resistance to medication. According to a 2019 report by the U.S. CDC, about 2 million people in the U.S. were diagnosed with drug-resistant pathogens annually, resulting in about 35,000 deaths per year. As the drug resistance of pathogens can be determined by their special genetic fragments- the drug-resistance markers-, additional screening of bacterial drug-resistance when detecting these pathogens can be a very useful information for clinical diagnosis. Resistant gonorrhea is considered the most refractory sexually transmitted threat by the public health community. In most clinical practices, the first step is to screen the sexually transmitted infections and followed by a genetic analysis of drug resistance. Our goal is to introduce a first-line test tool for infectious disease with the option of including drug resistance genes. This will allow more timely treatment while eliminating the overuse of antibiotics.
Urinal Track Infection	Common pathogens that cause urinary tract infections include Escherichia coli, Citrobacter freundii, Acinetobacter baumanii, Proteus mirabilis, Enterococcus, Klebsiella, Enterobacter, Morganella, Mycoplasma and Chlamydia. Considering the efficiency and insurance reimbursement in the clinical practice in the U.S., a negative result of pathogens by a single rapid screening test is usually confirmed by a molecular test approach. Our product utilizes molecular testing to screen these pathogens and provides a comprehensive and accurate diagnosis of urinal tract infection.
Opportunistic Infection	Immunosuppressed populations, such as the elderly, cancer patients, immunocompromised patients and HIV patients are more likely to be infected. For tests of common infection targets (fungus, bacteria, virus), our Company provides existing test kits that cover most of these targets. After re-grouping, we intend to introduce test kits suitable for opportunistic infections via RUO for test facilities specializing in this field.
120-Plex Allergy Diagnostic Panel and Automated	The global market of rapid immunoassay is expected to grow from 18.725 billion U.S. dollars in 2017 to 31.885

Product	Introduction
Immunoassay System	billion in 2026, a compound annual growth rate of 8.49%. The rapid assay is suitable for preliminary or emergency medical diagnosis and use by medical institutions with limited resources. Due to its convenience and rapid testing capability, it will assist in providing timely treatment. There is currently a great demand globally on preventive management, and as the awareness for early disease detection continues to increase globally, it is expected that this segment of the market will grow significantly in the future. Diseases related to allergies include asthma, rhinitis, angioedema, urticaria, conjunctivitis and eczema. Populations suffering from these diseases are rapidly increasing due to industrial pollution and population growth. For the asthmatic population alone, the World Health Organization forecasts that the global asthmatic population will growth to 400 million people by the year 2025. Allergies result in an increase of direct medical costs and decrease of social behavioral efficiency; the decrease in work efficiency will result in health burdens for all. Treating these kinds of diseases requires effective testing tools of allergens.
Liquid Biopsy	Testing circulating tumor DNA (ct-DNA) to determine the incidence of tumor formation or treatment efficacy is a novel molecular test application. Most products on the market analyze tumor DNA using a genetic sequencing approach which is time consuming and requires bioinformatic service to translate the data for interpretation. In line with the diverse test features offered by the barcoded magnetic beads, our Company hopes to isolate multiple types of ct-DNAs for PCR tests, hoping to reduce the test time and lower the cost of testing. A feasibility study is currently being conducted.

2. Industry Status

(1) Industry Status and Development

Our corporation provides an automated multiplex detection platform, research and development of platform applications, and development and sales of infectious disease test assays. Our technology platform aims to provide accurate real-time diagnosis and precision treatment to greatly improve the efficiency of medical analysis and reduce the costs of treatment and risks of patients. The following is an analysis on the global markets

for in-vitro diagnostic products, immune diagnosis, molecular diagnosis and infectious disease detection:

A. Status of Global In-Vitro Diagnostic Product Market

In-Vitro diagnostics, also known as IVD, are assay kits or medical instruments (like instrument system) that are used in the collection, preparation and analysis of specimens collected from the human body, which are used for disease diagnosis and other purposes (including the determination of health status). In-vitro diagnostics assays refer to any assays, calibration substances or control substances described previously. IVD is classified based on the diagnostic basics and methods used and is mainly classified as hematology diagnosis, biochemical diagnosis, urinary diagnosis, immune diagnosis, microbial diagnosis and molecular diagnosis.

According to the analysis report published in the MarketWatch in 2022 (2022/03/15, In-Vitro Diagnostics Market: 2022), the production value of the IVD market in 2021 was US$76.9 billion dollars. In 2022~2028, the IVD market will exhibit a compound annual growth rate of 6.6% and is expected to reach an output value of US$120.9 billion dollars in 2028. The prevalence of chronic disease and infectious disease, with the increased coverage of medical test facilities, are the main driving forces for this market. In an overall market analysis, the health-related expenses in North America have increased drastically since 2020 faster than the average rate witnessed in the past 10 years, with the epidemic prevention measures dominating the allocation of medical resources. North America has a market share of approximately 39.8% in the global IVD market, with Europe accounting for approximately 28% and the Asian-Pacific region approximately 23% of the market share.

B. Status of Global Immune Diagnosis Market

According to the analysis report published in the Markets and Markets (2021, Immunoassay Global Market Forecast to 2026), the global immune diagnostic market is expecting growth from US$28 billion dollars in 2021 to US$39 billion dollars in 2026, a compound annual growth rate of 6.6%. The revenue of the immunoassay market is mainly based on immune technology, products and service applications. Based on the aforementioned product types and service applications, kits and reagents of immune assays occupied a significant market portion. As the population continues to age and chronic diseases become more prevalent, it is expected that demand for immune assay kits and analytical technology will continue to push the market to grow. Household assay and kits for a wide range of tests will be the future development trends of the market.

A report by Markets and Markets indicated that diagnosis of allergens is the key step for effective treatment. The diagnosis of allergens can identify specific factors inducing individual immune responses, and is a process required for drug development,

manufacturing and treatment. The global market of allergen diagnostics is also expecting growth from US$4.8 billion dollars in 2021 to US$8.2 billion dollars in 2026, a compound annual growth rate of 11.1%. Presumably the main reason for the growth in such market is the high disease incidence rate of allergic diseases and the enormous accompanying financial burden, exacerbation of environmental pollution, increase in healthcare expenses and utilization of medical insurance. The market of allergen diagnostics can be divided according to products and services into test assays, instruments, and services. In the future, it is expected that the market for allergen test assays will grow at a tremendous speed, and the widespread usage and consumption of allergen test assays will continue to promote the growth of this field in the near future.

Diseases related to allergy include asthma, rhinitis, angioedema, urticaria, conjunctivitis and eczema. Populations suffering from these diseases are rapidly increasing due to industrial pollution and population growth. For the asthmatic population alone, the World Health Organization forecasts that the global asthmatic population will growth to 400 million people by the year 2025. Allergies result in an increase of direct medical costs and decrease of social behavioral efficiency; the decrease in work efficiency will result in health burdens for all. Treating these kinds of diseases requires effective testing tools of allergens. Market surveys have shown that the development niche of allergen diagnostic products lie in the increase in turn around time and laboratory automation.

In the overall analysis, the North American market remains the leading segment, followed closely by the European, Asian and other markets. Major international manufacturers of immune assays are based in North America and Europe, such as Switzerland's Roche Diagnostics, Germany's Siemens Healthcare, Abbott Laboratories, Beckman Coulter and Ortho Clinical Diagnostics from the United States and France's bioMérieux. However, the population growth and rising awareness of health in Asia are expected to create more demands for the diagnostic market, representing a potentially significant business opportunity.

C. Status of Global Molecular Diagnosis Market

According to the analysis report by Mordor Intelligence (Molecular Diagnostics Market, 2021), the global scale of the molecular diagnostics market (MDX) in 2020 was US$9.3 billion, and is expected to grow to US$15 billion with the compound annual growth rate is expected to become 9.2% by 2026. According to the report, molecular or nuclei acid diagnosis of human diseases are now a proven, viable medical technology for diagnosis, treatment, prevention and monitoring treatment progress. MDX combines professional knowledge and technology acquired through years of diagnostic medical research and molecular genetics. Innovation in the field of molecular biology has also lead to revolutionary breakthroughs in the past few decades. Depending on the fields of applications, MDX can be categorized as infectious disease diagnosis, tumor gene mutation analysis, blood screening, microbial identification and other applications (e.g. diagnosis for cardiovascular diseases, neurological diseases,

DNA fingerprinting profile, tissue classification and foodborne pathogen analysis). The convenience of molecular diagnostic allows it to occupy a significant portion of the diagnostic market for infectious diseases.

D. Analysis of Infectious disease diagnostic market

According to Markets and Markets (Oct. 2019, Report code: MD 3088), the 2021 global infection diagnostic market reached a scale of US$28 billion dollars and is expected to reach US$39.8 billion dollars in 2026, a compound annual growth rate of 7.2%. Conventional diagnostic technology that immune diagnosis is the major part of the infectious disease market. The fastest-growing technology will be molecular diagnostic technology like nucleic acid amplification technology. Based on the applications, the infectious disease diagnostic market can be categorized as gastrointestinal tract (GPP), influenza and upper respiratory track (RPP), pneumonia, Hepatitis B, Hepatitis C, sexually transmitted disease (STD), tuberculosis (TB), Chlamydia trachomatis and Neisseria gonorrhoeae (CT/NG), Methicillin (MRSA) and others (influenza, Ebola, Typhoid fever, Malaria and Dengue fever). The growth in this category is due to the growing prevalence of infectious diseases in recent years.

(2) Correlation between the upstream, midstream and downstream industries

Industry correlation	Related stakeholders	Function
Upstream	Material supply: Proteins, antibodies, antigens, DNA, reaction assays, instrument components, test carriers and related consumables.	Provides basic materials

Industry correlation	Related stakeholders	Function
Midstream	Product development personnel, product manufacturing personnel: Test assays, instrument and equipment, design of test platform and analyzer, manufacturing and retail sale	Provides products and services

Industry correlation	Related stakeholders	Function
Downstream	Customers: University medical centers, community hospitals, government health-related organizations, regional hospital laboratories and 3rd party reference laboratories.	Collect specimens from patients, perform tests and generate reports.

Manufacturers of in-vitro diagnostics assays rely on existing technologies to develop in-vitro diagnostic assays and test instruments. The upstream industries of this field are suppliers of proteins, antibodies, antigens, DNA, reaction assays, instrument components

and related consumables; the midstream industries are the designers, sellers and manufacturers of test assay kits, instruments, testing platform and analyzers. The midstream industry can also be retailers who distribute products to the end customers; the downstream customers include university medical centers, community hospitals, government health organizations, regional hospital laboratories and 3rd party reference laboratories.

Our corporation's core business affairs are development, manufacture and sale of BMB, test instruments, fully-automated molecular multiplex diagnostic system, diagnostic platform, and assays. Therefore, our corporation is positioned as the midstream industry within this industry chain, and the downstream industries are our target customers.

(3) Development trends of various products

In general, in-vitro diagnostics are testing specimens collected from the human body, such as urine, blood, tissue, stool and cells, and used as a basis for disease diagnosis and verification of physiological conditions. The following is a brief description of the various development trends of in-vitro diagnostic products:

A. Biochemical diagnosis-immune diagnosis-advancement of molecular diagnosis

A biochemical diagnosis like the diagnosis of triglyceride, blood glucose and metallic elements (sodium ions, potassium ions and magnesium ions) are some of the earliest types of in-vitro diagnostics, with more than 70 years of development culminating in a mature market. After 30 years, the diagnostic technology has extended to the immune diagnostic market with protein detection technology. The compound annual growth rate of the immune diagnostic market for the past 10 years was 8.49%. From 2000, the flourishing of genomic molecular biology has resulted in the in-vitro diagnostic market's growth based on molecular genetics and molecular biotechnology. It is estimated that the molecular diagnostic market is rapidly growing at a rate of 9.23% compound annual growth rate in the recent decade and is currently the main development axis of in-vitro diagnostics.

B. Full automation

Early test platform requires manual operation and is labor-intensive, requiring technical operators with high technical proficiency and experience to effectively carry out the testing procedures. However, such highly technical proficient talents are costly to train and hard to recruit. The quality of manual operation also varies from person to person and is prone to testing errors. Thus, the tests take time and the labor-cost is intensive, often requiring prolonged testing time to verify the results.

Recently, the rising health consciousness and increasing aging population have resulted in a significant increase in specimen collection by clinical and medical laboratories. Therefore, a testing platform capable of full-automation and high-

throughput testing is in urgent demand by the market and has since become a development trend; in addition, a fully automated testing platform can provide immediate, consistent and accurate test results. This excellent feature allows clinicians to arrange personalized treatment quickly and can maintain and improve the quality of medical diagnosis for customers with large-scale testing needs.

C. Multiplex testing

We have integrated molecular diagnostic technology, automated analysis technology and multiple testing platforms into a single system. It is intended to provide technology and products for markets that have not yet been satisfied and address future medical market trends.

Traditionally, a single test means that only one test can be performed from a single specimen. Because specimens are difficult to obtain, the traditional single test is less effective, giving rise to the revolutionary advancement in multiplex and all-in-one testing technology. The benefits of multiplex testing are not only limited to technological breakthroughs. They can be beneficial for instrument users and patients as well:

(A) Clinician: able to detect the pathogenic causes of the patient early (identify whether it's a single pathogen or shared latent infection) for better and faster patient management.

(B) Laboratory: improves laboratory efficiency, no longer requires multiple platforms for multiple tests, can effectively save on personnel costs and lower the assay costs from testing.

(C) Hospital: reduce patient isolation period, increases management efficiency and quality of the patient-doctor relationship, which lead to decreased waiting time for result report and lower operational costs of the hospital.

(D) Patient: allow for optimized therapy regimen, decreases waiting time for follow-up report and the frequency of testing at the hospital.

(4) Competition

A. Analysis of competition of multiplex testing technology

(A) Real-time polymerase chain reaction (Real-time PCR)

Real-time PCR is a testing technology that detects the amplification of nucleic acids in the PCR cycle. The strength of the emitted fluorescent signals reflects the concentrations of the nucleic acids. Its limitation is the number of test items in a single test. The Real-Time PCR used in multiplex testing is based on detecting different fluorescent signals to achieve multiple testing objectives. Based on the limitation of current types of fluorescent signals, the multiplex testing capability of real-time PCR can only detect 2~3 target compounds

simultaneously. A well-known manufacturer of medical diagnostic equipment is the Cepheid of United States (recently acquired by the Danaher Corporation).

(B) Microarray

Biological chips (microarray technology) technology has been developing for nearly 20 years. A carrier vehicle is spotted with over 10 million of microscopic spots, allowing simultaneous detection/testing of multiple types of biomarkers. Its limitation is its precision. Microarray technology has been successfully applied in biological science to search for new biomarkers. However, its technical weakness is the difficulty to maintain consistency between each spot, the high degree of variance and lack of precision, which is an essential requirement for clinical diagnosis. Its lack of flexibility, high price and lower stability (the produced batches of signals are inconsistent) hampers its market demand for in-vitro medical diagnosis. Affymetrix of the U.S. is one of the well-known companies for this detection technology (recently acquired by the Thermo Fisher Corporation).

(C) Sequencing technology

Sequencing technology is the process of determining the sequence of nucleic acids. It is now widely implemented in scientific research, such as mapping the whole genome of humans and the detection of gene mutations in cancer patients. It can also be used in the investigation of unknown genes and biomarkers. However, single-sequencing is no longer significant once the genome has been decoded. Although it is a revolutionary technology in the field of genomic study, its time-consuming and costly nature makes it less suitable for the medical diagnostic market's routine demands.

(D) Barcoded Magnetic Beads (BMB) assays

Other than our Group, Luminex (purchased by Diasorin in 2021) is the only company that uses barcodes to develop test platforms. The Luminex bead based assay uses the ratio of 2~3 types of fluorescent dye as a method of identification; and the “analog” type can be identified up to 300~500 barcodes at the same time. Our corporation's technology involves “digital” encoding of the barcodes and allows clear and stable identification of 4,096 test labels, with far more detectable target quantifies and higher precision. In addition, the Luminex analyzer's microfluidic channels are complicated to maintain, easily blocked and increases the maintenance risks of the test organization, which in turn induces extra costs on maintenance management.

		Luminex Bead	ABC-BMB
Barcoded Magnetic Beads (BMB)	Encoding method	**Analog** Mix 2-3 types of fluorescent dye beads and based on the intensity of the emitted fluorescence.	**Digital** Barcoded Magnetic Beads (BMB), high contrast barcode (0:1) for precise identification
	Multiple tests	50, 100 (2 fluorescent dyes) **<500** (3 fluorescent dyes)	**4,096**
	Production	Emulsion solution, unstable barcode Light-sensitive/requires protective covering, interferes with fluorescent labels	Semiconductor photoetching Permanent barcode with high stability Low-cost batch production and easy to scale production
System/operation	Maintenance	Difficult: Blockage of microfluidic channels, residual beads, require washing and cleaning after loading specimens, labor intensive	Easy: Direct optical imaging of microplate, no microfluidic channels
Automation	Convenient to use	No: Complex procedures/labor intensive/potential contamination	Yes: Easy to create workflow/integrated PCR, hybridization and testing/avoids contamination

Source: compiled by our group

B. Market competition analysis

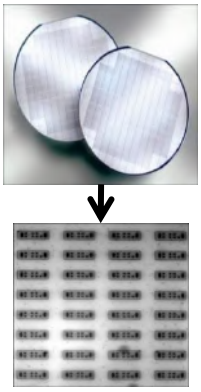
The seven major IVD manufacturers in the world are Roche, Abbott, Siemens, Hologic, Danaher/Cepheid, Qiagen and BioMerieux. These manufacturers have high market shares in medical diagnostic assays but lack innovative technology, especially in multiplex testing. Multiplex testing is the mainstream trend of the current market. Global manufacturers that lack this type of technology risk losing in the future's highly competitive diagnostic market. As such, these manufacturers are catching up by acquiring companies with multiple diagnostic technologies. For example, BioMerieux acquired Biofire in 2014 and the procurement of Cepheid by Danaher in 2016 (up to 4 tests). Roche acquired GenMark and DiaSorin acquired Luminex in 2021. This illustrates the emphasis of global major pharmaceutical companies on multiplex testing. Presently, except for Luminex and BioMerieux, none of the seven major manufacturers have technology platforms and products for multiplex detection (more than 4 labels). Another phenomenon was observed in the U.S. market, where an overspill of test capacity from the existing test facilities caused by the COVID-19 pandemic resulted in a number of new test laboratories. With the decreasing number of COVID-19 samples, these laboratories need to seek new sources of income and therefore created a new blue sea for test demands. The more test items a company can provide, with a high throughput capacity, the more laboratory clients they will attract.

3. Technology and Research & Development Status

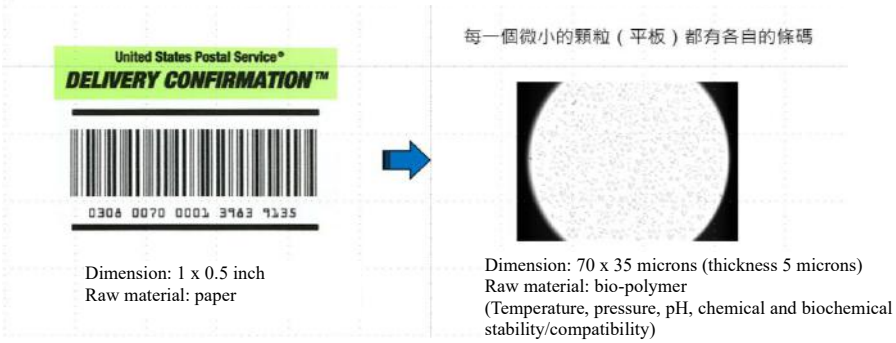
(1) Technology level and R&D of business affairs

The development of multiplex in-vitro diagnostics assays and instruments' technology platform with barcoded Magnetic Beads (BMB) are the main operating axes of our corporation. Looking at the diagnostic assay products available on the market, most technology platforms are similar to the existing single test platform. It is impossible to obtain multiple and accurate diagnostic results in a single test. Our corporation uses semiconductor-based manufacturing technology to produce millions of test carriers encoded to obtain multiple and accurate test results in a single test pass. Here we describe the technology level and R&D status of our corporation's main product lines:

A. Barcoded Magnetic Beads (BMB)



- Digital barcodes (used in supermarket and logistics) shrink the length and width to 1,000 times and imprinted onto magnetic beads

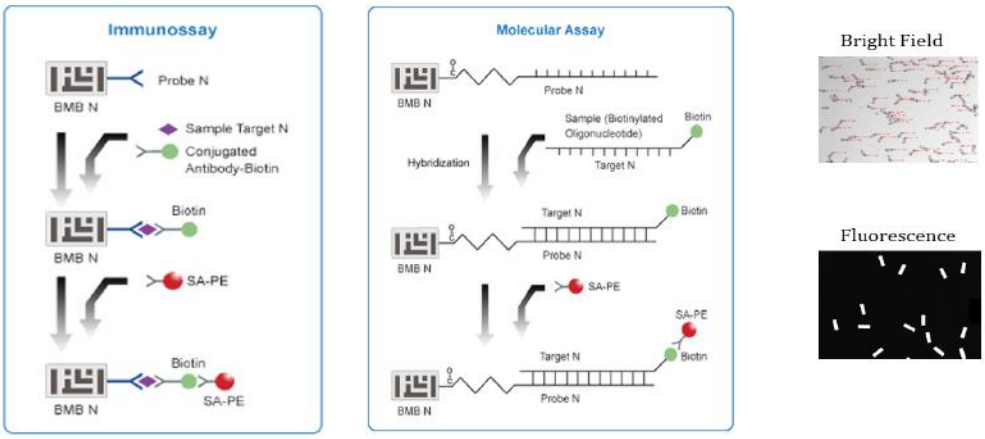


Dimension: 1 x 0.5 inch
Raw material: paper

Dimension: 70 x 35 microns (thickness 5 microns)
Raw material: bio-polymer
(Temperature, pressure, pH, chemical and biochemical stability/compatibility)

Barcodes on the magnetic beads identify specific probes

Stable BMB optical scanning: fluorescence signals indicate quantitative/qualitative



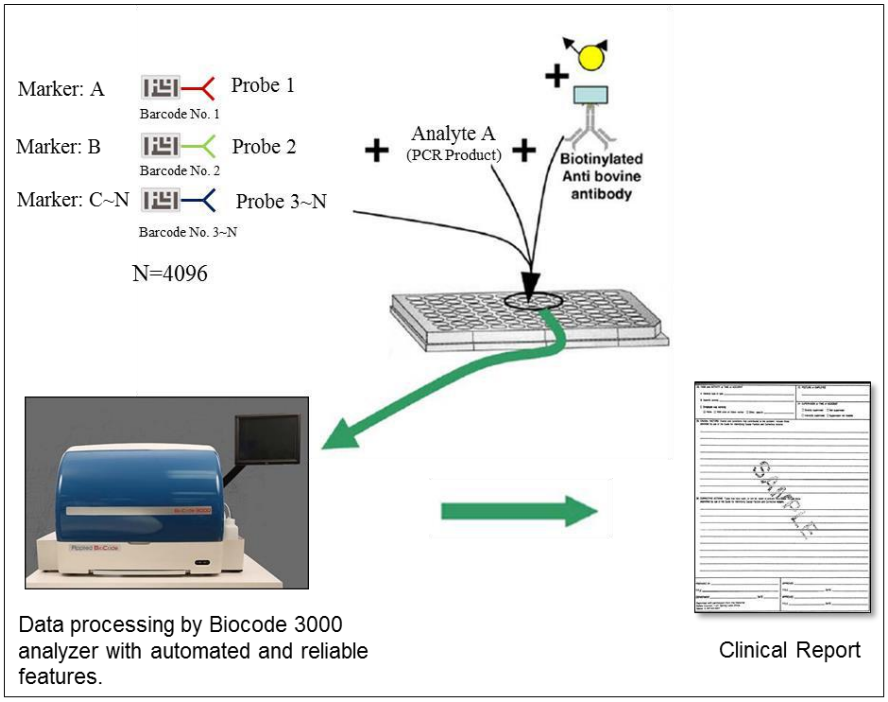
Source: compiled by our group

BMB is the shrinkage and etching of digital barcodes onto silicon wafers using a semiconductor manufacturing process and applying diagnostic assays. Its unique encoding method allows more than 4,000 codes to be encoded. At present, the encoding method can identify up to 12 bars on a barcode, which culminates in a combination of 4,096 (2^{12}) combinations of different digital barcodes. The molecular probes or antibody/antigen combinations of different diseases can be chemically bonded to the BMB on organic polymer (as shown in the figure above). The probes react with the specimen to emit fluorescent signals, which the system interprets to identify the barcode with a fluorescent signal, achieving hundreds of label readings in a single test for multiplex diagnosis.

B.Instrument

The instrument developed by our corporation includes high and low power LEDs, microscope lenses, imaging cameras, scanning systems and analysis software to provide micro-level BMB reading and calculation of fluorescent signal intensity. The current instrument product lines include Biocode 1000, Biocode 2500 and MDx 3000. Biocode 2500 is a 2nd generation product. Compared to Biocode 1000, it has the advantages of smaller size, faster analysis speed and lower costs. Multiplex testing can produce large amounts of test results quickly; for example, only 30 seconds is needed to perform 20 multiplex tests, which give 20 test results. This means that the system can produce about 2,000 test results in just 30 minutes (20 x 96-well microplates = 1,920 tests). In addition, Biocode 2500 can be integrated with an automation system to achieve fully-automated operation.

Schematic for multiplex testing of microcarriers



Source: compiled by our group

The MDx 3000 system is a fully automated multiplex testing system, which is very easy to operate. This system integrates molecular analysis steps such as PCR amplification, cross-linking, washing and automatic interpretation. It can perform multiplex tests, including intestinal pathogen typing and identification, infectious bacteria of the respiratory tracts, sexually transmitted diseases, and tuberculosis/non-tuberculous mycobacteria typing and identification, etc.

C. In-vitro diagnostics assays (multiplex panels)

Technology that can accurately determine the source of infection at the early onset of diseases. Combined with our group's BMB platform, this technology can fulfill the needs for one-time detection of multiple targets, high-throughput and precision diagnosis, and can optimize the testing processes in major hospitals and third party laboratories, allowing rapid provision of large amounts of infection source diagnosis information. Our Group has commercialized the test panels for important applications, including diagnosing infectious diseases, such as diarrhea, respiratory tract infection, coronavirus disease, SARS-CoV-2 pooling test, Fungal ASR, etc. We will continue introducing more innovative test panels requiring a high technical threshold, including Cov-2 Flu Plus Direct, a series of test panels for sexually transmitted infections (STIs), Antimicrobial Resistant Gene, and urinary tract infections (UTIs) and opportunistic infections.

The Group has also delved into the field of multiplex immune diagnostic panels, and plan to use our exclusive BMB technology platform to develop Allergy Diagnostic Panel and Automated Immunoassay System. The market of immunoassay is much more mature than molecular diagnostics, however it lacks novel products capable of multiple testing. We expect that our experience in the development of multiplex

diagnostics and automated instrument will revolutionize the technology of multiplex immunoassay.

D. Research and Development of Liquid Biopsy

Testing circulating tumor DNA (ct-DNA) to determine the incidence of tumor formation or treatment efficacy is a novel molecular test application. Most products on the market analyze tumor DNA using a genetic sequencing approach which takes weeks to complete and requires bioinformatic service to translate the data for interpretation. In line with the diverse test features offered by the barcoded magnetic beads, our Company hopes to isolate multiple types of ct-DNAs for PCR tests, hoping to reduce the test time and lower the cost of testing. A feasibility study is currently being conducted.

(2) Research Personnel and Education Background/Professional Experience

A. The main education background distributions of the research and development personnel in the Group are as follow:

Year / Education	End of 2019		End of 2020		End of 2021		End of March 2022	
	Number of personnel	Ratio (%)	Number of personnel	Ratio (%)	Number of personnel	Ratio (%)	Number of personnel	Ratio (%)
Ph.D. Degree	8	34.78	7	31.82	7	29.17	6	26.09
Masters Degree	5	21.74	4	18.18	5	20.83	5	21.74
University and College Degree	9	39.13	10	45.45	11	45.83	11	47.83
Others	1	4.35	1	4.35	1	4.17	1	4.34
Total	23	100.00	22	100.00	24	100.00	23	100.00

B. The education backgrounds and professional experiences of the research and development personnel in our group are as follows:

Name	Position	Highest education/Years of Professional Experience	Expertise	Main education backgrounds and experience
Winston Z. Ho	President and Founder/ Chief Technology Officer	Ph.D./ 31 years	Optoelectronics, biochemistry, physical chemistry	Bachelor of Chemistry, National Chung Hsing University Ph.D. of Physical chemistry and Master of Biochemistry, Arizona State University, U.S. Post-doctoral researcher, Columbia University, New York, U.S. - high-speed optics Maxwell Sensors, Inc. Founder / CEO Director of smart optical system and sensor Director, Biomedical Sciences, Physical Optics Corp.

				US-NIH Grant review committee Researcher, optical center of University of Arizona, U.S. - non-linear optics 52 publications and 15 authorized patents
Michael Aye	Principal Scientist (Director of Science)	Ph.D./ 17 years	Microbiology, molecular diagnostics, infectious disease, diagnostic assays	Ph.D. in Microbiology, University of California, Irvine Vice-Chairman of Molecular Products Director of Molecular Analysis, Focus Diagnostics Extensive experience in the development of molecular diagnostics and analysis; developed and launched over 40 products approved by ASR and 4 products approved by 510(k) of the FDA.
Collen Knoth (Note 1)	Product R&D Division Manager	Ph.D./ 11 years	Microbiology, biochemistry, infectious disease, molecular genetic diagnostics	Ph.D., University of California, Riverside Senior Scientist, Focus Diagnostics Scientist, Johnson & Johnson Company
Gerald Kowalski	Product R&D Division Associate manager	Bachelor's Degree/ 31 years	Software engineering, team building and all stages of software items	Bachelor in Technology in Electronic Instrumentation Engineering, Michigan Technological University Software team leader, BECKMAN COULTER INC. Senior Software Engineer, BAXTER International Inc.
Jung-Ren Hou	Senior Scientist	Ph.D./ 25 years	Polymer chemistry, organic chemistry, surface chemistry	Bachelor and Master's Degree in Chemistry, National Taiwan University Ph.D., New York Institute of Technology Post-doctoral researcher, The City University of New York
Jakob Kirchner (Note 2)	Senior Scientist	Ph.D./ 28 years	Microbiology, biochemistry, infectious disease, molecular diagnostics	Ph.D., Rutgers University Research Scientist, Luminex Corp. Assistant Professor, Texas State University National Institute of Environmental Health Sciences
Gao Chen	Product Manufacturing	Ph.D./ 27 years	Immune testing, oncology,	Ph.D., Gembloux Agro-Bio Tech, Belgium

	Division Senior assistant manager		biochemistry, bio-engineering, molecular biology	Bachelor's degree, Gembloux Agro-Bio, Belgium
Anh Pham	Senior Scientist	Ph.D./ 19 years	Microbiology, biochemistry, infectious disease	Ph.D., Walden University Bachelor's degree, UCLA Research scientist, Quest Diagnostics Molecular Diagnostics, Focus Diagnostics

Note 1: The employee has left the job on March 24, 2022.
Note 2: The employee has left the job on July 1, 2021.

(3) Annual budget devoted to research and development for the past 5 years

Unit: NT$ thousand; %

Item \ Year	2017	2018	2019	2020	2021
R&D expenses	204,544	195,709	216,973	197,005	205,854
Total operating income	26,756	36,904	104,694	299,015	319,962
Percentage of research expenses in operating income	764.48	530.32	207.24	65.88	64.34

Source: Audited consolidated financial statements of the Group.

(4) Successfully developed technology or products

A. Barcoded Magnetic Beads (BMB)

Our corporation has successfully developed and commercialized Barcoded Magnetic Beads (BMB). Based on the time of development, the products include 32 Plex (5-digit, (2^5)), 128 Plex (7-digit, (2^7)), and 4,096 Plex (12-digit, (2^{12})) of BMBs. While the dimension of the products in this series are largely identical, the encoding mode of the BMB has been changed from 1-dimensional encoding to 2-dimensional encoding. This unique encoding method allows 4,096 barcodes or simultaneous detection of 4,096 targets. The 4,096 barcodes are sufficient for use in clinical diagnostic applications of immune or molecular detection.

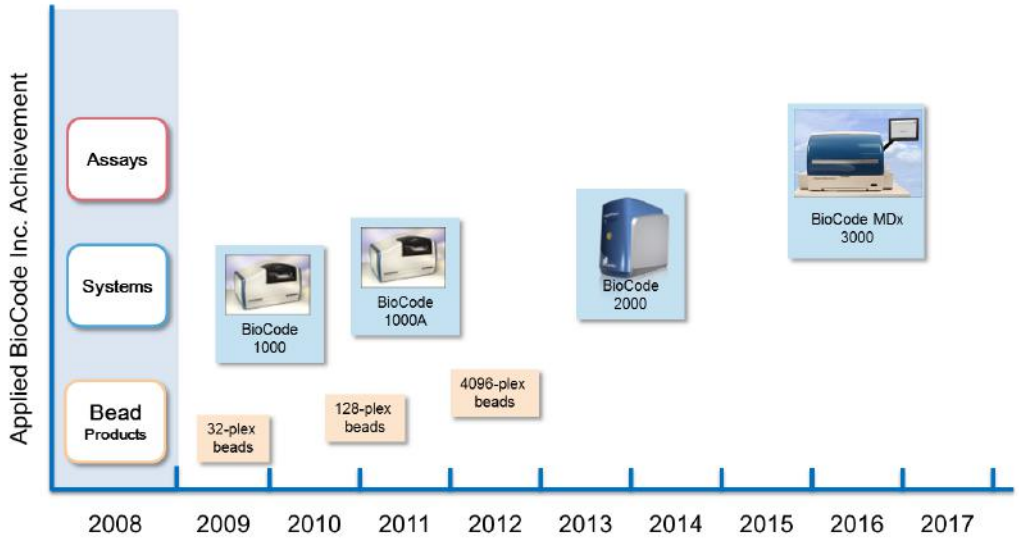
B.Instrument- Optical Scanner

Our corporation has successfully developed and commercialized automated analyzers, which include the Biocode 1000 and 2500. The products in this series can automatically read BMBs, analyze fluorescence signals, and use them as the basis of quantification/qualification interpretation. The instruments include light sources, scanners, optical filters and optical detectors. The 2500 (II) is a smaller analyzer that uses LED as a high-power light source, which saves on costs and can be integrated with a mechanical fluid system.

C. Instrument- Automatic Analyzer

MDx 3000 is a user-friendly automated system that integrates fluid processing and optical detection systems into a single unit. The user places the 96-well PCR plate into the system, which will then automatically carry out all operations and produce a final test results report. The MDx 3000 system is a fully automated multiplex testing system, which is very easy to operate. This system integrates molecular analysis steps such as PCR amplification, cross-linking, washing and automatic interpretation. It can perform multiplex tests, including intestinal pathogen typing and identification, infectious bacteria of the respiratory tracts, sexually transmitted diseases, and tuberculosis/non-tuberculous mycobacteria typing and identification, etc.

Development progress of instruments



Source: compiled by our group

D. In-vitro diagnostics assays (multiplex panels)

The Group received a 510(k) approval from the U.S. FDA on September 29, 2018 and a market permit for respiratory tract test products on December 24, 2019. We have also received a EUA from the U.S FDA for coronavirus test panels on June 16, 2020; a EUA from the U.S FDA for a pooling test for coronavirus on December 8, 2020; and a EUA from the U.S FDA for Cov-2 Flu Plus on December 16, 2021, which are all used with our automated test instrument MDx 3000 for diagnosis. We currently offer and have commercialized test panels for diarrhea, respiratory tract and coronavirus infections that are used with our automated multiplex test system MDx 3000. Fungal test panels have been validated by several hospitals with LDT protocol being completed before the publication of our annual report and is currently being promoted.

4. Short and Long-term business development plans

(1) Short-term business development plans

A. The Group recruited a new sales director and a marketing director in September 2021 to strengthen our sales team. We also signed a sales contract for the U.S. with Hardy Diagnostics on December 22, 2021. In March 2022, the Group recruited a CEO for our

US subsidiary to enhance the company's commercialization ability. We will reinforce the promotion of our test panels for infectious disease and automated molecular diagnostic system MDx3000 in the short term.

B. Complete the clinical trial for Cov-2 Flu-Plus Direct Test and enrollment is expected to be done in the 4th quarter of 2022. Complete the analysis of the study result in the 1st quarter of 2023 and submit the result to the U.S. FDA for 510 (k).

C. Accelerate the product commercialization process to improve sales and promotion activities and expand international sales channels.

D. Improve collaborative ties with licensed organizations and accelerate the development cycles.

(2) Long-term business development plans

A. Continue the research and development and the commercialization of IVD for infectious diseases. There is a particularly high unmet medical demand for tests for sexually transmitted infections. Our goal is to become the leader in global infectious disease diagnostics among large hospitals and test laboratories.

B. Expand to other test assays such as cancer, genetic mutations, allergy, cytokines, and agricultural genes improvement.

C. Increase licensing to collaborative organizations of different applications and regions.

D. Develop automated immune diagnostic analyzer and real-time analyzer (Point of Care Testing, POCT) and expand application markets.

2. Industry, Supply and Sales Overview

1. Market Analysis

(1) Main Locations of Product Sales and Service Provisions

Unit: NT$ thousand; %

Year / Location		2019		2020		2021	
		Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
Domestic sales		78,528	75.01	276,057	92.32	294,599	92.07
International sales	Europe	189	0.18	157	0.05	118	0.04
	Asia	25,977	24.81	22,801	7.63	25,245	7.89
	Others	-	-	-	-	-	-
	Total	26,166	24.99	22,958	7.68	25,363	7.93
Total		104,694	100.00	299,015	100.00	319,962	100.00

Note: domestic sales refers to sales in the United States.

Our corporation's revenue sources are mainly from BMBs, instruments, in-vitro diagnostics assays, licensing and sales of parts and components. Major markets of sales include the United States, Europe and Asia.

According to our corporation's business development plans, we will focus on assay sales and we will initially focus on the North American markets. As of the printing and publication of this annual report, our Group already possesses the practical

commercialization results of 17-Plex Gastrointestinal Pathogen Panel, Automated multiplex screening system MDx3000, 20-Plex Respiratory Infection Panel and Covid-19 test panels in larger American hospitals and third party laboratories.

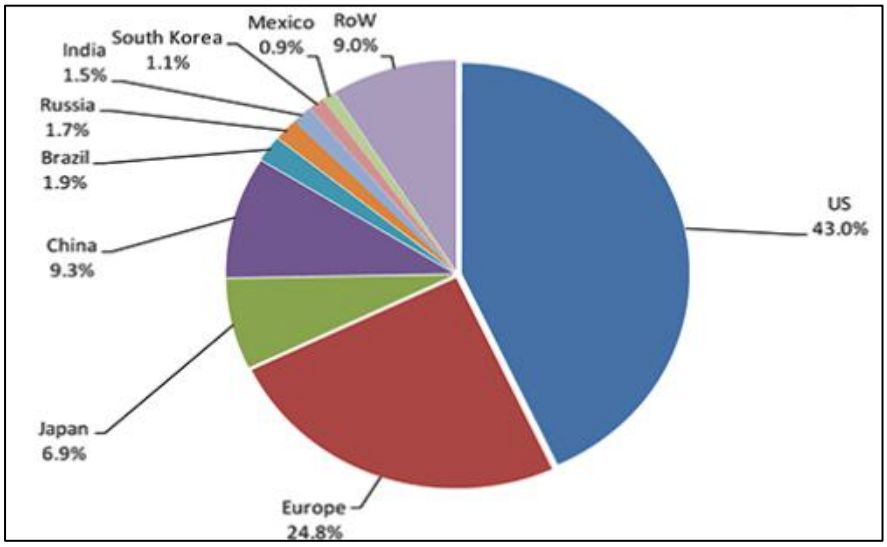
(2) Market shares

Before 2019, the main sources of revenue for the Group were income generated from technology licensing and sales of BMBs, instruments and components to technology licensees. Since having obtained approval from the USFDA for in-vitro diagnostics assays for enteritis, respiratory and coronavirus in conjunction with the fully-automated analyzer MDx 3000 for sale or authorization for emergency use in September 2018, December 2019, and June 2020, respectively, our revenues have included income from in-vitro diagnostics assays sales since 2019. Generally speaking, most of the products are currently in the process of commercialization. Therefore, we could not analyze the relevant market shares of this annual report's publication and printing date.

(3) Future market supply and demand status and opportunities of growth

According to the research report published by Visiongain, the global molecular diagnostic market in 2019 is expected to top 10.4 billion $ U.S. Dollars. With the global aging trend and increasing prevalence of chronic diseases, it is expected that the molecular diagnostic market will continue to grow before 2025; Visiongain also predicted that the North American market will occupy the majority of the shares.

Prediction of Molecular Diagnostic Market in 2019 (by regions)



Source: Visiongain

The multiplex automated molecular diagnostic system provided by our corporation is easy to use, fully-automated, high-throughput, and allows highly varied testings in a small product footprint, which will satisfy the current market needs. In the current molecular diagnostic market, many diversified but low-throughput systems are targeted toward smaller hospitals and clinics; however, as the demand for specimen testing is high

in larger hospitals and medical laboratories, products with high-throughput testings are usually favored such as conventional diagnostic instruments from manufacturers like Roche. Although these conventional diagnostic instruments are high-throughput, they could not conduct multiple tests in a single pass and requires more time, money, and manual labors to provide patients with diagnostic reference and medication guidelines. For clinicians, it is expected that the demand for multiple and high-throughput testing will continue to grow.

Our corporation has selected assays of infectious diseases as self-developed products because infectious diseases have clear diagnostic needs and are covered by insurance subsidies. In the U.S. market, test panels for major infectious diseases are reimbursed by insurance. In addition to the developed and marketed test kits for gastritis and respiratory tract infections, test panels for coronavirus and fungal test panels, we are currently developing or planning to develop test kits, including Cov-2 Flu Plus Direct (7 in 1), a series of test panels for sexually transmitted infections, including test panels for antimicrobial resistance gene markers and opportunistic infections. The following is a brief description of the current market status:

A. 17-Plex Gastrointestinal Pathogen Panel

Enteritis is a serious global infectious disease. According to a report from the U.S. Centers for Disease Control and Prevention (CDC-Global Diarrhea Burden), 1 out of 9 children deaths worldwide is due to diarrheal disease. Diarrhea is the second leading cause of death for children under 5 years of age. It is estimated that there are 2 billion diarrhea cases every year, resulting in about 1.8 million deaths. Diarrhea cases are the second leading cause of death and the leading cause of malnutrition in children under five. Because the diarrhea symptoms are very similar, doctors often cannot distinguish whether the diarrhea is caused by viruses, bacteria or parasites, which makes treatment difficult, therefore necessitating immediate detection of pathogenic sources to act as a diagnostic basis. Luminex is the current market leader. Concerning the market demands, our corporation has developed a more precise and efficient multiplex detection system, which reduces manual labor costs and specimen contamination issues.

B. 20-Plex Respiratory Infection Panel

Our corporation's 20-Plex Respiratory Infection Panel allows rapid identification and phenotyping of clinically common bacteria and viruses. It can determine respiratory infection as early as possible, which helps to lower the costs of treatment. If respiratory diseases are not monitored immediately and effectively, they can often cause large-scale infections, leading to issues like deaths and potential drug abuse. Respiratory pathogens, especially those found in children, the elderly and patients with weakened immune systems, include the following: viruses (H1, H1N12009, H3 subtype), influenza B virus, respiratory syncytial virus (type A and B), para-influenza virus (type 1, type 2, type 3, type 4), human metapneumo virus (Type A and B),

rhinovirus, enterovirus, coronavirus (OC43, HKU1, NL63, 229E), adenovirus, Mycoplasma pneumoniae, Chlamydia pneumoniae, and Bacillus pertussis.

C. COVID-19 diagnostic panel series

Since 2019, the spread of COVID-19 has hit countries hard around the world, and the situation is still relatively serious as of now. However, with countries starting to administer vaccines as a means to recover the economy, testing at the same time continues to reach its peak to. By making such effort, it ensures the effectiveness of the vaccination so that people will be able to travel and carry on with their day-to-day life. Our Group has received a U.S. FDA license for and commercialized the coronavirus test panels (including pooling) and Cov-2 Flu Plus. We are currently preparing a clinical trial program for Cov-2 Flu Plus Direct and will submit a 510(k) application to the U.S. FDA upon completion. This will help expand the Company's pipeline and increase our revenue and source of profit.

D. Fungal Panel

Fungal panel kits can be used to test fungi responsible for pulmonary infections, meningitis, blood infections, allergies, and skin infections. Among these, Cryptococcus is the most commonly observed fungus in fungal meningitis. Cryptococcus infection is the 4th ranking pathogens aside from bloodstream infection. Its mortality rate is estimated between 35 and 55% and is a common type of pathogen for nosocomial infections. The Candida auris, known for its multiple drug resistance characteristic, has a mortality rate of about 30 to 60% for those infected, and is listed as one of the emergency threats by the U.S. CDC. This fungal test panel includes: (A) fungus (Aspergillus spp. (including Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, Aspergillus terreus), Mucor (including Mucor indicus), Rhizopus (including Rhizopus microspores, Rhizopus oligosporus), Cunninghamella bertholletiae, Fusarium oxysporum, Fusarium solani, Scedosporium apiospermum, Scedosporium prolificans)), (B) Yeasts (such as Candida (including Candida albicans, Candida glabrata, Candida krusei, Candida parapsilosis, Candida tropicalis, candida auris), Cryptococcus neoformans). The inspiration for this product development comes from feedbacks received from our clients. The clients have completed the validation for 23 test items and the LDT Protocol.

E. Sexually transmitted infections (STIs)

According to the WHO data, at least 0.3 billion and 7 thousand people are infected with infectious diseases per year, for which the treatment cycles after infection are longer for women than men. These infections are also positively associated with female infertility. Currently, there are single-test products available for most major STIs but lack multiplex tests. Our multiplex STI tests will include Chlamydia, gonorrhea, herpes simplex virus-1 and herpes simplex virus-2, trichomonas vaginalis and mycoplasma. In addition to being a serious public health issue that resulted in enormous health care expenses, sexually transmitted infections have always been

considered a certifiable disease by many governments. While common pathogens of sexually-transmitted diseases like AIDS and syphilis already have various detection methods, pathogens that are difficult to diagnose like chlamydia, gonorrhea, trichomoniasis, mycoplasma, herpes virus, etc., have always been blind spots in prevention and treatment. The ABC's assay kit will satisfy this market demand.

F. Sexually transmitted infections - Antimicrobial Resistance Gene marker

Drug resistance of pathogens is considered by public health experts to be one of the major threats to the modern human society. Due to the widespread usage of anti-biotics and mutation of pathogens after multiple infections, there are more pathogens nowadays that have begun developing resistance to medication. According to a 2019 report by the U.S. CDC, about 2 million people in the U.S. were diagnosed with drug-resistant pathogens annually, resulting in about 35,000 deaths per year. Pathogen resistance that are listed as major threats include carbapenem-resistant Acinetobacter, Candida auris, Clostridium difficile, carbapenem-resistant Enterobacter, drug-resistant Campylobacter, ESBLs Enterobacter, Vancomycin-resistant Enterococcus, drug-resistant Salmonella, multiple drug-resistant Shigella, drug-resistant Staphylococcus aureus (MRSA), and drug-resistant mycobacteria, etc. Resistant gonorrhea is considered the most refractory sexually transmitted threat by the public health community. As the drug resistance of pathogens can be determined by their special genetic fragments- the drug-resistance markers-, additional screening of bacterial drug-resistance when detecting these pathogens can be a very useful information for clinical diagnosis. In most clinical practices, the first step is to screen the sexually transmitted infections and followed by a genetic analysis of drug resistance. Our goal is to introduce a first-line test tool for infectious disease with the option of including drug resistance genes. This will allow more timely treatment while eliminating the overuse of antibiotics.

G. Urinal Track Infection

Urinary tract infection (UTI) is a common indication of community and nosocomial infection. According to the report from the National Institutes of Health, the total expenses related to the medical care of UTI is estimated to be about 3.5 billion USD. The severity of infection may be increased significantly with complications like urinary stones, insertion of urethral catheters, and patients who have undergone urinary surgery. Common pathogens that cause urinary tract infections include Escherichia coli, Citrobacter freundii, Acinetobacter baumanii, Proteus mirabilis, Enterococcus, Klebsiella, Enterobacter, Morganella, Mycoplasma and Chlamydia. This product screens these pathogens all at once and provides comprehensive and accurate diagnosis of urinary tract infections with the precision afforded by molecular diagnosis.

H. Opportunistic Infection diagnostic panel

Immunosuppressed populations, such as the elderly, cancer patients and immunocompromised patients, HIV patients are more prone to opportunistic infections. Infection-causing pathogens including Aspergillus spp., Fusarium spp., Mucor spp., Rhizopus spp. and Cryptococcus spp., are all covered in our existing test kits. After re-grouping, we plan to introduce test kits for opportunistic infections via RUO for test facilities specializing in this field.

I. 120-Plex Allergy Diagnostic Panel and Automated Immunoassay System

The Group intends to develop 120-Plex Allergy Diagnostic Panels and Automated Immunoassay Systems in the future mainly to target diseases related to allergies, including asthma, rhinitis, angioedema, urticaria, conjunctivitis and eczema. Populations suffering from these diseases are rapidly increasing due to industrial pollution and population growth. For the asthmatic population alone, the World Health Organization forecasts that the global asthmatic population will growth to 400 million people by the year 2025. Allergies result in an increase of direct medical costs and decrease of social behavioral efficiency; the decrease in work efficiency will result in health burdens for all. Treating these kinds of diseases requires effective testing tools of allergens.

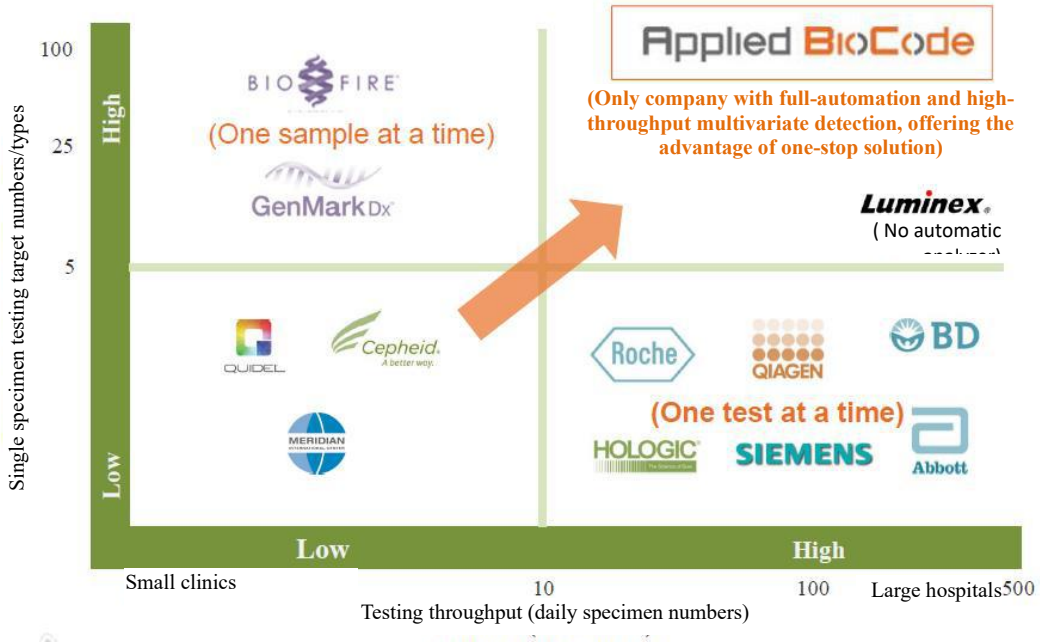
J. Liquid Biopsy

Testing circulating tumor DNA (ct-DNA) to determine the incidence of tumor formation or treatment efficacy is a novel molecular test application. According to a study report, the production value for this application reached US$1.2 billion dollars in 2021. However, it is estimated that the annual growth rate will achieve 20.9% in 2027. The convenience created by the transformation of sample collection from tissue biopsy to blood collection for cancer detection and reduced invasiveness, along with the drug development by several immunotherapy and cell therapy companies that target the association between specific ct-DNA and effective treatment, implied that liquid biopsy is likely to contain the key messages to changing how we fight cancer. A companion diagnostics company, Guardant Health, recently approved by the U.S. FDA reached a market value of US$6 billion dollars in 2021. Another company approved by the FDA, Foundation Mediciney, was purchased by Roche Diagnostic in 2018 for US$2.4 billion dollars. Most of these types of index corporations use genetic sequencing as a platform for tumor DNA analysis, which is time consuming and requires bioinformatic service to translate the data for interpretation. In line with the diverse test features offered by the barcoded magnetic beads, our Company hopes to isolate multiple types of ct-DNAs for PCR test, hoping to reduce the test time and lower the cost of testing. A feasibility study is currently being conducted.

(4) Competitive niche

A. High-throughput, high efficiency, automation

BMB can be used together with the instruments developed by our corporation for analysis. The MDx 3000 is a fully automated multiplex detection system that is easy to operate and integrated many molecular detection steps such as PCR amplification, hybridization, washing and automated reading and interpretation. Up to 4,096 tests can be performed on a single specimen, and up to 188 specimens (8 hours) can be operated and analyzed simultaneously. Compared to the market competitors like Roche and Luminex, while their products also have a high-throughput capability, Roche's offering does not have multiplex detection capability, and neither Roche nor Luminex has full automation built in their systems. Comparing the xMAP instrument of Luminex where each step must be manually completed, our MDx 3000 can reduce the total operation time to 3.5 hours. In addition, full automation can reduce manual operation errors and labor costs, demonstrating the competitive advantages of our corporation's technology platform.



Source: compiled by our group

B. High yield and good stability

BMBs are produced with semiconductor manufacturing technology. As the semiconductor industry has rapidly advanced in the past decades, this production technology's stability is very high and much more stable than other market competitors that offer fluorescent-labeled analog multiplex detection systems. In addition, the fluorescent beads of Luminex are photosensitive and must be stored in darkness. Otherwise, the fluorescent dye will lose its color intensity. The Luminex fluorescent beads are also difficult to produce and can be affected by different barcode reading rates between different batches.

C. Cost advantages

Since the production of Barcoded Magnetic Beads (BMB) is based on a semiconductor manufacturing process that can scale to mass production, the production costs of BMB are competitively advantageous compared to the multiplex detection system of Luminex's fluorescent beads.

D. Proprietary technology and patent protection

Our corporation has previously obtained exclusive, irrevocable and permanent licensing from Maxwell Sensors for our core intellectual property rights, excluding the application in the same fields under our corporation by Maxwell Sensors and third parties. We also have the right to re-authorize applications by third parties. Such core intellectual property rights have been transferred and provided to our corporation. Our corporation is the developer and technology proprietor of the Barcoded Magnetic Beads (BMB) assay platform, we can collaborate with international vendors through licensing. This technology platform has obtained multiple patents in the U.S. and the world, including various BMB core patents (7,871,770, 7,858,307, 8,232,092, 8,148,139 and 9,255,922 are approved by the United States Patent and Trademark Office; the European Union Intellectual Property Office approves EP2342561B1; CN 102246037 B is approved by Chinese Patent). Our corporation's critical technologies' intellectual property rights are the following four: Barcoded Magnetic Beads (BMB), Light transmitted assay bead, Biocompatible and photocurable polymer, Image Decoding and System. When combined, these patents protect our corporation's technologies and ensure their applications in various biomedical fields.

Patent Number	Patent name	Country of Application	Date of Approval
7,871,770	Barcoded Magnetic Beads Structure and Materials	United States	2011/01/18
7,858,307	Barcoded Polymer Beads	United States	2010/12/28
8,232,092	Apparatus and Method for Analyzing Digital Magnetic Beads	United States	2012/07/31
8,148,139	Manufacturing and structure of Barcoded Polymer Beads	United States	2012/04/03
CN 102246037 B	Bio-compatible Polymer Materials for Barcode Magnetic Beads	China	2014/05/21
9,255,922	Biocompatible and photocurable Polymers	United States	2016/02/09
EP2342561B1	Biocompatible and photocurable Polymers	Europe	2019/06/26
PCT/US08/08529	Apparatus and Method for Digital Magnetic Beads Analysis	PCT	–
PCT/US09/60043	Biocompatible and Photocurable Polymers	PCT	–

Source: compiled by our group

(5) Advantages and Disadvantages of Development Prospective and Corresponding Measures

A. Advantages

(A) Technology platform that meets the market trend

As the world's population structure continues the aging trend and the concepts of preventive medicine gain maturity, governments of various countries began to value healthcare and the population's welfare. The improvement of personal economic status and changing healthcare concepts have resulted in continuous expansion and growth of the global healthcare markets. In recent years, the biotechnology industry has paid much attention to precision healthcare and personalized medicine. It is expected that in-vitro diagnostics, such as molecular and immune diagnosis, will become a popular development field. The multiplex diagnostic technology platform of our corporation can satisfy the three market trends simultaneously: 1. Multiple testing, 2. High throughput, and 3. automated operation. In response to the rapid growth of the personalized medicine and precision medical markets, our corporation's testing platform has high compatibility and expandability, making it easy to incorporate new diagnostic targets into our products. Additionally, in response to the multiplex testing market's highly variable demands, our BMB technology platform has good flexibility on diagnostic expansion, allowing rapid inclusion of new biomarkers.

(B) International Brand and Proprietary Technology

Our corporation is the developer and technology proprietor of the Barcoded Magnetic Beads (BMB) assay platform. This technology platform is protected by various international patents. Through licensing to international vendors, we collect pre-payments and royalties to the licensees and engage in sales of BMBs to licenses, generating technology royalty and revenue for our corporation.

(C) Application in Diverse Disciplines

The scope of application of our corporation's technology platform covers wide market applications like clinical diagnosis, academic research, agriculture testing, animal health testing and environmental testing, in addition to our core diagnostic applications in immune and nucleic acid analysis. Our BMB technology has been successfully licensed to various international vendors for use as a development platform for various diagnostic products, demonstrating the recognition received for our platform's application value.

B. Disadvantages and corresponding measures

(A) Existing market competitors: BMB is an innovative technology platform. The existing competitors in the market of multiplex diagnostic can present a threat to the future market share expansion of the BMB technology platform. A major competitor of similar characteristics to our platform is the xMAP system of Luminex, which has been successfully implemented in hospital markets. Compared to our BMB technology platform, Luminex has the advantage of technology and brand familiarity. Other competitors on the market: vendors like Biofire and Genmark provide single-use cassette type operation

platforms (one specimen per cassette). Although the volume of specimens is lower, they are nevertheless potential competitors of our corporation.

Corresponding measures

a. Each step of the Luminex xMAP operation requires manual input, which is time-consuming and challenging to control the quality of results. Our corporation's MDx 3000 is a fully automated operation platform, which reduces labor costs and can decrease total operation time to 3.5 hours. It also has the advantages of easy operation, prevention of DNA contamination, and ease of maintenance and repair. Our corporation will continue to promote our products through authoritative seminars in the field of clinical diagnosis, publication in international journals, and participation in international conventions so that we can increase our brand visibility and emphasize our unique automation advantages.

b. Compared to Biofire and Genmark, whose products do not possess high-throughput capacity, our products are positioned toward high test volume users such as major hospitals, which allows our products to compete for different market objectives. Our corporation's high-throughput feature allows our product to reduce personnel operation time, a shorter testing cycle, and lower costs per diagnosis.

(B) Costs invested during the research and development phase: our corporation was founded fairly recently, and being a biotechnology and medical research and development company, it takes a long time for products to go on sale, as the process requires multiple verifications and clinical trials. If there is no fixed revenue or continuous injection of external funding, it is difficult for us to support the research expenses, and failure of product development will also impact our corporation's financial affairs. Therefore, sound financial planning is of paramount importance to our corporation's operations.

Corresponding measures

a. The BMB technology platform can be applied in a wide range of fields. Our BMB technology has been successfully licensed out to various international vendors for research and development in clinical diagnosis and animal health testing. We collect royalty fees from licensees, which, along with BMBs or instruments' sales, have brought in revenue streams for our corporation.

b. Considering that infectious diseases have well-defined diagnostic needs and are subsidized by health insurance, we retain the in-house development, production and sales of infectious disease related products. Currently, we have the practical sale and commercialization results for Gastrointestinal Pathogen Panel, Respiratory panel, Covid-19 panels and automated multiplex testing system MDx 3000. Or group is continuously developing diverse in-vitro diagnostics assay products such as fungi, urinary tract infection, bacterial drug-resistance, sexually-transmitted diseases (gynecology) and lower respiratory tracts, which help to disperse the risks of a single product's developmental failure. It is expected that sales of our main products (including the in-vitro diagnostics assays) will continue to bring in profits for our corporation.

c. Utilize capital market fundraising opportunities to increase diversified outlets for financing.

2. Key usage and production processes of main products

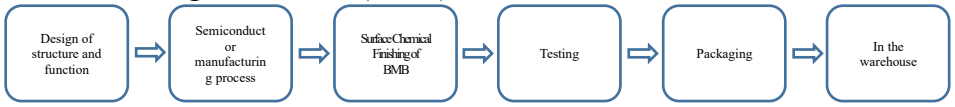
(1) Key usage of main products

The BMB technology platform developed by our corporation can be applied to nucleic acid and immune testing principles. Therefore, it can be applied to a wide range of markets, such as clinical diagnosis, technology research, agriculture, animal health, food industry and environment testing. Following is a brief description of the main products developed or currently in development by our corporation, and their key usage:

Product name	Key usage
Barcoded Magnetic Beads, BMB	BMB can encode up to 4,096 unique numbers and bind with DNA, antibodies, or antigens for specific binding and identification of target compounds. It can be used as a carrier for in-vitro diagnostic assays and can be applied to the diverse fields of clinical diagnostic, agriculture and animal health.
Instrument	A testing instrument that complements the Barcoded Magnetic Beads (BMB) acts as a diagnostic and analysis platform for proteins and nucleic acids. Our BC2500 is an analytical instrument designed for sale to authorized customers. The Biocode MDx 3000 is targeted to hospitals and third party laboratory clients, and has the advantages of fully automated molecular assays, high-throughput, highly diverse testing, ease of operation and small product footprint. Our Group is currently developing automated testing instrument for immunoassay.
Reagent	Diagnostic panel reagents based on BMB technology comprise mainly of molecular and immunoassay products. Panels are divided based on different indications and test targets. Medical personnel can generate important clinical diagnosis basis by following the instructions and operate the tests. Our philosophy is to develop multiple in-vitro diagnostics assays panels for the same testing instrument, which maximizes the testing efficiency for the customer and increases the number of items available.

(2) Manufacturing process of primary products

A. Barcoded Magnetic Beads (BMB)



B. Instrument

C. Reagent

3. Supply of primary raw materials

Primary products	Primary raw materials	Primary suppliers	Supply situation
Barcoded Magnetic Beads (BMB)	Wafer fabrication	Asia Pacific Microsystems	Adequate
Instrument	System manufacturing	Symbio	Adequate
Reagent	Chemical assays	Promega	Adequate

4. Significant changes in primary products or gross margin in divisions for the most recent 2 fiscal years

(1) Comparative analysis of changes in the gross margin of primary products for the most recent 2 fiscal years

Unit: NT$ thousand

Products / Item	Barcoded Magnetic Beads (BMB)		Instrument		Reagent	
	2020	2021	2020	2021	2020	2021
Net sales	44,755	92,462	25,487	69,009	210,908	138,513
Gross profit	24,544	53,505	9,373	31,752	169,533	91,246
Gross margin (%)	54.84	57.87	36.78	46.01	80.38	65.88
Change in gross margin (%)	4.98	5.52	109.22	25.11	34.10	(18.05)

(2) Description of the change in the gross margin of 20% or more

The increase from 2020 of the gross margin for the Group's instruments in 2021 was mostly due to the sales target mainly being IDexx, whose unit price was higher than other licensed customers.

5. List of main purchasing and selling customers

(1)The names of the suppliers who have accounted for more than 10% of the total purchase amount in any of the most recent 2 fiscal years, and the amount and proportion of the purchase amount, and explain the reasons for such increase or decrease.

Unit: NT$ thousand

Item	2020				2021			
	Name	Amount	As a percentage of the total net annual purchase (%)	Relationship with the issuer	Name	Amount	As a percentage of the total net annual purchase (%)	Relationship with the issuer
1	Promega	62,109	44.02	None	Crystalvue	23,225	20.35	None
2	Symbio	24,949	17.68	None	Promega	20,069	17.59	None
3				None	Symbio	17,875	15.66	None
					Wistron	13,712	12.02	None
-	Others	54,040	38.30	-	Others	39,243	34.39	-
-	Net purchase	141,098	100.00	-		114,124	100.00	-

Crystalvue and Wistron are the main suppliers of optical scanners. Their purchase volume increases correspondingly with the increasing sales volume in 2021.

Promega is a primary raw material supplier for panel products. Due to the slowdown in demand for Covid panels, the corresponding purchases and stocking amount decreased compared with the same period last year.

Symbio is an OEM company for optical scanners. Their sales figure was lower than last year due to inventory and lower sales volume of test panels.

(2) The names of the customers who have accounted for more than 10% of the total sales amount in any of the most recent 2 fiscal years, and the amount and proportion of the sales amount, and explain the reasons for increase or decrease

Unit: NT$ thousand

Item	2020				2021			
	Name	Amount	As a percentage of the annual total sales (%)	Relationship with the issuer	Name	Amount	As a percentage of the annual total sales (%)	Relationship with the issuer
1	Poplar	89,442	29.91	None	IDEXX	137,845	43.08	None
2	Baylor	76,043	25.43	None	Poplar	48,191	15.06	None
3	IDEXX	49,719	16.63	None	QDx	33,371	10.43	None
4	-	-	-	-	-	-	-	-
-	Others	83,811	28.03	-	Others	100,555	31.43	-
-	Total sales	299,015	100.00	-	Total sales	319,962	100.00	-

As IDEXX is currently commercializing the pet test panels developed using our BMB technology platform in December 2021, the increased purchase amount pushed the sales volume of BMB and optical scanners higher,and hence IDEXX became the largest customer in 2021. Due to the increased coverage of COVID-19 vaccinations, the shipment of SARS-Cov-2 Direct Test Reagents was reduced. However, the sales volume of other test panels, such as 17-Plex Gastrointestinal Pathogen Panel (GPP) and 20-Plex Respiratory Infection Panel (RPP), increased significantly, which pushed QDx to the No. 3 sales spot.

6. Production volume and value for the most recent 2 fiscal years

Note 1 Unit: 50,000 pieces, NT$ thousand

Year / Primary products	2020			2021		
	Production capacity	Production volume	Production value	Production capacity	Production volume	Production value
Barcoded Magnetic Beads (BMB)	72,000	32,522	20,211	72,000	70,369	38,957
Instrument	Note 2	24	16,114	Note 2	53	37,258
Reagent	4,000	3,392	41,375	4,000	2,449	47,267
Others	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
Total	-	-	77,700	-	-	123,482

Note 1: The BMB is 50,000 pieces per unit in the table above, while the instrument is counted as one unit.

Note 2: The production of an instrument is outsourced and not applicable to production capacity analysis; other revenues include technical services and sales of instrument parts and components, which are also not applicable to production capacity and yield analysis.

The changes in production volume and value for 2020 and 2021, were mainly due to changes in customers' orders.

7. Sales volume and value for the most recent 2 fiscal years

Unit: 50,000 pieces, NT$ thousand

Year / Products	2020				2021			
	International sales		Domestic sales		International sales		Domestic sales	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Barcoded Magnetic Beads (BMB)	18,342	19,039	14,180	25,716	22,705	22,337	47,664	70,125
Instrument	2	1,848	22	23,639			53	69,009
Reagent	1	37	3,391	210,871			2,449	138,513
Others	Not applicable	2,034	Not applicable	15,831	Not applicable	3,027	Not applicable	16,951
Total	-	22,958	-	276,057	-	25,364	-	294,598

Note 1: Domestic sales refer to sales activities within the U.S.; foreign sales refer to sales activities outside the U.S.

Note 2: The BMB is 50,000 pieces per unit, while the instrument is counted as one unit.

Note 3: Other income includes income for technical services, parts, and components of instruments; their sales units are different.

The changes in sales volume and value of the Group's products from 2020 to 2021 were mainly due to the COVID-19 pandemic slowdown in the United States in 2021. However, benefitted from license partners strong demand, the sales volume and value of BMB and instruments went up against the sales of reagents declined.

8. Product technology analysis and sustained research and development planning

(1) Technology level of product development and production, sources, protection (patent rights and legal protection status), and improvement

A. Technology level of product development and production

Our corporation has developed the Barcoded Magnetic Beads (BMB) assay technology to reduce the two-dimensional barcode (commonly used in supermarkets and shipping industry) into a million fold, and engrave it onto BMB, configure it with a multi-layer structure, and use photo masking with polymers to implement photolithography. This technology has the advantages of biocompatibility and stability. The decoding of the binary barcode system makes the identification of BMBs more direct and greatly reduces the error rate. BMBs are not affected by light as they do not carry fluorescence, which allows them to have a longer shelf life and more relaxed storage requirement; in addition, since the detection of fluorescent signals is completed in a stable state, it is suitable for quantitative and qualitative identification of fluorescent signals. For a detailed description, please refer to the previous section I Company status/Technology level of business operation and description on research and development.

B. Sources of product development and production technology

Our corporation's core technologies are developed by Winston Z. Ho, Ph.D., Founder, Chairman and President of the company, and his research team in 1998. The initial patent rights

were registered to Dr. Ho and his spouse's co-owning company, Maxwell Sensors. In 2008, Maxwell Sensor authorized ABC-US for the exclusive, irrevocable and permanent license of its four patents and related derived technologies. Based on the premise that Maxwell Sensors and third parties shall not use the four patents on the application of fields related to our corporation, we have since been dedicated to developing technology related to the diagnostic platform. Aside from the independently obtained patent registrations, the Maxwell Sensors' four patents were voluntarily transferred to our corporation in April 2018.

C. Protection and improvement of product development and production technology

Our corporation has devised control mechanisms for internal control of our R&D projects. We regularly hold meetings that include business operation and quality and irregular submission of development proposals from units within the company, which supervisors evaluate for their feasibility. The assessment includes: a description of new product features, market analysis, product positioning, TFDA, US-FDA regulations and environmental guidelines. The development projects are reviewed in the meeting and confirmed by the President. The research director appoints project managers responsible for assembling a task group and delegating responsibilities. The project manager will draw up a development and introduction plan and confirm the product specification is feasible and meets the client's demand based on the development result. Once the responsible supervisor approves the plan, the project manager will prepare and submit a new product development plan to the President for approval. A sample project will be initiated for product development and management before the product enters the design and development process. As the developer and exclusive owner of the BMB technology platform, other than producing and selling our products, we also work with international companies via technology licensing. The technology platform is protected by a number of U.S. and international patents.

(2) Main product competitive advantages, product life cycle and sustained R&D plans and new product development

A. Main product competitive advantages

Please refer to the previous section I for a description of Company status/Competition and Niche

B. Product life cycle

In-vitro test assays usually have a long life cycle, sometimes exceeding even 20 years or more. The application of assays is usually for disease detection or genetic testing. Such demands are long-term and will not easily follow changing habits or times. In-vitro diagnostic assays as non-reusable medical consumables, its downstream market demand is relatively rigid, and assays and testing instruments' development threshold is relatively high. It requires the integration of various technology fields such as electro-optics, optoelectronics, biochemistry, physical chemistry, molecular science and genetics. It also requires long-term validation, evaluation and testing. Once the market has accepted it, it is expected to have a longer life cycle. At present, most countries have gradually implemented GMP management and related measures, which have inadvertently increased the entry threshold of diagnostic assays, so there should be no product life cycle concerns.

C. Sustained R&D plans and new product development

Using our core technology BMB as a development platform, our Group has received U.S. FDA approval for launching 2 multiplex IVDs for gastritis and respiratory panels with Biocode MDx3000. We have also received 3 FDA EUAs for nucleic acid tests for COVID-19, nucleic acid tests for COVID-19 (pooling test) and Cov-2 Flu Plus Direct (7 in 1), for which our clients have completed the validation for 25 fungal panels and LDT protocol. A clinical trial is currently being prepared for our Cov-2 Flu Plus Direct (7 in 1). The products described above and all molecular diagnostic panels developed in the future will be able to use on Biocode MDx3000 automated diagnostic system. Our broad pipeline and flexibility of our products will become a great incentive to attract clients. The Group will continue to develop in-vitro diagnostic assays and expect to pass at least one assay per year. We will actively evaluate potentially profitable projects and product expansion to maximize the efficiency of R&D, production, and sales.

Research and Development Items	Main research and development
Cov-2 Flu Plus Direct (7 in 1)	A nuclear acid test without an extraction step will enhance the test speed and convenience and cut down the cost of extraction instruments, reagents, and manpower. For one-time testing of COVID-19, type A influenza and its subtypes (H1, H1N1 2009pdm, H3), type B influenza and respiratory syncytial virus (RSV), and to distinguish between COVID-19 and recurrent influenza. We are currently organizing 3 clinical trial centers and are expected to collect 1,200 samples. The study data will be submitted to the U.S. FDA for 510(k) clearance once the trial is completed.
Sexually transmitted infections (STIs)	According to the WHO data, at least 0.3 billion and 7 thousand people are infected with infectious diseases per year, for which the treatment cycles after infection are longer for women than men. These infections are also positively associated with female infertility. Currently, there are single-test products available for most major STIs but lack multiplex tests. Our multiplex STI tests will include Chlamydia, gonorrhea, herpes simplex virus-1 and herpes simplex virus-2, trichomonas vaginalis and mycoplasma.
Sexually transmitted infections - Antimicrobial Resistance Gene markers	Drug resistance of pathogens is considered by public health experts to be one of the major threats to the modern human society. Due to the widespread usage of anti-biotics and mutation of pathogens after multiple infections, there are more pathogens nowadays that have begun developing resistance to medication. According to a 2019 report by the U.S. CDC, about 2 million people in the U.S. were diagnosed with drug-resistant pathogens annually, resulting in about 35,000 deaths per year. As the drug resistance of pathogens can be determined by their special genetic fragments- the drug-resistance markers-, additional screening of bacterial drug-resistance when detecting these pathogens can be a very useful information for clinical diagnosis. Resistant gonorrhea is considered the most refractory sexually transmitted threat by the public health community. In most clinical practices, the first step is to screen the sexually transmitted infections and followed by a genetic analysis of drug resistance. Our goal is to introduce a first-line test tool for infectious disease with the option of including drug resistance genes. This will allow more timely treatment while eliminating the overuse of antibiotics.

Research and Development Items	Main research and development
Urinal Track Infection	Common pathogens that cause urinary tract infections include Escherichia coli, Citrobacter freundii, Acinetobacter baumanii, Proteus mirabilis, Enterococcus, Klebsiella, Enterobacter, Morganella, Mycoplasma and Chlamydia. Considering the efficiency and insurance reimbursement in the clinical practice in the U.S., a negative result of pathogens by a single rapid screening test is usually confirmed by a molecular test approach. Our product utilizes molecular testing to screen these pathogens and provides a comprehensive and accurate diagnosis of urinal tract infection.
Opportunistic Infection Test Panels	Immunosuppressed populations, such as the elderly, cancer patients and immunocompromised patients, HIV patients are more prone to opportunistic infections. Infection-causing pathogens including Aspergillus spp., Fusarium spp., Mucor spp., Rhizopus spp. and Cryptococcus spp., are all covered in our existing test kits. We assess the market demand, competition and NHI reimbursement policies and base our product development and commercialization strategies on the result. We intend to introduce a new rapid test kit for opportunistic infections for RUO, which will be provided for test facilities specializing in this field.
120-Plex Allergy Diagnostic Panel and Automated Immunoassay System	Diseases related to allergies include asthma, rhinitis, angioedema, urticaria, conjunctivitis and eczema. Populations suffering from these diseases are rapidly increasing due to industrial pollution and population growth. For the asthmatic population alone, the World Health Organization forecasts that the global asthmatic population will growth to 400 million people by the year 2025. Allergies result in an increase of direct medical costs and decrease of social behavioral efficiency; the decrease in work efficiency will result in health burdens for all. Treating these kinds of diseases requires effective testing tools of allergens. We assess a number of automated platforms and combine these with our optical scanners, with the hope of developing an easy-to-operate multiplex allergy test product that provides the most comprehensive test data.

3. Number of Employees of past two years

1. Number of workers in the most recent 2 fiscal years and as of the publication date of the annual report

Year / Item		End of 2020	End of 2021	End of March 2022
Number of employees	Management personnel	13	17	16
	Research and technology personnel	42	47	49
	Other employees	16	18	18
	Total	71	82	83
Average age		45.20	43.51	44.94
Average length of service		3.72	3.52	3.55
Education distribution ratio	Ph.D. Degree	11%	11%	11%
	Masters Degree	15%	13%	14%
	University and College Degree	70%	70%	69%
	Senior high school	4%	6%	6%
	Below high school	-	-	-

2. The employment turnover and movement of managers, and technology and research and development personnel, and other employees

Item / Year		2020		2021		End of April 2022	
		Number of personnel	Ratio (%)	Number of personnel	Ratio (%)	Number of personnel	Ratio (%)
Separated employees	Managerial officer	1	6.25	3	13.64	1	25.00
	Research and technology personnel	8	50.00	12	54.55	-	-
	Other employees	7	43.75	7	31.81	3	75.00
	Total (A)	16	100.00	22	100.00	4	100.00
Number of active employees at the end of the period (B)		71		82		83	
Turnover rate (%)=A/(A+B)		18.39		21.15		4.60	

Note: Separation rate = separated employees / number of active employees at the end of the period+separated employees).

4. Environmental Expenditure

1. According to laws and regulations, if it is required to apply for a permit for installing anti-pollution facilities, or permit of pollution drainage, or to pay anti-pollution fees, or to organize and set up an exclusively responsible unit/office for environmental issues, the description of the status of such applications, payment or establishment shall be made: The Group does not have factories, and only discharges general domestic wastewater. The Group has not yet reached the criteria to set up environmental protection dedicated personnel.
2. Set forth the group's investment in the major anti-pollution facilities, the use purpose of such facilities, and the possible effects to be produced: Not applicable as the group has no factories.
3. Describe the process undertaken by the group on environmental pollution improvement for the most recent 2 fiscal years and up to the prospectus publication date. If there had been any pollution dispute, its handling process should also be described: The Group has not been penalized by environmental protection authorities on environmental pollution matters or had any pollution dispute.
4. Any losses suffered by the Group in the last fiscal year and up to the annual report publication date due to environmental

pollution incidents (including any compensation paid and any violations of environmental protection laws or regulations found in environmental inspection, specifying the disposition dates, disposition reference numbers, the articles of law violated, the substance of the legal violations, and the content of the dispositions), and disclosing an estimate of possible expenses that could be incurred currently and in the future and measures being or to be taken. If a reasonable estimate cannot be made, an explanation of the facts of why it cannot be made shall be provided: The Group has not been involved in environmental pollution incidents in the most recent 2 fiscal years and up to the annual report publication date.

5. Explain the current condition of pollution and the impact of its improvement to the profits, competitive position and capital expenditures of the group, as well as the projected major environment-related capital expenses to be made for the coming 2 fiscal years: As the Group has not been involved in environmental pollution incidents, there is no impact of significant impact on the Group's profits, competitive position and capital expenditures.

5. Employer-Employee Relation

(1) The Company's various policies including employee welfare measures, continuing training, training, retirement systems and their implementation, as well as agreements between labor and management and various employee rights protection measures

1. Employee benefits

Not only does ABC-KY's primary place of business, Applied Biocode, Inc., handles the employee's benefits in accordance with applicable regulations of the Social Security Program Rules and Labor Law, Medical Insurance, Dental Insurance and Worker's Compensation Insurance and retirement Plan-401K are also provided, ensuring employees' related benefits. Employees of ABC-TW are also covered by Labor insurance and National Health Insurance as required by the Taiwan government, protecting employees' rights and interests. So far, incidents that affected the rights and interests of employees have not occurred.

2. Employee education and training

(1) Newcomers

On the first day of employment, an introduction to the Company's work rules, environment, supervisors and colleagues is explained to newcomers by HR personnel.

(2) On-the-job training

In an effort to accommodate the organization's goals and manpower development to improve the quality of personnel, after approval, professional capability and work efficiency, employees are offered a variety of professional and technical training courses according to different functions and business needs. e-Learning and book clubs are also promoted in the Company to encourage the employee to share and exchange their knowledge to enhance their academic skills to help achieve their work tasks. Moreover, we provide convenient and diverse learning outlets and opportunities by cultivating talented professional and technical individuals.

3. Retirement system and implementation status

ABC-KY makes contributions to labor pensions according to local laws and regulations so that employees can concentrate on their work without worries. In accordance with Federal Insurance Contribution Act (FICA), Applied Biocode, Inc.'s primary place of business currently contributes 12.4% of the employee's monthly salaries to the Social Security Tax (shared by both the employer and employee at 6.2%) and 2.9% to the Medicare's Hospital Tax (shared by both the employer and employee at 1.45%). After employees retire, they will be entitled to social security benefits, including pension, disability benefits and federal hospital/medical insurance, etc. Applied Biocode, Inc. also offers a pension system (Retirement Plan -401K), allowing employees to contribute 1%-20% of their monthly salary to their retirement account. Employees are free to choose to join the investment plans launched by financial institutions selected by the Company. The amount contributed by the employee can be deducted from the reported income until retirement, when tax will be imposed. On the other hand, ABC-TW contributes labor pension funds to a dedicated account of the Bureau of Labor Insurance required by the Taiwan government. Pension funds are provided to retired employees in accordance with the retirement plan.

4. Agreements between labor and management and various employee rights protection measures

The Group has formulated working rules in accordance with laws and regulations to clearly regulate labor conditions to protect the rights and interests of employees, allowing their rights and interests to be handled fairly and reasonably. Up to now, incidents that would damage the rights and interests of employees have not occurred.

(2) Any losses suffered by the Company in the last fiscal year and up to the annual report publication date due to labor-capital disputes (including any violations of the Labor Standards Act found in labor inspection, specifying the disposition dates, disposition reference numbers, the articles of law violated, the substance of the legal violations, and the content of the dispositions), and disclosing an estimate of possible expenses that could be incurred currently and in the future and measures being or to be taken. If a reasonable estimate cannot be made, an explanation of the facts of why it cannot be made shall be provided: We have always regarded our employees as the most precious assets, and the relationship between labor and capital has been harmonious, hence, there have not been any major disputes.

6. Information and Technology Security Management:

(1) Clear description of the information security risk management framework, information security policies and concrete management approaches, and investment of resources in information security management

1. Information security risk management framework

   The Group has set up an Information Management Department, which is responsible for the overall planning of information security matters encompassing the formulation of internal information security policies, planning and execution of information security operations, and raising of information security awareness among staff members. The Audit Room is the supervisory unit responsible for the supervision of information security implementation status. It conducts annual audits to ensure that information security policies are properly enforced.

2. Information security policies and concrete management approaches

   All staff members of the Group have the duty and obligation to comply with information security regulations and maintain information security inside the Company. The Information Management Department conducts regular reviews of information security measures and strengthens firewalls and network controls. In addition, security-related training and education is provided to ensure that no confidential information is leaked.

   Despite the fact that the Group has adopted comprehensive information security protection measures, network attacks of any form still cannot be completely ruled out. With a view to minimizing the damage caused by potential network attacks on the Group's business operations, information security insurance has been effected to protect the Group's operations and safeguard shareholder rights and interests.

(2) The Company is required to disclose losses sustained due to information security deficiencies in the most recent year until the annual report's publication date, in addition to estimated amounts and response measures currently in place or expected to occur in the future. Where reasonable estimates are impossible, reasons shall be specified: The Group has established an information security framework and is committed to strengthening the information security awareness of its employees. No information security-related material losses occurred in the reporting period.

7. Important Agreements

Agreement Nature	Parties	Agreement Period	Main Content	Restricted Terms and Conditions
Development Agreement	Accel Biotech,Inc.,	March 15, 2013	Entered into an agreement with Accel Biotech, Inc. for product development and design services.	None
Supply, Sales and License Agreement	Genetic Analysis	November 19, 2013	Genetic Analysis was granted non-exclusive rights to use ABC-KY's Barcoded Magnetic Beads (BMB) in specific fields. Genetic Analysis purchased ABC-KY's systems and BMB.	None
Technology License Agreement	Imusyn	April 22, 2014	Imusyn was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also responsible for developing and commercializing the systems in specific fields.	None
Technology License Agreement	PerkinElmer, Health Sciences, Inc.	December 28, 2014	PerkinElmer was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also responsible for commercializing the systems and providing them to customers of vitro diagnostic laboratories in specific fields.	None
Technology License Agreement	Hecin Scientific,Inc. /Improve Medical Instrumentation Co.	September 28, 2015	Hecin was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also responsible for commercializing the systems and providing them to customers of vitro diagnostic laboratories in specific fields.	None
Technology License Agreement	Diatherix Laboratories, LLC	May 2, 2016	Diatherix was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also licensed to have the right to sell these products.	None
Primary Product Supply Agreement	Asia Pacific Microsystems, Inc.	July 7, 2016	ABC-KY entered into an OEM agreement with Asia Pacific Microsystems, Inc. for the manufacturing of products.	None

Agreement Nature	Parties	Agreement Period	Main Content	Restricted Terms and Conditions
Technology License Agreement	Shanghai Kexin Biotech Co., Ltd.	March 8, 2016	Shanghai Kexin Biotech Co., Ltd. was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also responsible for commercializing the systems and providing them to customers of vitro diagnostic laboratories in specific fields.	None
Primary Product Supply Agreement	CrystalVue Medical Corporation	March 15, 2017	ABC-KY entered into an OEM agreement with CrystalVue Medical Corporation.	None
Technology Licensing and Supply Agreement	Zhuhai Livzon Diagnostics Inc. (Zhuhai Livzon Pharmaceutical Group)	July 4, 2017 - July 4, 2027	Zhuhai Livzon Diagnostics Inc. was licensed to purchase ABC-KY's BMB technology, assays and instruments for product development. It was also responsible for commercializing the systems and providing them to customers of vitro diagnostic laboratories in specific fields.	None
Technology Licensing and Supply Agreement	IDEXX Technologies GmbH	October 10, 2017 - December 31 2036	BMB and multiplex immunoassay are sold exclusively to IDEXX Technologies GmbH in the non-human health field, and IDEXX Technologies GmbH agrees to a minimum annual purchase volume.	None
Primary Product Supply Agreement	Suzhou Sym-Bio Lifescience Co., Ltd.(Subsidiary of Perkin Elmer)	November 30, 2017	ABC-KY entered into an OEM agreement with Perkin Elmer.	None
Non-Exclusive License Agreement	Accel Biotech, LLC	April 1, 2018	Attained a non-exclusive license from Accel to use its molecular diagnostic analysis equipment.	None
MDx 3000 Launch and Assay Sales Agreement	Baylor Scott & White Health	November 8, 2018	The launch of the automated molecular diagnostic system MDx 3000, and post-test sales of the 17-Plex Gastrointestinal Pathogen Panel and supply of COVID-19 panels.	None
MDx 3000 Launch and Assay Sales Agreement	Poplar Healthcare	November 19, 2018	Launch of MDx 3000 - an automated molecular diagnostic system, and post-test sales of 17-Plex Gastrointestinal Pathogen Panel.	None

Agreement Nature	Parties	Agreement Period	Main Content	Restricted Terms and Conditions
Plant Lease Agreement	PPF INDUSTRIAL 12016 TELEGRAPH RD, LP	March 21, 2019 - October 31, 2025	ABC-US entered into a plant lease agreement.	None
Licensing Agreement	Guoyao Group Beijing Medical Apparatus and Instruments	June 1, 2019 - May 31, 2022	Licensed Guoyao Group Beijing Medical Apparatus and Instruments for the sale of Biocode 2500 and BMB.	None
Non-Exclusive License Agreement	ALPCO	October 21, 2019 - October 21, 2029	ALPCO was licensed to purchase the Group's BMB technology, assays and instruments for product development. It was also responsible for commercializing the systems and providing them to customers of vitro diagnostic laboratories in specific fields.	None
Non-Exclusive License Agreement	Paitaike Co. Ltd.	December 31, 2019 - December 30, 2029	Signed a non-exclusive license with Paitaike Co. Ltd. for the development of cytohormone assays in China.	None
Supply Agreement	Tricore	January 2, 2020 - January 1, 2023	Signed a supply agreement with Tricore for gastrointestinal pathogen diagnostic panels.	None
Launch of Panel and Instrument Contracts	QDx Pathology Services	August 19, 2020 - August 19, 2023	Supply of COVID-19 panels and 17-Plex Gastrointestinal Pathogen Panels. The supply has begun.	None
Launch of Panel and Instrument Contracts	Greenwood Leflore Hospital	July 16, 2020 - July 16, 2021	Supply of COVID-19 panels. The supply has begun.	None
Launch of Panel and Instrument Contracts	20/20 GeneSystems, Inc.	July 28, 2020 - November 28, 2020	Supply of COVID-19 panels. The supply has begun.	None
Launch of Panel and Instrument Contracts	Mayaquez Clinical Lab, Inc.	September 29, 2020 - September 29, 2023	Supply of COVID-19 panels. The supply has begun.	None
Launch of Panel and Instrument Contracts	Alliance Laboratories	October 20, 2020 - October 20, 2023	Supply of respiratory adaptation multiplex panels. The supply has begun.	None
Launch of Panel and Instrument Contracts	PCG Molecular	November 4, 2020 - May 4, 2021	Supply of COVID-19 panels and 17-Plex Gastrointestinal Pathogen Panels. The supply has begun.	None

Agreement Nature	Parties	Agreement Period	Main Content	Restricted Terms and Conditions
Evaluation Contract	SDI Labs	November 12, 2020	Supply of 17-Plex Gastrointestinal Pathogen Panels and respiratory adaptation multiplex panels.	None
Launch of Panel and Instrument Contracts	DNA Reference Lab	April 24, 2020	Supply of COVID-19 panels and respiratory adaptation multiplex panels. The supply has begun.	None
Primary Product Supply Agreement	Wistron Medical Technology Corporation	November 3, 2020 - November 3, 2023	Entered into an OEM contract for instruments with Wistron Medical Technology Corporation	None
Launch of Panel and Instrument Contracts	Ultimate Dx	31 March, 2021	Supply of COVID-19 panels, 17-Plex Gastrointestinal Pathogen Panels and respiratory adaptation multiplex panels.	None
Evaluation Contract	Apostle, Inc.	April 30, 2021	Supply of COVID-19 panels, 17-Plex Gastrointestinal Pathogen Panels and respiratory adaptation multiplex panels.	None
Evaluation Contract	Boundary Community Hospital	June 8, 2021	Supply of COVID-19 panels, 17-Plex Gastrointestinal Pathogen Panels and respiratory adaptation multiplex panels.	None
Non-Exclusive License Agreement	Hardy Diagnostics	June 17, 2021	Authorization of Hardy Diagnostics to utilize the Company's technologies for the development of testing products in the field of food safety	None
Launch of Panel and Instrument Contracts	Sterling Pathology	July 20, 2021	Supply of COVID-19 panels, 17-Plex Gastrointestinal Pathogen Panels and respiratory adaptation multiplex panels.	None
Licensing Agreement	Hardy Diagnostics	December 16, 2021 - December 16, 2031	Authorization of Hardy Diagnostics to sell the Biocode 2500 Analyzer and Barcoded Magnetic Beads (BMB).	None

VI. Financial Overview

1. Condensed Consolidated Financial Statements for the Last Three Years

(1) Condensed balance sheet and consolidated income statement

1. Condensed balance sheet

Unit: NT$ thousand

Item \ Year		Financial information for the last three years		
		2019	2020	2021
Current asset		540,039	1,021,077	826,446
Property, Plant and Equipment		51,438	116,210	111,830
Right-of-use asset		69,512	55,309	50,940
Intangible asset		21,974	17,196	13,434
Other assets		36,044	17,429	16,317
Total assets		719,007	1,227,221	1,018,967
Current liabilities	Before dividends	112,160	77,802	59,947
	After dividends	112,160	77,802	59,947
Non-current liabilities		76,197	62,424	56,063
Total liabilities	Before dividends	188,357	140,226	116,010
	After dividends	188,357	140,226	116,010
Equity attributable to parent company owners		530,650	1,086,995	902,957
Share capital		722,854	816,390	817,292
Additional paid-in capital		770,920	1,394,683	351,57**6**
Retained earnings	Before dividends	(948,612)	(1,052,108)	(165,199)
	After dividends	(948,612)	(1,052,108)	(165,199)
Other equities		(14,512)	(71,970)	(100,712)
Treasury stock		-	-	-
Non-controlling interests		-	-	-
Total Equity	Before dividends	530,650	1,086,995	902,957
	After dividends	530,650	1,086,995	902,957

Source: Audited consolidated financial statements.

2. Condensed Consolidated Income Statement

Unit: NT$ thousand

Year / Item	Financial information for the last three years		
	2019	2020	2021
Net sales	104,694	299,015	319,962
Gross profit	52,969	193,524	189,367
Operating (loss) income	(275,073)	(133,514)	(164,943)
Non-operating income and (expense)	(4,976)	30,042	(233)
Profit (losses) before tax	(280,049)	(103,472)	(165,176)
Net income (loss) of continuing operations in the current period	(280,073)	(103,496)	(165,199)
Loss from discontinued operations	-	-	-
Net income (loss) in the current period	(280,073)	(103,496)	(165,199)
Other comprehensive income (loss) in the current period (net, after-tax)	(19,616)	(58,289)	(28,742)
Total comprehensive income (loss) in the current period	(299,689)	(161,785)	(193,941)
Net income (loss) attributable to parent company owners	(280,073)	(103,496)	(165,199)
Net income attributable to non-controlling interests	-	-	-
Comprehensive income (loss) attributable to parent company owners	(299,689)	(161,785)	(193,941)
Comprehensive income attributable to non-controlling interests	-	-	-
Earnings per share (loss)	(4.36)	(1.33)	(2.02)

Source: Audited consolidated financial statements.

(2) Matters of material significance which affected the comparability of the above-mentioned condensed financial statements, such as accounting changes, corporate mergers, or suspension of work in the operating departments etc., and the impact of these events on the then current financial reports: None.

(3) The names and auditor's opinions of the attesting CPA for the most recent 5 fiscal years

1. The names and auditor's opinions of the attesting CPA for the most recent 5 fiscal years

Year	Accounting Firm	CPAs	Review opinion
2017	PwC Taiwan	Andy Chang, Audrey Tseng	Unqualified opinion
2018	PwC Taiwan	Andy Chang, Audrey Tseng	Unqualified opinion
2019	PwC Taiwan	Andy Chang, Audrey Tseng	Unqualified opinion

2020	PwC Taiwan	Andy Chang, Wendy Liang	Unqualified opinion
2021	PwC Taiwan	Wendy Liang, Alan Chien	Unqualified opinion

2. If there was change/replacement of the CPA within the most recent 5 fiscal years, explanation made by the company's previous and current CPA over the causes for such change/replacement shall be set forth: The Group’s original CPAs were Andy Chang and Wendy Liang of PwC Taiwan. Due to the rotation requirement, the CPAs were changed to Wendy Liang and Alan Chien from the first quarter of 2021.

3. If the summary financial data of a foreign issuer for the last 7 consecutive years after public issue were audited and certified by the same CPAs in each of those years, the group shall explain the reasons for not changing the CPAs, the independence of the current CPAs, along with specific measures taken by the group to reinforce the CPAs' independence in certification: The Group does not have the same CPAs for 7 consecutive years.

2. Financial Analysis for the Most Recent Fiscal Year

Analysis item (Note 2) \ Year		Financial analysis for the most recent 3 fiscal years		
		2019	2020	2021
Financial structure	Debt ratio (%)	26.20	11.43	11.39
	Long-term fund to property, plant and equipment (%)	1,179.76	989.09	857.57
Solvency	Current ratio (%)	481.49	1,312.40	1,378.63
	Quick ratio (%)	397.93	1,175.61	1,209.52
	Times Interest Earned	The Group's profit before tax remain negative. It is therefore not meaningful for analysis.		
Operating capacity	Receivables turnover (per time)	7.03	8.13	5.47
	Average collection days for receivables	52	45	67
	Inventory turnover (per time)	0.72	1.12	1.26
	Payables turnover (per time)	4.81	5.67	7.05
	Average days of sale	507	326	290
	Real property, plant, and equipment turnover ratio (per time)	2.15	3.57	2.81
	Total asset turnover ratio (per time)	0.17	0.31	0.28
Profitability	Return on total assets (%)	(44.36)	(10.19)	(14.45)
	Return on equity (%)	(58.14)	(12.80)	(16.60)
	Ratio of income before tax to paid-in capital (%)	(38.74)	(12.67)	(20.21)
	Profit margin (%)	(267.52)	(34.61)	(51.63)
	Earnings per share (NT$)	(4.36)	(1.33)	(2.02)
Cash flow	Cash flow ratio (%)	(279.81)	(188.61)	(253.18)
	Cash flow adequacy ratio (%)	(864.28)	(595.00)	(438.06)
	Cash re-investment (%)	(48.34)	(12.83)	(15.30)

Analysis item (Note 2) \ Year		Financial analysis for the most recent 3 fiscal years		
		2019	2020	2021
Leverage	Operating leverage	Not calculated as the Group's net operating revenue is a loss and the ratio is negative.		
	Financial leverage	1	1	1

Please explain the reason for ratio changes for financial information in the most recent 2 fiscal years. (Analysis may be exempted if the increase or decrease change does not reach 20%)

1. The Group's financial ratios in 2021 that exhibited changes by more than 20% compared to 2020 are receivables turnover ratio, average collection days, real property, plant, and equipment turnover ratio, return on assets, return on equity, ratio of income before tax to paid-in capital, profit margin, earnings per share, and cash flow ratio. The following reasons have been identified for these major changes:
   (1) Receivables turnover ratio, average collection days: This is mainly attributed to the higher sales volume in 2021 and the higher receivables balance at the end of 2021 compared to the same period of 2020.
   (2) Real property, plant, and equipment turnover ratio: The decrease in the property, plant, and equipment turnover ratio in 2021 compared to 2020 is mainly attributed to significant growth in the net value of fixed assets starting in 2020 coupled with the rising average net value of fixed assets.
   (3) Return on assets, return on equity, ratio of income before tax to paid-in capital, net income ratio and earnings per share: Return on assets, return on equity, ratio of income before tax to paid-in capital, profit margin and earnings per share: Return on assets, return on equity, ratio of income before tax to paid-in capital, net income ratio and earnings per share: Return on assets, return on equity, ratio of income before tax to paid-in capital, profit margin and earnings per share declined in 2021 compared to 2020, mainly due to increasing net losses in 2021 compared to 2020 caused by declining gross profit margins as a result of rising operating expenses.
   (4) Cash flow ratio, cash flow adequacy ratio: The cash flow ratio in 2021 was mainly affected by the declining current liability amount (net cash flows from operating activities exhibited no significant differences compared to 2020). The rising cash flow adequacy ratio in 2021, on the other hand, is attributable to the declining net operating cash flow of the past five years.

Note: The following calculation formula should be shown at the end of this table in the annual report.

1. Financial structure
   (1) Debt-to-asset Ratio = total liabilities/total assets.
   (2) Ratio of Long-term Funds to Property, Plant, and Equipment = (total equity + non-current liabilities)/net worth of property, plant, and equipment.
2. Solvency
   (1) Liquidity Ratio = current assets/current liabilities.
   (2) Quick Ratio = (current assets – inventory – prepaid expenses)/current liabilities.
   (3) Times Interest Earned = income before income tax and interest expenses/current interest expenses.
3. Operating capacity
   (1) Receivables (including accounts receivable and notes receivable arising from business operations) Turnover Rate = net sales amount/average receivables (including accounts receivable and notes receivable arising from business operations) for each period.
   (2) Average Collection Days for Receivables = 365/turnover of receivables.
   (3) Inventory Turnover = cost of goods sold/average inventory.
   (4) Payables (including accounts payable and notes payable arising from business operations) Turnover Rate = cost of goods sold/average payables (including accounts payable and notes payable arising from business operations) for each period.
   (5) Average Days of Sale = 365/inventory turnover.
   (6) Real property, plant, and equipment turnover ratio = net sales amount/average net worth of property, plant, and equipment.
   (7) Total Assets Turnover = net sales amount/average total assets.
4. Profitability
   (1) Return on Assets = [post-tax profit or loss + interest expenses × (1- tax rate)]/average total assets.
   (2) Return on Equity = post-tax profit or loss/average total equity.
   (3) Profit Margin = post-tax profit or loss/net sales amount.
   (4) Earnings per Share (EPS) = (profit and loss attributable to owners of the parent – dividends on preferred shares)/weighted average number of issued shares.
5. Cash flow
   (1) Cash Flow Ratio = net cash flow from operating activities/current liabilities.
   (2) Net Cash Flow Adequacy Ratio = net cash flow from operating activities for the last five years/(capital expenditures + inventory increase + cash dividends for the last five years).

(3) Cash Re-investment Ratio = (net cash flow from operating activities – cash dividends)/gross property, plant, and equipment value + long-term investment + other non-current assets + working capital).

6. Leveraging:
   (1) Operating Leverage = (net operating revenue – variable operating costs and expenses)/operating income.
   (2) Financial Leverage = operating income/(operating income - interest expenses).

3. Audit Committee’s Review Report for the Last Annual Financial Report

Applied BioCode Corporation

審計委員會審查報告書

茲准 董事會造送本公司一一〇年度營業報告書、合併財務報表與虧損撥補議案，其中合併財務報表業經董事會委託資誠聯合會計師事務所梁嬋女會計師及簡汎亞會計師查核完竣並出具查核報告。上開董事會造送之各項表冊，經本審計委員會審查，認為尚無不符，爰依證券交易法第十四條之四及公司法第二一九條之規定報告如上，敬請 鑒核。

此　　致

本公司一一一年股東常會

Applied BioCode Corporation

審計委員會召集人：蔡文精 蔡文精

中　華　民　國　一　一　一　年　三　月　二　十　三　日

4. Audited Financial Report of last fiscal year: Please refer to pages 154 to 210 of the annual report.

5. Standalone Audited Financial Report of last fiscal year: Not applicable.
6. If the group or its affiliated enterprises have experienced financial difficulties in the most recent fiscal year and up to the date of publication of the annual report, and explain impact : Not applicable

VII. Analysis of Financial Position, Performance, and Risk

1. Financial Position

List the main reasons for any material change in the company's assets, liabilities, or equity during the most recent 2 fiscal years, and describe the effect thereof. Where the effect is of material significance, describe the measures to be taken in response:

Unit: NT$ thousand

Item \ Year	2020	2021	Difference	
			Increase (decrease) amount	Change ratio (%)
Current asset	1,021,077	826,446	(194,631)	(19.06)
Property, Plant and Equipment	116,210	111,830	(4,380)	(3.77)
Right-of-use asset	55,309	50,940	(4,369)	(7.90)
Intangible asset	17,196	13,434	(3,762)	(21.88)
Other assets	17,429	16,317	(1,112)	(6.38)
Total assets	1,227,221	1,018,967	(208,254)	(16.97)
Current liabilities	77,802	59,947	(17,855)	(22.95)
Non-current liabilities	62,424	56,063	(6,361)	(10.19)
Total liabilities	140,226	116,010	(24,216)	(17.27)
Equity attributable to parent company owners	1,086,995	902,957	184,038	(16.93)
Share capital	816,390	817,292	902	0.11
Additional paid-in capital	1,394,683	351,576	(1,043,107)	(74.79)
Retained earnings (for making up losses)	(1,052,108)	(165,199)	(886,909)	(84.30)
Other items in shareholders' equity	(71,970)	(100,712)	28,742	39.94
Total shareholders' equity	1,086,995	902,957	184,038	(16.93)

1. The change ratio reaches over 20% and the amount of change reaching NT$10 million or more, and the main reason and their effects are as follows:
   (1) Current liabilities: The decrease in current liabilities in 2021 compared to 2020 can mainly be attributed to the lower accounts payable balance due to settlement at year-end coupled with declining R&D expenses payable.
   (2) Additional paid-in capital and retained earnings (for making up losses): Additional paid-in capital and retained earnings (for making up losses) increased compared to the end of 2020, which can mainly be attributed to the approval of the offsetting of accumulated deficits with additional paid-in capital - share premiums by the shareholders at the shareholders' meeting in 2021.
   (3) Other items in shareholders' equity: Decreases in other shareholders' equity items in 2021 compared to the end of 2020 can mainly be attributed to the weak US dollar resulting in exchange differences in the translation of foreign financial statements.
2. Measures to be taken in response:

Item \ Year	2020	2021	Difference	
			Increase (decrease) amount	Change ratio (%)
In summary, the higher change in the ABC-KY's balance sheet accounts at the end of 2021 compared to 2020 was primarily due to the operating losses; therefore measures to be taken in response are as follows: Measures to be taken in response to operating Losses A. Expand market sales In addition to the sale of Barcoded Magnetic Beads (BMB), Optical Scanners, Gastrointestinal Pathogen Panels (GPP), Upper Respiratory Pathogen Panels (RPP), and SARS-CoV-2, we completed the development of fungal multiplex test panels in Q4. Product samples have been submitted to Baylor Scott&White for validation and composition of test protocols. Our Covid Flu Plus received Emergency Use Authorization (EUA) by the US Food & Drug Administration in December. This represents the third EUA issued to the Group (the previous two EUAs were issued for the COVID-19 and Pooling Assays). The Group signed a distribution contract for the US market with Hardy Diagnostic Inc. in December 2021 to boost the revenues and profits of the Group. B. Continuous development of new products The Group continues to develop in-vitro diagnostics products such as urinal tract infection, antimicrobial resistance gene markers, sexually transmitted disease (gynecology), and low respiratory in-vitro pathogen panels, as well as immunoassay and cancer test products. Product diversity is conducive to customer development and future revenue increase.				

2. Financial Performance

(1) List the main reasons for any material change in operating revenues, operating income, or income before tax during the most recent 2 fiscal years, provide a sales volume forecast and the basis therefore, and describe the effect upon the company's financial operations as well as measures to be taken in response:

Unit: NT$ thousand

Item \ Year	2020	2021	Difference	
			Increase (decrease) amount	Change ratio (%)
Net sales	299,015	319,962	20,947	7.01
Operating costs	(105,491)	(130,595)	25,104	23.80
Gross profit	193,524	189,367	(4,157)	(2.15)
Operating expenses	(327,038)	(354,310)	27,272	8.34
Net operating income (loss)	(133,514)	(164,943)	31,429	23.54
Non-operating icome(loss)	30,042	(233)	(30,275)	(100.78)

Item \ Year	2020	2021	Difference	
			Increase (decrease) amount	Change ratio (%)
Profit (losses) before tax	(103,472)	(165,176)	61,704	59.63
Income tax (expense)	(24)	(23)	(1)	(4.17)
Current net income (loss)	(103,496)	(165,199)	61,703	59.62
Other comprehensive income (loss) recognized in the current period	(58,289)	(28,742)	(29,547)	(50.69)
Current total comprehensive loss	(161,785)	(193,941)	32,156	19.88

The change ratio reaches over 20% and the amount of change reaching NT$10 million or more, and the main reason and their effects are as follows:

(1) Operating costs and gross profit: Rising revenues were accompanied by increasing operating costs in 2021. The decrease in gross profit in 2021 from 2020 can mainly be attributed to changes in sold product mixes.

(2) Net operating loss, net loss before tax and net loss after tax: The increase in net operating loss, net loss before tax, and net loss after tax in 2021 from 2020 can mainly be attributed to the declining gross margin and rising R&D expenses in 2021.

(3) Non-operating expenses: The decrease in non-operating expenses in 2021 from 2020 can mainly be attributed to other income from the exemption of repayment of the U.S. Federal Government’s Paycheck Protection Program (PPP) for SMEs due to the pandemic in 2020.

(4) Other comprehensive net loss for the period: The increase in other comprehensive net loss and decrease in total comprehensive loss YoY in 2021 compared to 2020 can mainly be attributed to the decrease in cumulative translation adjustments as presented in the Group's financial statements.

(2) Provide a sales volume forecast and the basis, and describe the effect upon the company's financial operations as well as measures to be taken in response

As of the annual report's publication date, aside from selling BMBs and Optical Scanners, 17-Plex Gastrointestinal Pathogen Panels, Upper Respiratory Pathogen Panel (RPP), and Sars-CoV-2 (including Pooling Testing) products, we have received EUA from the FDA in the US for Covid Flu Plus in December 2021 and have concluded a distribution contract with Hardy Diagnostic Inc. for the US market. The Group’s expected sales volume is based on the market forecast of major customers, past product sales status, customers’ annual procurement plans, licensed customers’ agreement, business plans of licensed customers, new customer development and business growth of existing customers. At the same time, to be able to set a shipping goal, the Group also takes into account factors such as the material condition of primary raw materials and the production capacity

and delivery time of suppliers. Not only does the Group adopt its original business model of licensing its patented platforms and technologies to a number of strategic customers in various industries and regions, it is at the same time adding new diagnostic panels for the Group to sell so that products and customers are more diverse in the future. Therefore, there should be no material adverse effect on the future financial development of the Group.

(3) Describe the effect upon the company's financial operations as well as measures to be taken in response.

The Group has a robust financial structure and continues to deepen its operational management and adopts reasonable control of costs for future business growth needs.

3. Cash Flow

(1) Describe and analyze any cash flow changes in the most recent 2 fiscal years

Unit: NT$ thousand

Item \ Year	2020	2021	Difference	
	Amount	Amount	Increase (decrease) amount	Change ratio (%)
Net cash (outflow) from operating activities	(146,741)	(151,773)	5,032	3.43
Net cash inflow (outflow) from investing activities	86,564	(16,388)	(102,952)	(118.93)
Net cash inflow (outflow) from financing activities	656,762	(14,188)	(670,950)	(102.16)
Analysis of changes in cash flows: 1. Business activities: Net cash flows from business activities in 2021 are comparable to 2020, exhibiting only minor changes caused by daily business activities. 2. Investing activities: The decrease in net cash inflow from investing activities in 2021 from 2020 was mainly due to the repayment of loans and release of restricted deposits in 2020. 3. Fundraising activities: The decrease in net cash inflow from financing activities in 2021 compared to 2020 can mainly be attributed to the listing and issuance of new shares in 2020.				

(2) Measures to be taken in response to illiquidity:

In 2021, the Group increased revenue from a number of multiplex panels. However, given that the sales volume of each product segment has not grown enough to support the Group’s operating expenses, we will dedicate ourselves to the sales expansion of each product segment and the development of new products. In the future, we will also build up our working capital by improving our revenue and profitability, and also apply for the secondary public offering (SPO) at an appropriate time to expand our source of working capital.

(3) Analysis of cash liquidity in the coming year (2022)

Unit: NT$ thousand

Beginning cash balance (1)	Estimated full-year net cash flows from operating activities (2)	Estimated full-year net cash flows from investing activities (3)	Estimated full-year net cash flows from financing activities (4)	Expected cash surplus (deficit) (1)+(2)+(3)+(4)	Expected remedies for cash deficits	
					Investment plan	Financing plan
646,070	(171,448)	(28,400)	—	446,222	—	—

1. Cash flow analysis for the coming year
   (1) Operating activities: The Group's 2022 operating activities are expected to include primarily the sales of in-vitro diagnostics assay products: gastrointestinal panels, respiratory pathway panels, Sars-CoV-2, Pooling, Covid Flu Plus and fungal panels, sales of BMBs and instruments to licensed customers as well as technology license royalty income. We will also carry on with research and development activities, including the feasibility study of allergen-containing immune products and the automation of immunology product testing devices. The increase in sales and customer service teams will be the main content of cash outflow from operating activities.
   (2) Investment activities: The Group's main investment activity in 2022 are expected to be the purchase of MDx3000 and the construction fee of extending lab Slusher unit 2.

2. Insufficient cash is not expected to be a concern.

4. Impact to Finance and Business from Major Capital Expenditure on financial business

In 2021, the cash outflow for the Group's property, plant and equipment reached NT$15,518 thousand, it was mainly caused by the purchase of MDx3000 and the replacement of equipment. Therefore, there should be no significant effect on the Group's financial position due to the increase in capital expenditure.

5. Investment Policies of last fiscal year, causes of profit or loss, improvement plan and upcoming year's investment plans

(1) Investment policy for the most recent fiscal year:

The Group's current investment policy is to invest in targets related to the development of the industry; the Company is not engaged in investments in other industries.

(2) The main reasons for the profits or losses on investment and improvement plans:

The operational losses of the Group's investee companies: ABC-US and ABC-TW in 2021 were mainly due to research and development of next-generation products and are not yet profitable despite the significant increase in revenue by the end of 2021. Apart from BMBs, instruments and a number of multiplex panels, Covid Flu Plus and fungal panels will be added to our operations in 2022. Therefore, it is expected that the Group's revenue or profitability will improve in the future with the investee companies' commitment to developing products for the market.

(3) Investment plans for the coming year:

The Group will focus on the product development and clinical trial of Cov-2 Flu-Plus Direct Test, and the preliminary feasibility evaluation of immunoassays and liquid biopsy tumor panels.

6. Risk Management and Assessment

(1) The impact of interest rate, exchange rate changes, and inflation on the Company's profit and loss and corresponding future measures:

1. Interest rate change

The Group's interest income totaled NT$3,732,000 and 3,111,000 in 2020 and 2021, respectively, representing a net loss before tax of 3.61% and 1.88%. The interest expenses for 2020

and 2021 were NT$4,313,000 and NT$2,870,000, respectively, representing 4.17% and 1.74% of net loss before tax, respectively, which does not have significant impact on the Group. The Group maintains a sound relationship with banks, and its financial personnel keeps a close eye on changes in market interest rates. In the future, if there are significant changes in interest rates upon borrowing from banks, the Group will take corresponding measures so as to reduce the impact on the Group's profit and loss.

2. Exchange rate change

The functional currencies of the Group's daily operations are U.S. dollars and New Taiwan dollars. Given that the main operating place of business is in the U.S, the U.S. dollars are currently used as the main currency for purchasing and selling, so the impact of foreign exchange gains and losses is limited. The currency position in the accounts related to contract negotiations or transaction payments is considered to reduce the risk arising from exchange rate changes. Additionally, the Group's financial personnel keep track of the movement of major currencies and changes of global noneconomic factors to control and adjust the positions of each currency in a timely manner to minimize the impact of exchange rate changes.

3. Inflation

The Group's payment terms for purchasing and selling have not been too long so far, and given that the Group monitors the price changes for raw materials or parts and components and have always kept a sound relationship with suppliers and customers, the significant impact of short-term price fluctuations on operations is avoided. In the future, the Group will continue to attach great importance to the impact of inflation while also maintaining a good relationship with counterparties, reducing inflation.

(2) Main reasons and corresponding future measures of policies for engaging in highly risky and highly leveraged investments, lending funds to others, endorsements and guarantees and derivatives transactions:

As of the annual report's publication date, the Group has not been engaged in highly risky, highly leveraged investments or derivatives transactions. Nor has the Group provided loans to others since 2020. In terms of providing endorsements/guarantees, the Group guaranteed ABC-US primarily due to applying for the bank loan line. The loan expired in May 2020 and there is no endorsement/guarantee line as of now. The abovementioned transactions were discussed and approved by the Board of Directors. The procedures were carried out in accordance with the regulations. The Group has formulated the "Procedures for Acquisition or Disposal of Assets," the "Operational Procedures for Loaning Funds to Others," and the "Procedures for Endorsements/Guarantees" which have all been approved by shareholders meetings. The Group handles related matters in accordance with these measures.

(3) Future R&D projects and estimated R&D budget:

The Group continues to invest in R&D resources for the development of the efficiency improvement of multiplex diagnostic testing systems, instruments and all types of diagnostic panels while also focusing on feasibility studies of immunology products and automated immunoassay systems. The estimated R&D budget will be set according to each product's progress, including R&D technical personnel, equipment, technological development, and clinical trials, to continue enhancing the Group's competitive advantage.

(4) Impact on the Company's financial operations of important policies adopted and changes in the legal environment at home and abroad, and measures to be taken in response

The Company is registered in the Cayman Islands and its principal place of business is the U.S. The main economic activity of the Cayman Islands is financial services, while the U.S. is one of the world's major economies with stable economic development and political environment. The Group abides by domestic and international important policies and laws when conducting businesses. In the most recent fiscal year and as of the publication date of the annual report, there were no material events affecting the Group's financial operations due to changes in important policies and laws from the aforementioned regions. Meanwhile, the Group pays close attention to domestic and international policy trends and regulatory changes. Lawyers, accountants and other professional sectors are consulted where there are changes in order to respond to the market while adopting suitable countermeasures in a timely manner.

(5) Impact on the company's financial operations of developments in science and technology as well as industrial change, and measures to be taken in response:

The Group monitors the impact of technological and industrial changes on the Group closely while paying close attention to the development of multiplex diagnostic testing technology and the biotechnology and medical industry dynamics. By grasping the R&D progress of products and adjusting the allocation of resources, the impact of technological and industrial changes in the future will be minimized.

(6) Impact on the company's crisis management of changes in the company's corporate image, and corresponding measures to be taken in response

Since the establishment, the Group adheres to the corporate spirit of integrity and sustainable management. The Group does not cease to strengthen the corporate management and improve operational efficiency, striving to maintain its good corporate image and sound and harmonious industrial relations so as to attract more talented people to make a difference in the Company. To date, no incidents have happened that would affect the Company's corporate image, and there are no plans for corporate image changes.

(7) Expected benefits and possible risks associated with any merger and acquisitions, and corresponding measures being or to be taken

As of the publication date of the annual report, the Group has no M&R plans. If there is a plan in the future to carry out such operation, the Group will handle related matters in accordance with the local laws and regulations as well as the applicable measures formulated by the Group to ensure the Group's interests and shareholders' equity.

(8) Expected benefits and possible risks associated with any plant expansion, and corresponding measures being or to be taken

The Group signed a lease agreement for the Susher Unit 2 extension with the current landlord on September 1, 2021. The monthly rent for the extension is US$ 3,809.4. Estimated construction costs and equipment purchases don't exceed US$ 1 million. Construction is projected to be completed in Q4 2022. The plant extension will mainly be used as a manufacturing and R&D site for Immunoassays and Liquid Biopsy.

This expansion project will add immunoassay product (protein) manufacturing and R&D capacities to the existing capacities in the field of multiplex molecular test panels. This is expected to have positive effects on future revenues of the Group. In addition, the low-capital, low-risk project is

within the controllable range of the Group.

(9) Risks associated with any consolidation of sales or purchasing operations, and corresponding measures being or to be taken

The Group's largest supplier accounted for approximately 44.02% and 20.35% of the total purchase amount in 2020 and 2021, respectively. The proportion of purchases from the largest supplier was higher in 2020 than in 2021 was mainly due to the purchase of polymerase, an upstream material for Sars-CoV-2 panels. In addition, due to our license partner,IDEXX, made a good process in commercialization,our BioCode 2500 partner,CrystalVue, became the largest supplier in 2021. The Group maintains an excellent partnership with its suppliers and carries out price comparisons and raw material quality analyses of each supplier. It is expected that with the sales of assays and overall revenue increases, and become more scalable, there will be a second or third supplier of each raw material, thereby reducing the proportion of purchases from a single supplier.

In 2020 and 2021, the Group's major customers accounted for 29.91% and 43.08% of net revenue, respectively. The increase in sales concentration can mainly be attributed to product commercialization preparations by licensed customer IDEXX and the number of customers for the Group's multiplex molecular test panels increasing to 15 in 2021. With the increase of product lines, the Group will commit itself to marketing, while at the same time collaborating with its licensed parties to expand the digital multiplex biopanel platform market, hoping to achieve revenue scaling, further reducing the proportion of sales to a single customer.

(10)Information and technology security risks and response measures

The Company and its subsidiaries constantly monitor technology changes and industry developments affecting their business areas. Dedicated information security personnel are responsible for the installation of information security equipment and administration of training to reinforce information security concepts of our staff members. As of the annual report's publication date, no information security threats have occurred in the Group.

(11)Impact upon and risk to the company in the event a major quantity of shares belonging to a director, supervisor, or shareholder holding greater than a 10 percent stake in the company has been transferred or has otherwise changed hands, and corresponding measures being or to be taken: None.

(12)Litigious and non-litigious matters. List major litigious, non-litigious or administrative disputes that: (1) involve the company and/or any company director, any company supervisor, the president, any person with actual responsibility for the firm, any major shareholder holding a stake of greater than 10 percent, and/or any company or companies controlled by the company; and (2) have been concluded by means of a final and unappealable judgment, or are still under litigation. Where such a dispute could materially affect shareholders' equity or the prices of the company's securities, disclose the facts of the dispute, amount of money at stake in the dispute, the date of litigation commencement, the main parties to the dispute, and the status of the dispute as of the date of publication of the annual report: None.

(13)Impact upon and risk to the company associated with any change in governance personnel or top management, and corresponding measures being or to be taken: As of the publication date of the annual report, there was no change in the the Group's operating right.

(14)Other important risks and corresponding measures

1. Risks of the protection of shareholders' equity

As the Company Law of the Cayman Islands is very different from the Company Act in Taiwan, the Group has amended the "Articles of Incorporation" in accordance with the "Checklist of Shareholders' Equity Protection" promulgated by Taiwan Stock Exchange (TWSE). However, in the matter of company operations, there are many differences between

these 2 countries, resulting in investors' inability to apply the legal protection of Taiwan's Company Act to the Cayman Islands where they invest in. Investors must thoroughly understand the laws and regulations regarding investing in the Cayman Islands and seek advice from experts to get hold of the differences regarding the protection of shareholders' equity.

2. Risks in relation to the statements made in the annual report

(1) Facts and statistics

Information and statistics in this annual report were obtained from various statistical publications. However, such information obtained may be inaccurate, incomplete or not up-to-date. The Group makes no declaration as to the truth or accuracy of such statements, and investors should not be overly dependent on such information when making their investment judgments.

(2) Forward-looking statements and risks and uncertainties contained in this annual report

This annual report contains certain forward-looking statements and information about the Group and its subsidiaries. Such statements and information are based on the beliefs and assumptions of the Group's management and information currently held. Words including "anticipate," "believe," "can," "expect," "future, "intend," "may," "must," "plan," "estimate," "seek," "should," "will," "maybe," "hope" and words of similar meaning contained in this annual report refer to forward-looking statements when used concerning the Group or the Group's management. Such statements reflect the group management's current views regarding future events, operations, liquidity, and sources of funds; certain viewpoints may not be realized or may be subject to change. These statements may be affected by certain risks, uncertainties and assumptions, including other risks stated in this annual report. Investors should make careful considerations and rely on any forward-looking statements that involve known and unknown risks and uncertainties. Risks and uncertainties faced by the Group could affect the accuracy of the forward-looking statements.

The Group does not update the forward-looking statements in this annual report nor does it make amendments to reflect future events or information. Based on these risks and other risks, uncertainties, and assumptions, this annual report's forward-looking statements and circumstances may not occur in an anticipated manner or may not even occur at all. Hence, investors should not rely on any forward-looking statements.

3. Cash dividend distribution and taxation

Applied BioCode Corporation was organized under the law of the Cayman Islands. Upon the restructuring of its organizational and investment structure, the shares of Applied BioCode, Inc. were acquired through a share swap among all shareholders. As a result, the Company's shareholder structure is the same as the Applied BioCode, Inc. prior to the restructuring. Based on the U.S. federal income tax regulations, the Company is deemed a U.S. corporation and should file federal income tax returns according to the federal income tax policy. In the event of the Group distributing cash dividends to non-U.S. shareholders in the future, the Company should pay tax as a U.S. Company and file U.S. corporate income tax returns. For example: when the Company distributes cash dividends to non-U.S. shareholders, it generally requires to withhold 30% tax on behalf of the non-U.S. shareholders, which is one of the investment risks for investors.

4. Overall economic, political and economic environment, foreign exchange, and legal risks

Because the Company is domiciled in the Cayman Islands and its principal place of business is in the U.S, the overall economic and political environment changes and fluctuations in foreign exchange rates between the Cayman Islands and the U.S. affect the Group's operating condition.

5. The Company is a holding company. It depends on its subsidiaries' performances and their

ability to distribute dividends while being restricted to their payment of dividends and the transfer of funds.

The Company is a holding company incorporated in the Cayman Islands; it has no commercial operations and revenue sources, and its source of profit mainly depends on its operating subsidiaries. The Group’s subsidiary in the U.S. is the Group’s vital source of operating income. Therefore, the Group's cash dividend distribution is affected by the subsidiary's cash dividend distribution or the retention of surplus.

Moreover, the subsidiary’s cash dividend distribution is subject to restrictions of the laws of dividends, revenue remittance, cash transfer and foreign exchange controls in the countries in which they are paid. The payment is also affected by the foreign exchange rates, which the Group has no control over.

The Group’s subsidiaries are separate and independent corporations. In the event of bankruptcy, insolvency, restructuring, liquidation or asset realization of a subsidiary, assets acquired by the Group or the order of distribution will be inferior to the subsidiary's creditors, including the subsidiary’s trading partners.

The distribution of the Group's dividends or other benefits is handled in accordance with applicable regulations. It is advised that investors should understand the taxation policy of the investment in the holding company and seek advice from experts.

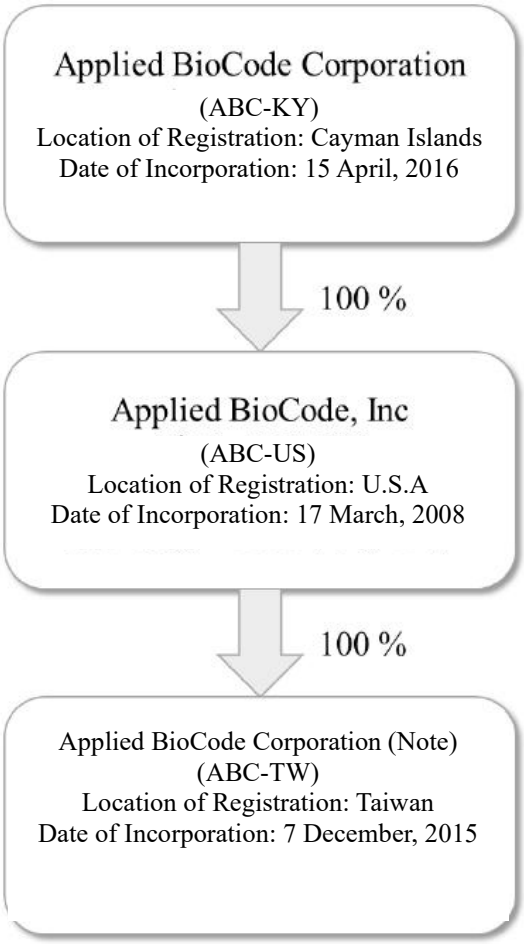
6. Please refer to pages 137-142 regarding the favorable and unfavorable factors concerning the Group's future development and their corresponding measures for other important risks and corresponding measures about the Group's operations. However, such corresponding measures may not be fully enforced due to force majeure and other factors. Their related risks may still affect the Group’s business, operating results and financial condition.

7. Other important disclosures: None.

VIII. Special disclosures

1. Information of Affiliates

(1) Organizational table of affiliated enterprises



(2) Basic information of affiliated enterprises

December 31, 2021; NT$thousand

Company name	Date of incorporation	Address	Paid-in Capital	Primary business or Production
Applied BioCode Corporation	2016/04/15	Grand Pavilion, Hibiscus Way, 802 West Bay Road, P.O. Box 31119, KY1-1205, Cayman Islands	817,292	Researching and developing multiplex diagnostic platform technologies and development, production and sales of testing instruments, magnetic beads and assays
Applied BioCode, Inc.	2008/03/17	12130 Mora Drive, Unit 2, Santa Fe Springs, CA 90670	1,598,105	R&D, production, sales and leasing of platform technologies and products including BMB, assay and instruments and products for in-vitro diagnostics assays (multiplex panels).
ABC-TW	2015/12/07	6F, No. 1, Lane 28, Xingzhong Road, Neihu District, Taipei City	88,850	R&D, production, and sales of platform technologies and products including BMB, assay and instruments and products for in-vitro diagnostics assays (multiplex panels).

(3) Information on the same shareholders who are presumed to have a relationship of control and subordination: None.

(4) The industries covered by the business operated by the overall affiliated enterprises: The main businesses of the overall affiliated enterprises of the Group's investment include researching and developing multiplex diagnostic platform technologies and development, production and sales of testing instruments, magnetic beads and panels.

(5) Information on directors, supervisors and presidents of affiliated enterprises

Company name	Position	Name or representative	Number of shares held(capital contribution)	Percentage of shares held(capital contribution)
Applied BioCode, Inc.	President / Director	Winston Z. Ho	-	-
	Directors	George J. Lee	-	-
	Directors	Benjamin Jen	-	-
ABC-TW	Directors	George J. Lee	-	-
	Directors	Winston Z. Ho	-	-
	Directors	Benjamin Jen	-	-
	Supervisor	Ruei-E Tang (Note 2)	-	-

Note: Supervisor, Ruei-E Tang assumed on May 26, 2020.

(6) Operational overview of affiliated enterprises

December 31, 2021; NT$thousand

Company name	Capital	Total asset value	Total liabilities	Net worth	Net sales	Operating (loss) income	Current profit and loss (post tax)	Earnings per share (NT$) (post tax)
Applied BioCode, Inc.	1,598,105	601,338	128,888	472,450	320,512	(132,584)	(141,340)	(3.28)
ABC-TW	88,850	41,205	9,263	31,942	27,753	(6,693)	(6,821)	(0.77)

(7) Consolidated financial statements of affiliated enterprises: Please refer to the financial statements on pages 154 to 210 in the annual report.

(8) Consolidated business reports of affiliated enterprises: The Group is not a subordinate company as stipulated in the chapter regarding affiliated enterprises in the Company Act. It is therefore not applicable.

2. Issuance of Securities through Private Placement in the most recent fiscal year and up to publication date of the annual report: None.

3. The holding or disposal of the Group's equity by the its Subsidiary: None.

4. Other Required Amended Explanation

(1) Internal control system implementation status

1. The CPA's recommendations for improving the internal control in the most recent 3 fiscal years

Year	recommendations by the CPAs	Status
2019	None	None
2020	None	None
2021	None	None

2. Major flaws discovered through internal auditing in the most recent 3 fiscal years: There are no major flaws so far.

3. Internal control statement: Please refer to page 46.

4. Where the company has retained CPAs to exclusively review its internal control systems, the prospectus shall set forth the reason for doing so, the CPAs' review opinions, measures the company has taken for improvement, and the condition of improvement on lacking items: In the opinion of the CPAs of PwC Taiwan, the Group maintained, in all material respects, effective internal controls over external financial reporting and assets safeguard, based on the criteria of effective internal controls set forth in the "Regulations Governing Establishment of Internal Control Systems by Public Companies".

(2) An explanation of any material differences from the rules of Taiwan in relation to the protection of shareholders' equity.

Explanation of any material differences from the rules of Taiwan in relation to the protection of shareholders' equity.

The Group has amended the "Articles of Incorporation" in accordance with the important measures for the protection of shareholders' rights prescribed in the newly amended "Checklist of Shareholders' Equity Protection Measures at Foreign Issuer's Domicile" ("Checklist of Shareholders' Equity Protection") as per the latest announcement of Taiwan Stock Exchange Corporation. However, certain important measures for the protection of shareholders' equity are not applicable under the Cayman Islands laws and are therefore not included in the amendment to the Company's Articles of Incorporation. Discrepancies between the important measures for the protection of shareholders' equity and the original Articles of Incorporation can be summarized as follows (the amendments to the "Checklist of Shareholders' Equity Protection Measures at Foreign Issuer's Domicile" promulgated in 2021 and 2022 have been incorporated into the motions on Articles of Incorporation amendments submitted to this years' shareholders meeting for approval by resolution):

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
1. Physical shareholder meetings shall be held within the territory of the Republic of China. If a shareholders meeting is convened physically outside of Taiwan, it shall be resolved by the Board meeting or shareholders meeting and gain permission from the competent authorities. It shall then be reported to the TWSE for approval within 2 days after the permission is gained by the competent authorities. 2. Any or a plural number of shareholder(s) of a company which has (have) continuously held 3% or more of the total number of outstanding shares for a period of one year or a longer time may, by filing a written proposal setting forth therein the subjects for discussion and the reasons, request the board of directors to call a special meeting of shareholders. If the board of directors fails to give a notice for convening a special meeting of shareholders within 15 days after the filing of the request under the preceding Paragraph, the	1. In terms of convening shareholders meeting by shareholders physically , given the fact that the Company Law of the Cayman Islands does not have special provisions governing the convening of shareholders meetings physically ; therefore, Article 19.6 of the Company's Articles of Incorporation does not stipulate that the shareholders shall report to the competent authorities for approval prior to convening an extraordinarily shareholders meeting by themselves. 2. Furthermore, if shareholders wish to convene a shareholders meeting physically outside of Taiwan, it is stipulated in Article 19.6 of the Company's Articles of Incorporation that it is required that the meeting must obtain permission from the TWSE or the TPEx in advance. Given that a special shareholders meeting does not require permission from the local authority of the Cayman Islands, the requirements in the "Checklist of Shareholders' Equity Protection" - "report to the TWSE for approval within two days after shareholders obtain approval from the competent authority for the convening of the meeting" do not apply. This part should have no material impact on the rights of Taiwanese shareholders.

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
proposing shareholder(s) may, after obtaining approval from the competent authority, convene a special meeting of shareholders on his/their own.	
1. When convening shareholder meetings, the Company shall list electronic transmission as one of the methods for exercising the voting power. 2. When voting rights are exercised by correspondence or electronic means, the method of exercise shall be specified in the shareholders' meeting notice. A shareholder exercising voting rights by correspondence or electronic means will be deemed to have attended the meeting in person. But to have waived his/her rights concerning the extraordinary motions and amendments to original proposals of that meeting;	In terms of exercising shareholder voting rights by correspondence or electronic means, the Company Law of the Cayman Islands does not mention whether a shareholder excising his/her voting rights by correspondence or electronic means is deemed to have attended the meeting in person, and lawyers of Cayman Islands have not discovered related cases. To make other arrangements, Article 25.4 of the Company's Articles of Incorporation stipulates that "a shareholder exercising his/her voting at a shareholders meeting by correspondence or electronic means is deemed to have appointed the chair of the meeting as its proxy. His/her voting rights must be exercised as instructed by correspondence or electronic documents. The meeting chair may not exercise his/her voting rights on behalf of the shareholder in matters not mentioned or set out in correspondence or electronic means, and/or amendments to the original motion proposed at the shareholders' meeting. To avoid doubts, such shareholder who exercises his/her voting rights through such means shall be deemed to have waived his/her rights concerning the extraordinary motions and amendments to original proposals of that meeting." The voting rights of the chair acting as a proxy at the shareholders' meeting may not exceed 3% of the total voting rights of the issued shares as stipulated in Article 26.3 of the Company's Articles of Incorporation.
For the following resolutions involving significant shareholders' interests, they shall be approved by a majority vote at a meeting of shareholders attended by shareholders representing two-thirds or more of the total number of the issued shares of the company. In the event the total number of shares represented by the shareholders present at a shareholders' meeting is less than the percentage of the total shareholdings required in the preceding Paragraph, the resolution may be adopted by two-thirds of the voting rights	1. In terms of the resolution method at a shareholders meeting - in addition to the ordinary resolutions and major resolutions under Taiwan's laws, "Special Resolution" under the Company Law of the Cayman Islands is stipulated in Article 1.1 of the Company's Articles of Incorporation. It refers to a resolution passed at the Company's shareholders meeting who have voting rights either attended in person or by a power of attorney, or by a proxy legally authorized by a corporate shareholder or non-natural person. After calculating the number of voting rights of each shareholder, the resolution shall be approved by at least two-thirds of the voting rights of all attending shareholders. 2. In accordance with the Company Law of the Cayman Islands, the following matters shall be resolved by special resolution: (1) Change in the Articles of Incorporation In accordance with the Cayman Islands laws, making

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
exercised by the shareholders present at the shareholders' meeting who represent a majority of the outstanding shares of the company. 1. Enter into, amend, or terminate any contract for lease of the company's business in whole, or entrusted business, or regular joint operation with others; transfer the whole or any essential part of its business or assets; or accept the transfer of another whole business or assets, which has great bearing on the business operation of the company. 2. Change in the Articles of Incorporation 3. Changes in the Articles of Incorporation that damage preferred shareholders' rights shall be subject to resolution at the special shareholders' meeting. 4. Dividends and bonuses in whole or in part distributed in the form of new shares to be issued 5. A resolution for dissolution, consolidation or merger, or split-up of a company 6. Share conversion	changes in the Articles of Incorporation must be performed through a special resolution. Therefore, Article 12.1 of the Company's Articles of Incorporation regarding the resolution threshold of changing the Articles of Incorporation has not been changed to a major resolution as required by the "Checklist of Shareholders' Equity Protection" under Taiwan's laws. In addition, According to Article 13 of the Company's Articles of Incorporation, if any amendment or change made in the Articles of Incorporation would impair the preferential rights of any types of shares, such amendment or change shall be subject to approval by a special resolution. Shareholders holding such type of impaired shares shall convene a separate meeting and pass the motion by special resolution. (2) Dissolution Under the Cayman Islands laws, if a company resolves to voluntarily liquidate and dissolve because it is unable to pay its debts as they fall due, the dissolution shall be resolved by the shareholders' meeting. However, suppose a company resolves to voluntarily liquidate and dissolve for reasons other than those mentioned above. In that case, the dissolution shall be made through a special resolution as required by the Company Law of the Cayman Islands. Hence, Article 12.4 of the Company's Articles of Incorporation (a) "the resolution threshold for voluntary liquidation and dissolution of the Company for the reason the Company is unable to pay its debts as they fall due" has not been changed to a major resolution as required by the "Checklist of Shareholders' Equity Protection" under Taiwan's laws. (3) Merger As there are mandatory provisions of the Company Law of the Cayman Islands regarding the voting manner of "Merger as defined by the laws of the Cayman Islands," Article 12.3 of the Company's Articles of Incorporation (b) provides "Merger" (except for any Merger which falls within the definition of "merger and/or consolidation" under the Company Law of the Cayman Islands that requires only a special resolution) that shall be approved by a major resolution. 3. The difference between the above matters and the Checklist of Shareholders' Equity Protection is important motions regarding

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
	the protection of shareholders' equity should be resolved by a major resolution and special resolution, respectively, in the Company's Articles of Incorporation. As these differences arise due to the laws of the Cayman Islands, the Company's Articles of Incorporations clearly stipulate major resolutions and special resolutions for the protection of important matters regarding shareholders' equity. Therefore, the effect on the shareholders' equity shall be limited.
1. Supervisors of a company shall be elected by the meeting of shareholders. Among them, at least one supervisor shall have a domicile within the territory of Taiwan. 2. The term of office of a supervisor shall not exceed three years, but he/she may be eligible for re-election. 3. In case all supervisors of a company are discharged, the board of directors shall, within 60 days, convene a special meeting of shareholders to elect new supervisors. 4. Supervisors shall supervise the execution of business operations of the company, and may at any time or from time to time investigate the business and financial conditions of the company, inspect, transcribe or make copies of the accounting books and documents, and request the board of directors or managerial personnel to make reports thereon. 5. Supervisors shall audit the various statements and records prepared for submission to the shareholders' meeting by the board of directors, and shall make a report of their findings and opinions at the meeting of shareholders. 6. Supervisors may appoint a practicing lawyer on behalf of the	The Company Law of the Cayman Islands does not have the concept of "supervisor." Issuing companies set up Audit Committees and there are no supervisors. Therefore, there are no provisions with regards to supervisors in the Articles of Incorporation.

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
Company and a certified public account to conduct the review matters. 7. Supervisors of a company may attend the meeting of the board of directors to express their opinions. In case the board of directors or any director commits any act, in carrying out the business operations of the company, in a manner in violation of the laws, regulations, the Articles of Incorporation or the resolutions of the shareholders' meeting, the supervisors shall forthwith advise, by a notice, to the board of directors or the director, as the case may be, to cease such act. 8. Supervisor may each exercise the supervision power individually. 9. A supervisor shall not be concurrently a director, a managerial officer or other staff/employee of the company.	
1. Shareholder(s) who has/have been continuously holding 1% or more of the total number of the outstanding shares of the company over six months may request in writing the supervisors of the company to institute, for the company, an action against a director of the company. The Taiwan Taipei District Court shall be the court of the first instance. 2. If the supervisor does not institute proceedings within 30 days after the shareholder's request, the shareholder may institute proceedings on behalf of the company, and the Taiwan Taipei District Court shall be the court of the first instance.	As there is no equivalent concept of supervisor under the laws of Cayman Islands, and the company has set up an Audit Committee. Therefore, there are no provisions with regards to supervisors in the Articles of Incorporation. However, subject to the provisions stipulated in Article 214 of Taiwan's Company Act regarding minority shareholders requesting to institute proceedings against directors, Article 48.3 of the company's Articles of Incorporation stipulates "within the permission scope of the laws of the Cayman Islands, a shareholder who has continuously held more than one percent of the company's issued shares for 6 months or more may: (a) requesting in writing that the Board of Directors to authorize the independent directors of the Audit Committee to institute proceedings against the director on behalf of the group, and the Taiwan Taipei District Court shall be the court of the first instance; or (b) requesting in writing that independent directors of the Audit Committee to institute proceedings against the director on behalf of the group, and the Taiwan Taipei District Court shall be the court of the first instance. Within 30 days after the request is made in accordance with abovementioned (a) or (b), if (i) the

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
3. Subject to the condition that the board of directors does not or is unable to convene a meeting of shareholders, the supervisors or independent directors of the Audit Committee may, for the benefit of the company, call a meeting of shareholders when it is deemed necessary.	independent directors of the Audit Committee authorized by the Board or the independent directors of the Audit Committee authorized by the Board fail to institute proceedings in accordance (a); or (ii) the requested independent directors of the Audit Committee fails to institute proceedings in accordance with (b), within the permission scope of the laws of the Cayman Islands, the Taiwan Taipei District Court shall be the court of the first instance. However, regarding the above provisions and laws of the Cayman Islands, lawyers of the Cayman Islands have the following polite reminders: There are no specific provisions in the Cayman Islands' Company Law that allow minority shareholders to bring a derivative action against directors in the court. The Articles of Incorporation are not a contract between the shareholders and directors; they agree between the shareholders and the company. Even though the Articles of Incorporation allow minority shareholders to institute proceedings against directors, lawyers in the Cayman Islands suggest that such content will not bind the directors. However, under common law, all shareholders (including minority shareholders) have the right to bring derivative actions (including actions against directors) regardless of their shareholding ratio or their period of ownership. Once shareholders have instituted proceedings, the court in the Cayman Islands will determine whether they may proceed with the litigation. In other words, although the Articles of Incorporation stipulate that a minority shareholder (or shareholders with the required shareholding ratio or period of ownership) may institute proceedings against the director on behalf of the Company, the court in the Cayman Islands holds the ultimate right to determine whether or not the litigation shall continue. Regarding the relevant decisions made by the Grand Court of the Cayman Islands, when considering whether or not the derivative action should continue, the applicable guideline is whether the Cayman Islands court is satisfied and accepts that the plaintiff's claim on behalf of the company is prima facie material. The court will also take into account that the wrongful behavior is conducted by persons in control of the company and that such persons are able to keep the Company from instituting proceedings against them. The court in the Cayman Islands will determine a case based on facts (although the court may refer to provisions of the company's Articles of Incorporation, it is not a decisive factor). According to the Cayman Islands law, the Board of Directors shall make decisions on behalf of the company as a whole (not as

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
	individual directors). The board of directors should authorize one of the directors on behalf of the company to institute proceedings against other directors as prescribed in the company's Articles of Incorporation. The Company Law of the Cayman Islands does not provide the right for shareholders to request the directors to convene a board meeting to resolve specific matters. However, the Cayman Islands' Company Law does not prohibit a company from formulating provisions regarding board meeting procedures in its Articles of Incorporation (including the requirements for the convening of the board meeting).
1. The directors of a company shall have the loyalty and shall exercise the due care of a good administrator in conducting the company's business operation; and if he/she has acted contrary to this provision, shall be liable for the damages to be sustained by the company there-from. If the act is carried out by the director or by others, the meeting of shareholders may, by a resolution, consider the earnings in such an act as earnings of the company. 2. If the director of a company has, in the course of conducting the business operations, violated any provision of the applicable laws and/or regulations and thus caused damage to any other person, he/she shall be liable, jointly and severally, for the damage to such other person. 3. Managerial officers and supervisors shall be liable for the same damages as the company's directors when executing duties within their scope.	Although it is stipulated in Article 48.4 of the Company's Articles of Incorporation that "Under the circumstances that do not affect and do not violate the principles of the common law of the Cayman Islands and general directors' duties to the company and shareholders under the law, directors shall faithfully execute the company's business and perform the duty of care of a good manager. If a director causes damage to the Company, he/she shall be liable to the maximum extent permitted by the law. If a director obtains benefits for himself/herself or others due to a violation of carrying out the act mentioned above, the company shall take all appropriate actions and steps to the maximum extent permitted by the law and consider such earnings of the Company. If a director violates the law or order during executing his/her duties that result in the Company becoming liable to any person for any compensation or damages, the director shall be jointly and severally responsible with the company for any compensation or damage caused to the company. If for any reason the director is not jointly and severally liable with the company, the director shall reimburse the company for any loss suffered by the company due to his/her breach of duty. When a managerial officer carries out company duties, he/she shall bear the same liability for damages as the company's directors. " However, regarding the above provisions and laws of the Cayman Islands, lawyers of the Cayman Islands have the following polite reminders: In general, under the Cayman Islands law, managerial officers or supervisors do not bear the same responsibilities to the company or shareholders as a director of the company. However, if a managerial officer or supervisor is authorized to carry out duties on behalf of a senior executive, he/she will have the same obligations as a director of the company. To avoid confusion, Cayman Islands companies generally define the duties and obligations of a managerial officer

Important matters regarding the protection of shareholders' equity	Regulations of the Articles of Incorporation and reasons for differences
	and supervisor to the company and its shareholders in their service contracts. The same is true for the Articles of Incorporation acting as an agreement between shareholders and the company. As managerial officers or supervisors are not a party to the Articles of Incorporation, and therefore, all rights of damages and compensation upon a violation of a managerial officer or supervisor shall be regulated in the service contract. Under the law of the Cayman Islands, the Articles of Incorporation are an agreement between shareholders and the company, and directors (as a director of the company) are not a party to the Articles of Incorporation. Lawyers of the Cayman Islands suggest that Articles of Incorporation do not bind the directors. If the company intends to give contractual effect to directors with applicable provisions, lawyers of the Cayman Islands believe that relevant rights should be enclosed in the individual director's contract, such as a service contract.

5. If any of the situations listed in Article 36, paragraph 2 subparagraph 2 of the Securities and Exchange Act, which might materially affect shareholders' equity or the price of the company's securities, has occurred during the most recent fiscal year or up to publication of the annual report: None.

瑞磁生物科技集團股份有限公司

Applied BioCode Corporation

董事長：李　家　榮

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS AND

INDEPENDENT AUDITORS' REPORT

DECEMBER 31, 2021 AND 2020

INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of Applied BioCode Corporation

Opinion

We have audited the accompanying consolidated balance sheets of Applied BioCode Corporation and subsidiaries (the "Group") as at December 31, 2021 and 2020, 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, 2021 and 2020, 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. Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. 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 judgement, were of most significance in our audit of the Group's 2021 consolidated financial statements. 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 2021 consolidated financial statements are stated as follows:

Existence and occurrence of cash and cash equivalents

Description

Please refer to Note 4(6) for accounting policies applied to cash and cash equivalents, and Note 6(1) for details of account items. As of December 31, 2021, cash and cash equivalents amounted to NT$646,070 thousand, constituting 63% of the total consolidated assets. As cash and cash equivalents constitute a significant portion of total consolidated assets and inherent risk exists, we consider the existence and occurance of cash and cash equivalents a key audit matter.

How our audit addressed the matter

The procedures performed in respect of this key audit matter include:

1. Confirmed bank accounts and special arrangements with financial institutions to verify the existence and rights and obligations of the bank deposits;
2. Verified the authenticity of the necessary information for the bank confirmations;
3. Reviewed and tested the mathematical accuracy of bank reconciliation statements, agreed the balances with the balances per cash book and per bank balance, identified any unusual or significant items and ensured that these were properly disposed of.
4. Selected samples of significant cash receipt and payment transactions to check whether the transactions were incurred for operational needs.

Existence of sales revenues

Description

Please refer to Note 4(23) for accounting policies on revenue recognition, and Note 6(16) for details of sales revenue.

The primary business of Applied BioCode Group is the selling of Barcoded Magnetic Beads, Reagents and Optical Analyzers for multiplex in-vitro diagnostics to third party testing laboratories and medical institutions. The transaction terms vary depending on market conditions and customers' needs. As sales revenue are the main transactions of the Group and are material to the financial statements, thus, the existence of sales revenue has been identified as a key audit matter.

How our audit addressed the matter

Our key audit procedures performed in respect of the above key audit matter included the following:

1. Inspected whether approved additions to the merchandise master file data had been correctly entered in the merchandise master file which include basic information of customers for evaluating the creditworthiness of buyers.
2. Evaluated and tested management's controls in respect of the Group's sales transactions and the execution of actual processes.
3. Performed substantive test on selected sales transactions including confirming orders, shipping documents, invoices and cash receipts to verify the existence of sales revenues.

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.

Auditors' 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 auditors' 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 the generally accepted auditing standards in the Republic of China 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 the generally accepted auditing standards in the Republic of China, 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 auditors' 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 auditors' 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 period and are therefore the key audit matters. We describe these matters in our auditors' 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.

Wendy Liang　　Alan Chien

For and on behalf of PricewaterhouseCoopers, Taiwan

March 23, 2022

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 independent auditors' report 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.

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2021 AND 2020
(Expressed in thousands of New Taiwan dollars)

	Assets	Notes	December 31, 2021 AMOUNT	%	December 31, 2020 AMOUNT	%
	Current assets					
1100	Cash and cash equivalents	6(1)	$ 646,070	63	$ 847,910	69
1170	Accounts receivable, net	6(2)	67,805	7	49,472	4
130X	Inventories, net	6(3)	101,374	10	106,432	9
1479	Other current assets, others	8	11,197	1	17,263	1
11XX	**Total current assets**		826,446	81	1,021,077	83
	Non-current assets					
1600	Property, plant and equipment, net	6(4)	111,830	11	116,210	10
1755	Right-of-use assets	6(6)	50,940	5	55,309	5
1780	Intangible assets, net	6(5)	13,434	1	17,196	1
1840	Deferred income tax assets	6(22)	3,513	1	4,600	-
1900	Other non-current assets	8	12,804	1	12,829	1
15XX	**Total non-current assets**		192,521	19	206,144	17
1XXX	**Total assets**		$ 1,018,967	100	$ 1,227,221	100

(Continued)

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2021 AND 2020
(Expressed in thousands of New Taiwan dollars)

	Liabilities and Equity	Notes	December 31, 2021 AMOUNT	%	December 31, 2020 AMOUNT	%
	Liabilities					
	Current liabilities					
2130	Current contract liabilities	6(16)	$ 1,987	-	$ 1,959	-
2170	Accounts payable		9,428	1	27,602	2
2200	Other payables	6(8)	34,234	3	35,506	3
2280	Current lease liabilities	6(6)	14,195	2	12,696	1
2399	Other current liabilities, others		103	-	39	-
21XX	**Total current liabilities**		59,947	6	77,802	6
	Non-current liabilities					
2527	Non-current contract liabilities	6(16)	7,988	1	9,092	1
2570	Deferred tax liabilities	6(22)	3,513	-	4,600	-
2580	Non-current lease liabilities	6(6)	44,562	4	48,732	4
25XX	**Total non-current liabilities**		56,063	5	62,424	5
2XXX	**Total Liabilities**		116,010	11	140,226	11
	Equity					
	Share capital	6(12)				
3110	Common share		817,292	80	816,390	67
	Capital surplus	6(10)(13)				
3200	Capital surplus		351,576	35	1,394,683	114
	Retained earnings	6(14)				
3350	Accumulated deficit		(165,199)	(16)	(1,052,108)	(86)
	Other equity interest	6(10)(15)				
3400	Other equity interest		(100,712)	(10)	(71,970)	(6)
3XXX	**Total equity**		902,957	89	1,086,995	89
3X2X	**Total liabilities and equity**		$ 1,018,967	100	$ 1,227,221	100

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

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
YEARS ENDED DECEMBER 31, 2021 AND 2020
(Expressed in thousands of New Taiwan dollars for loss per share)

			Year ended December 31			
			2021		2020	
	Items	Notes	AMOUNT	%	AMOUNT	%
4000	Operating revenue	6(7)(16)	$ 319,962	100	$ 299,015	100
5000	Operating costs	6(3)(20)(21)	(130,595)	(41)	(105,491)	(35)
5900	Gross profit from operation		189,367	59	193,524	65
	Operating expenses	6(20)(21)				
6100	Selling expenses		(56,941)	(18)	(44,241)	(15)
6200	Administrative expenses		(91,515)	(29)	(85,792)	(29)
6300	Research and development expenses		(205,854)	(64)	(197,005)	(66)
6000	Total operating expenses		(354,310)	(111)	(327,038)	(110)
6900	Net operating loss		(164,943)	(52)	(133,514)	(45)
	Non-operating income and expenses					
7100	Interest income	6(17)	3,111	1	3,732	1
7020	Other gains and losses	6(18)	(474)	-	30,623	10
7050	Finance costs	6(6)(19)	(2,870)	(1)	(4,313)	(1)
7000	Total non-operating income and expenses		(233)	-	30,042	10
7900	**Loss before income tax**		(165,176)	(52)	(103,472)	(35)
7950	Income tax expense	6(22)	(23)	-	(24)	-
8200	**Loss for the year**		($ 165,199)	(52)	($ 103,496)	(35)
	Other comprehensive income (loss)					
	Components of other comprehensive income (loss) that will not be reclassified to profit or loss					
8361	Financial statements translation differences of foreign operations	6(15)	($ 28,742)	(9)	($ 58,289)	(19)
8500	**Total comprehensive loss for the year**		($ 193,941)	(61)	($ 161,785)	(54)
	Loss attributable to	6(23)				
8610	Owners of the parent		($ 165,199)	(52)	($ 103,496)	(35)
	Comprehensive loss attributable to					
8710	Owners of the parent		($ 193,941)	(61)	($ 161,785)	(54)
	Basic loss per share	6(23)				
9750	Basic loss per share (In dollars)		($ 2.02)		($ 1.33)	
9850	Diluted loss per share (In dollars)		($ 2.02)		($ 1.33)	

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

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
YEARS ENDED DECEMBER 31, 2021 AND 2020
(Expressed in thousands of New Taiwan dollars)

	Notes	Equity attributable to owners of the parent				Total equity
		Share capital - common share	Capital surplus	Accumulated deficit	Other equity interest	
2020						
Balance at January 1, 2020		$ 722,854	$ 770,920	($ 948,612)	($ 14,512)	$ 530,650
Loss for the year	6(14)(23)	-	-	(103,496)	-	(103,496)
Other comprehensive loss for the year	6(15)	-	-	-	(58,289)	(58,289)
Total comprehensive loss		-	-	(103,496)	(58,289)	(161,785)
Compensation cost of employee stock options	6(10)(13)	-	12,702	-	-	12,702
Compensation cost of employee restricted shares	6(10)(15)	-	-	-	831	831
Issuance of common shares	6(12)(13)	90,500	610,981	-	-	701,481
Exercise of employee stock options	6(10)(12)(13)	3,036	80	-	-	3,116
Balance at December 31, 2020		$ 816,390	$ 1,394,683	($ 1,052,108)	($ 71,970)	$ 1,086,995
2021						
Balance at January 1, 2021		$ 816,390	$ 1,394,683	($ 1,052,108)	($ 71,970)	$ 1,086,995
Loss for the year	6(14)(23)	-	-	(165,199)	-	(165,199)
Other comprehensive loss for the year	6(15)	-	-	-	(28,742)	(28,742)
Total comprehensive loss		-	-	(165,199)	(28,742)	(193,941)
Compensation cost of employee stock options	6(10)(13)	-	8,565	-	-	8,565
Exercise of employee stock options	6(10)(12)(13)	902	436	-	-	1,338
Capited surplus used to offset accumulated deficits	6(13)(14)	-	(1,052,108)	1,052,108	-	-
Balance at December 31, 2021		$ 817,292	$ 351,576	($ 165,199)	($ 100,712)	$ 902,957

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

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2021 AND 2020
(Expressed in thousands of New Taiwan dollars)

	Notes	Year ended December 31 2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES			
Loss before tax		($ 165,176)	($ 103,472)
Adjustments			
Adjustments to reconcile profit (loss)			
Depreciation expense	6(4)(20)	46,891	39,456
Amortisation expense	6(5)(20)	4,068	4,139
Expected credit loss	6(2)	5,668	91
Interest income	6(17)	(3,111)	(3,732)
Interest expense	6(19)	2,870	4,313
Losses on disposals of property, plant and equipment	6(4)(18)	10	-
Compensation cost of employee share-based payment	6(10)	8,565	13,533
PPP loan forgiveness revenue	6(18)	-	(28,062)
Changes in operating assets and liabilities			
Changes in operating assets			
Accounts receivable, net		(24,001)	(25,461)
Inventories, net		(13,383)	(65,560)
Other current assets, others		6,066	(7,898)
Changes in operating liabilities			
Contract liabilities		(1,076)	2,552
Accounts payable		(18,174)	18,020
Other payables		(1,272)	5,921
Other current liabilities, others		64	24
Cash outflow generated from operations		(151,991)	(146,136)
Interest received		3,111	3,732
Interest paid		(2,870)	(4,313)
Income tax paid		(23)	(24)
Net cash flows used in operating activities		(151,773)	(146,741)
CASH FLOWS FROM INVESTING ACTIVITIES			
Incerese in current financial assets at amortised cost		-	(262,281)
Decrease in current financial assets at amortised cost		-	383,607
Acquisition of property, plant and equipment	6(24)	(15,518)	(27,580)
Acquisition of intangible assets	6(5)	(750)	(374)
Increase in refundable deposits		(120)	(12,829)
Decrease in refundable deposits		-	6,021
Net cash flows (used in) from investing activities		(16,388)	86,564
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayments of short-term borrowings		-	(60,212)
Proceeds from long-term borrowings	6(9)	-	28,062
Repayments of principal portion of lease liabilities	6(6)(25)	(15,526)	(15,685)
Proceeds from issuance of shares	6(12)	-	701,481
Exercise of employee stock options	6(10)(13)	1,338	3,116
Net cash flows (used in) from financing activities		(14,188)	656,762
Effect of exchange rate changes		(19,491)	(51,351)
Net (decrease) increase in cash and cash equivalents		(201,840)	545,234
Cash and cash equivalents at beginning of year		847,910	302,676
Cash and cash equivalents at end of year		$ 646,070	$ 847,910

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

APPLIED BIOCODE CORPORATION AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2021 AND 2020
(EXPRESSED IN THOUSANDS OF NEW TAIWAN DOLLARS,
EXCEPT AS OTHERWISE INDICATED)

1. History and Organization

Applied BioCode Corporation (the "Company") was incorporated as a company in British Cayman Islands on April 15, 2016, as a holding company for the purpose of reorganization. On June 30, 2016, as part of a reorganization, Applied BioCode Inc. converted all of its outstanding shares to the Company's newly issued shares. The Company and its subsidiaries (collectively referred herein as the "Group") are primarily engaged in Barcoded Magnetic Beads of multiplex in-vitro diagnostics, platform technology of assays and instruments and research and development, production, sales, leasing and authorisation of products. The Company's shares have been listed on the Taiwan Stock Exchange since June 9, 2020.

2. The Date of Authorisation for Issuance of the Financial Statements and Procedures for Authorisation

These consolidated financial statements were authorized for issuance by the Board of Directors on March 23, 2022.

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 endorsed by the FSC effective from 2021 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 4, 'Extension of the temporary exemption from applying IFRS 9'	January 1, 2021
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16, 'Interest Rate Benchmark Reform— Phase 2'	January 1, 2021
Amendment to IFRS 16, 'Covid-19-related rent concessions beyond 30 June 2021'	April 1, 2021(Note)

Note：Earlier application from January 1, 2021 is allowed by FSC.

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

(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 endorsed by the FSC effective from 2022 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 3, 'Reference to the conceptual framework'	January 1, 2022
Amendments to IAS 16, 'Property, plant and equipment: proceeds before intended use'	January 1, 2022
Amendments to IAS 37, 'Onerous contracts — cost of fulfilling a contract'	January 1, 2022
Annual improvements to IFRS Standards 2018–2020	January 1, 2022

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

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

New standards, interpretations and amendments issued by IASB but not yet included in the IFRSs as endorsed by the FSC are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
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, 2023
Amendments to IFRS 17, 'Insurance contracts'	January 1, 2023
Amendment to IFRS 17, 'Initial application of IFRS 17 and IFRS 9 – comparative information'	January 1, 2023
Amendments to IAS 1, 'Classification of liabilities as current or non-current'	January 1, 2023
Amendments to IAS 1, 'Disclosure of accounting policies'	January 1, 2023
Amendments to IAS 8, 'Definition of accounting estimates'	January 1, 2023
Amendments to IAS 12, 'Deferred tax related to assets and liabilities arising from a single transaction'	January 1, 2023

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, International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively referred herein as the "IFRSs").

(2) Basis of preparation

A. The Consolidated financial statements have been prepared under the historical cost convention.

B. The preparation of financial statements in conformity with 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.

(3) Basis of consolidation

A. Basis for preparation of consolidated financial statements:

(a) The Group's financial statements are initially presented in USD. When converting the consolidated financial statements into New Taiwan Dollars, all assets and liabilities are translated into New Taiwan Dollars at the exchange rate of the balance sheet; except for the balance accrued at the end of the period, the balance of the equity in the equity account is carried forward, and the rest is based on historical exchange rates. Profit and loss accounts are translated at the weighted average exchange rate, and the difference arising from the conversion is included in the "cumulative translation adjustment" as an adjustment item for equity.

(b) All subsidiaries are included in the Group's consolidated financial statements. Subsidiaries are all 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.

(c) 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.

(d) Profit or loss and each component of other comprehensive income are attributed to the owners of the parent and to the non-controlling interests. Total comprehensive income is attributed to

the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

(e) Changes in the Company's shares in subsidiaries do not result in loss in control (transactions with non-controlling interest), transactions shall be considered as equity transactions, which are transactions between owners. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognised directly in equity.

(f) 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:

			Ownership (%)	
Name of investor	Name of the subsidiary	Main business activities	December 31, 2021	December 31, 2020
Applied BioCode Corporation	Applied BioCode, Inc.	Barcoded Magnetic Beads of multiplex in-vitro diagnostics, platform technology of assays and instruments and research and development, production, sales and leasing.	100%	100%
Applied BioCode, Inc.	Applied BioCode Taiwan Ltd.	Barcoded Magnetic Beads of multiplex in-vitro diagnostics, platform technology of assays and instruments and research and development, production and sales of products.	100%	100%

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.

(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 USD, which is the Company's functional and the Group's presentation currency. However, the consolidated financial statements are

presented in NTD under the future financing plan and the regulations of the country where the consolidated financial statements are reported to the regulatory authorities.

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

(a) 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:

i. Assets and liabilities presented in each balance sheet are translated at the closing exchange rate at the date of that balance sheet;

ii. Income and expenses for each statement of comprehensive income are translated at average exchange rates of that period; and

iii. All resulting exchange differences are recognised in other comprehensive income.

(b) When the foreign operation partially disposed of or sold is a subsidiary, cumulative exchange differences that were recorded in other comprehensive income (loss) are proportionately transferred to the non-controlling interest in this foreign operation. In addition, even when the Group retains partial interest in the former foreign subsidiary after losing control of the former foreign subsidiary, such transactions should be accounted for as disposal of all interest in the foreign operation.

(5) Classification of current and non-current items

A. Assets that meet one of the following criteria are classified as current assets; otherwise they are classified as non-current assets:
   (a) Assets 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; and
   (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.

B. Liabilities that meet one of the following criteria are classified as current liabilities; otherwise they are classified as non-current liabilities:
   (a) Liabilities that are expected to be settled within the normal operating cycle;
   (b) Assets held mainly for trading purposes;
   (c) Liabilities that are to be settled within twelve months from the balance sheet date; and
   (d) Liabilities for which the repayment date cannot be deferred unconditionally for at least 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.

(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) Accounts receivable

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

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

(8) Impairment of financial assets

For financial assets at amortised cost including accounts receivable or contract assets that have a significant financing component, lease receivables, loan commitments and financial guarantee contracts, 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.

(9) Derecognition of financial assets

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

(10) Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted-average method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads. The item by item approach is used in applying the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and applicable variable selling expenses.

(11) 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. Property, plant and equipment apply cost model and are depreciated using the straight-line method to allocate their cost over their estimated useful lives. Each part of an item of property, plant, and equipment with a cost that is significant in relation to the total cost of the item must be depreciated separately.
D. The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each financial year-end. 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:

Test equipment	5 years
Machinery and equipment	5 years
Rental assets	5 years
Office equipment	5 years
Leasehold improvements	1~6 year(s)

(12) Leasing arrangements (lessee)－right-of-use assets / lease liabilities

A. Leases are recognised as a right-of-use asset and a corresponding lease liability at the date at which the leased asset is available for use by the Group. For short-term leases or leases of low-value assets, lease payments are recognised as an expense on a straight-line basis over the lease term.

B. Lease liabilities include the net present value of the remaining lease payments at the commencement date, discounted using the incremental borrowing interest rate.

Lease payments are comprised of the following:

(a) Fixed payments, less any lease incentives receivable; and

(b) Amounts expected to be payable by the lessee under residual value guarantees.

The Group subsequently measures the lease liability at amortised cost using the interest method and recognises interest expense over the lease term. The lease liability is remeasured and the amount of remeasurement is recognised as an adjustment to the right-of-use asset when there are changes in the lease term or lease payments and such changes do not arise from contract modifications.

C. At the commencement date, the right-of-use asset is stated at cost comprising the following:

(a) The amount of the initial measurement of lease liability;

(b) Any initial direct costs incurred by the lessee; and

(c) An estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

The right-of-use asset is measured subsequently using the cost model and is depreciated from the commencement date to the earlier of the end of the asset's useful life or the end of the lease term. When the lease liability is remeasured, the amount of remeasurement is recognised as an adjustment to the right-of-use asset.

(13) Intangible assets

A. Computer software

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

B. Patents and patented technologies

Patents acquired by issuing new shares to exchange is recognised based on the fair value at the acquisition date. The fair value is stated based on the appraisal report and is amortized on a straight-line basis over patent's estimated useful of 15 to 17 years.

Other patents are stated at cost and amortised on a straight-line basis over its duration of 6 to 9 years.

(14) 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.

B. The recoverable amounts of intangible assets with an indefinite useful life and intangible assets that have not yet been available for use are evaluated periodically. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount.

(15) Borrowings

A. Borrowings comprise long-term bank borrowings. 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.

B. Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

(16) Accounts payable

A. Accounts payable are liabilities for purchases of raw materials, goods or services and accounts payable are those resulting from operating and non-operating activities.

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

(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) Offsetting financial instruments

Financial assets and liabilities are offset and reported in the net amount 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.

(19) 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 recognized as expenses in that period when the employees render service.

B. Pensions

For the defined contribution plans, the contributions are recognised as pension expense 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' remuneration

Employees' compensation and directors' 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 distributed amounts is accounted for as changes in estimates.

(20) Employee share-based payment

A. 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-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.

B. Restricted stocks

(a) Restricted stocks issued to employees 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.

(b) For restricted stocks where those stocks do not restrict distribution of dividends to employees and employees are not required to return the dividends received if they resign during the vesting period, the Group recognises the fair value of the dividends received by the employees who are expected to resign during the vesting period as compensation cost at the

date of dividends declared.

(c) For restricted stocks where employees do not need to pay to acquire those stocks, if the Group will pay the employees who resign during the vesting period to repurchase the stocks, the Group estimates such payments that will be made and recognises such amounts as compensation cost and liability at the grant date, in accordance with the terms of restricted stocks.

(21) Income taxes

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 tax of Taiwan subsidiary is levied on the unappropriated retained earnings and is recorded as income tax expense in the year the stockholders resolve to retain the earnings.

C. Deferred 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. 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 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 tax asset is realised or the deferred tax liability is settled.

D. Deferred 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 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 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 acquisitions of equipment or technology, 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.

(22) Share capital

A. Common 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 shares that have 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.

(23) Revenue recognition

A. Sales revenue

(a) The Group manufactures and sells test reagents and medical instrument. Revenue is measured at the fair value of the received or receivable from the sale of goods to external customers in the ordinary course of the Group's operating activities after netting the business tax, returns, rebates and discounts. Sales are recognised when control of the products has transferred, being when the products are delivered to the buyer, the buyer has full discretion over the channel and price to sell the products, and there is no unfulfilled obligation that could affect the buyer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the buyer, and either the buyer has accepted the products in accordance with the sales contract, or the Group has objective evidence that all criteria for acceptance have been satisfied.

(b) If the payment (or payable) exceeds the services or goods delivered, a contract liability is recognised.

B. Revenue from licencing intellectual property

The Group entered into contracts with customers to grant licences of patents to the customers. Given the licences are distinct from other promised goods or services in the contract, the Group recognises the revenue from licencing based on the nature of the licences granted. The nature of the Group's promise in granting licences 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 licencing period. In case the abovementioned conditions are not met, the nature of the Group's promise in granting a licence is a promise to provide a right to use the Group's intellectual property and therefore, the revenue is recognised when transferring the licence to a customer at a point in time.

C. Rental revenue

The Group entered into the reagent purchase agreements with clients and provides the medical devices for the customers to use through operating leases. Lease income from operating leases (net of any incentives given to the lessee) is recognised in profit or loss on a straight-line basis over the lease term.

D. Other operating revenue

Other operating revenue from the sale of consumables is recognised when the Group sells a product to the customer. Payment of the transaction price is due when the customer purchases the product.

(24) Government grants

Government grants are recognised at their fair value only when there is reasonable assurance that the Group will comply with any conditions attached to the grants and the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises expenses for the related costs for which the grants are intended to compensate.

(25) Operating segments

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The Group's chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Board of Directors that makes strategic decisions.

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. Such assumptions and estimates have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year. The related information is addressed below:

(1) Critical judgements in applying the Group's accounting policies

None.

(2) Critical accounting estimates and assumptions

None.

6. Details of Significant Accounts

(1) Cash and cash equivalents

	December 31, 2021	December 31, 2020
Checking accounts and demand deposits	$ 460,916	$ 661,164
Time deposits	185,154	186,746
Total	$ 646,070	$ 847,910

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. As of December 31, 2021 and 2020, the interest rate of time deposits were 0.6% and 0.498%, respectively.

(2) Accounts receivable

	December 31, 2021	December 31, 2020
Accounts receivable	$ 71,153	$ 49,559
Less: Allowance for uncollectible accounts	(3,348)	(87)
	$ 67,805	$ 49,472

A. The ageing analysis of accounts receivable that were past due but not impaired is as follows:

	December 31, 2021	December 31, 2020
Not past due	$ 61,774	$ 42,514
Up to 90 days	175	6,938
91 to 180 days	3,065	107
181 to 360 days	5,925	-
Over 360 days	214	-
	$ 71,153	$ 49,559

The above ageing analysis was based on past due date.

B. As of December 31, 2021, and 2020, the balances of receivables from contracts with customers amounted to $71,153, and $49,559, respectively.

(3) Inventories

	December 31, 2021		
	Cost	Allowance for valuation loss	Book value
Raw materials	$ 82,626	($ 13,080)	$ 69,546
Work in process	18,367	-	18,367
Finished goods	13,498	(37)	13,461
	$ 114,491	($ 13,117)	$ 101,374

	December 31, 2020		
	Cost	Allowance for valuation loss	Book value
Raw materials	$ 81,318	($ 5,727)	$ 75,591
Work in process	15,405	-	15,405
Finished goods	15,558	(122)	15,436
	$ 112,281	($ 5,849)	$ 106,432

The cost of inventories recognised as expense for the year:

	Year ended December 31, 2021	Year ended December 31, 2020
Cost of goods sold	$ 117,191	$ 103,851
Loss on scrap	5,882	156
Valuation loss	7,522	1,484
	$ 130,595	$ 105,491

(4) Property, plant and equipment

	Leasehold improvements	Machinery and equipment	Test equipment	Office equipment	Rental assets	Unfinished construction and equipment under acceptance	Total
At January 1, 2021							
Cost	$ 44,365	$ 71,512	$ 4,530	$ 5,667	$ 56,528	$ -	$ 182,602
Accumulated depreciation	(8,789)	(41,876)	(2,283)	(3,139)	(10,305)	-	(66,392)
	$ 35,576	$ 29,636	$ 2,247	$ 2,528	$ 46,223	$ -	$ 116,210
2021							
At January 1	$ 35,576	$ 29,636	$ 2,247	$ 2,528	$ 46,223	$ -	$ 116,210
Additions	3,569	7,891	-	1,154	-	1,019	13,633
Disposals	-	(10)	-	-	-	-	(10)
Transfer (Note)	-	3,548	-	-	14,893	-	18,441
Depreciation charge	(6,974)	(11,904)	(820)	(853)	(12,662)	-	(33,213)
Net exchange differences	(981)	(791)	(21)	(75)	(1,351)	(12)	(3,231)
At December 31	$ 31,190	$ 28,370	$ 1,406	$ 2,754	$ 47,103	$ 1,007	$ 111,830
At December 31, 2021							
Cost	$ 46,708	$ 80,838	$ 4,470	$ 6,652	$ 69,628	$ 1,007	$ 209,303
Accumulated depreciation	(15,518)	(52,468)	(3,064)	(3,898)	(22,525)	-	(97,473)
	$ 31,190	$ 28,370	$ 1,406	$ 2,754	$ 47,103	$ 1,007	$ 111,830

	Leasehold improvements	Machinery and equipment	Test equipment	Office equipment	Rental assets	Total
At January 1, 2020						
Cost	$ 8,420	$ 68,722	$ 3,879	$ 4,557	$ 14,211	$ 99,789
Accumulated depreciation	(7,098)	(34,258)	(1,634)	(2,449)	(2,912)	(48,351)
	$ 1,322	$ 34,464	$ 2,245	$ 2,108	$ 11,299	$ 51,438
2020						
At January 1	$ 1,322	$ 34,464	$ 2,245	$ 2,108	$ 11,299	$ 51,438
Additions	42,023	10,249	-	1,390	-	53,662
Transfer (Note)	-	(3,745)	866	-	44,577	41,698
Depreciation charge	(6,432)	(9,723)	(743)	(841)	(7,791)	(25,530)
Net exchange differences	(1,337)	(1,609)	(121)	(129)	(1,862)	(5,058)
At December 31	$ 35,576	$ 29,636	$ 2,247	$ 2,528	$ 46,223	$ 116,210
At December 31, 2020						
Cost	$ 44,365	$ 71,512	$ 4,530	$ 5,667	$ 56,528	$ 182,602
Accumulated depreciation	(8,789)	(41,876)	(2,283)	(3,139)	(10,305)	(66,392)
	$ 35,576	$ 29,636	$ 2,247	$ 2,528	$ 46,223	$ 116,210

Note: The inventory was transferred to rental assets and machinery and equipment.

(5) Intangible assets

	Patents and patented technologies	Computer software	Total
At January 1, 2021			
Cost	$ 54,010	$ 3,002	$ 57,012
Accumulated amortisation	(37,572)	(2,244)	(39,816)
	$ 16,438	$ 758	$ 17,196
2021			
At January 1	$ 16,438	$ 758	$ 17,196
Additions	-	750	750
Amortisation charge	(3,726)	(342)	(4,068)
Net exchange differences	(429)	(15)	(444)
At December 31	$ 12,283	$ 1,151	$ 13,434
At December 31, 2021			
Cost	$ 52,460	$ 3,673	$ 56,133
Accumulated amortisation	(40,177)	(2,522)	(42,699)
	$ 12,283	$ 1,151	$ 13,434

	Patents and patented technologies	Computer software	Total
At January 1, 2020			
Cost	$ 57,037	$ 2,764	$ 59,801
Accumulated amortisation	(35,673)	(2,154)	(37,827)
	$ 21,364	$ 610	$ 21,974
2020			
At January 1	$ 21,364	$ 610	$ 21,974
Additions	-	374	374
Amortisation charge	(3,933)	(206)	(4,139)
Net exchange differences	(993)	(20)	(1,013)
At December 31	$ 16,438	$ 758	$ 17,196
At December 31, 2020			
Cost	$ 54,010	$ 3,002	$ 57,012
Accumulated amortisation	(37,572)	(2,244)	(39,816)
	$ 16,438	$ 758	$ 17,196

Patents and patented technologies refer to the patents and technologies acquired by the Group for manufacturing and testing of Barcoded Magnetic Beads.

(6) Lease arrangements - lessee

A. The Group leases various assets, including buildings, machinery and equipment. Rental contracts are made for periods of 2 to 7 years. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose covenants other than the restriction to be used as guarantee for borrowing purposes.

B. The carrying amount of right-of-use assets and the depreciation charge are as follows:

	December 31, 2021	December 31, 2020
	Carrying amount	Carrying amount
Buildings	$ 48,499	51,011
Machinery and equipment	2,441	4,298
	$ 50,940	$ 55,309

	Year ended December 31, 2021	Year ended December 31, 2020
	Depreciation expense	Depreciation expense
Buildings	$ 11,924	$ 12,075
Machinery and equipment	1,754	1,851
	$ 13,678	$ 13,926

C. For the years ended December 31, 2021 and 2020, the additions to right-of-use assets were $10,779 and $2,953, respectively.

D. The carrying amount of lease liabilities are as follows:

	December 31, 2021	December 31, 2020
	Carrying amount	Carrying amount
Current	$ 14,195	$ 12,696
Non-current	44,562	48,732
	$ 58,757	$ 61,428

E. Information on profit or loss in relation to lease contracts is as follows:

	Year ended December 31, 2021	Year ended December 31, 2020
Items affecting profit or loss		
Interest expense on lease liabilities	$ 2,870	$ 3,532
Expense on short-term lease contracts	-	191
Expense on leases of low-value assets	18	17

F. For the years ended December 31, 2021 and 2020, the Group's total cash outflow for leases were $18,414 and $15,893, respectively.

G. Extension options

(a) Extension options are included in the Group's lease contracts pertaining to offices and plants. These terms and conditions aim to maximise optional flexibility in terms of managing contracts.

(b) In determining the lease term, the Group takes into consideration all facts and circumstances that create an economic incentive to exercise an extension option. The assessment of lease period is reviewed if a significant event occurs which affects the assessment.

(7) Leasing arrangements - lessor

A. The Group leases various assets including machinery and equipment. Rental contracts are typically made for a period of 3 years. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions.

B. Gain arising from operating lease agreements for the years ended December 31, 2021 and 2020 are as follows:

	Year ended December 31, 2021	Year ended December 31, 2020
Rental revenue	$ 10,068	$ 11,677
Rental revenue from variable lease payments	1,596	3,384
	$ 11,664	$ 15,061

C. The Group's rental revenue from operating leases were based on the sales amount of reagent during the contract period, which is a variable lease payment.

(8) Other payables

	December 31, 2021	December 31, 2020
Accrued salaries and bonus	$ 18,790	$ 20,388
Accrued professional service fee	6,179	4,386
Accrued tax	4,175	82
Accrued research and development expenses	1,143	5,524
Payables for equipment	153	2,038
Others	3,794	3,088
	$ 34,234	$ 35,506

(9) Long-term borrowings

A. As of December 31, 2021 and 2020, there were no long-term borrowings.

B. For the years ended December 31, 2021 and 2020, the Group recognised interest expense arising from long-term borrowings amounting to $0 and $0, respectively.

C. Paycheck Protection Program (PPP)

(a) The US subsidiary, Applied BioCode, Inc., obtained a loan from CTBC BANK CORP. (USA) in accordance with Paycheck Protection Program (PPP) amounting to US$949,077 with a contract period from April 21, 2021 to April 21, 2022. Interest will continue to accrue during the deferment period calculated on the unpaid principal balance using a taxed rate of 1.00% based on a simple interest method.

(b) In accordance with the loan contract, the loan will be repaid in 18 installments starting from 6 months after first disbursement of the loan. If the loan proceeds is used for operations, such as salary, rental and other expenses, which meets the regulations specified in PPP, it can be forgiven through submitting an application to the Small Business Administration (SBA). In accordance with the P.L. 116-142 of supplementary provisions of the Paycheck Protection Flexibility Act of 2020, the start date and repayment date of the principal and interest will be postponed to the date that the loan forgiveness is approved by the SBA. The Group obtained the approval of forgiveness from the SBA and settled the PPP loan and related interests and has recognized the PPP loan forgiveness revenue in the amount of $28,062 in November 2020.

(10) Share-based payment

A. As of December 31, 2021, the Group's share-based payment arrangements were as follows:

Type of arrangement	Grant date	Quantity granted	Contract period	Vesting conditions
Employee stock options	2014/01/14	80,000	10 years	4 years' service; Description (b)
	2014/06/16	100,000	10 years	4 years' service; Description (g)
	2014/09/26	70,000	10 years	0 to 4 years' service; Description (a)(b)
	2015/03/20	26,500	10 years	0 to 4 years' service; Description (a)(b)(e)
	2015/06/26	60,000	10 years	0 to 4 years' service; Description (a)(b)(e)
	2015/10/16	47,400	10 years	0 to 4 years' service; Description (a)(b)(c)(d)
	2016/02/29	211,700	10 years	1 to 4 years' service; Description (b)(e)
	2016/06/08	112,800	10 years	0 to 4 years' service; Description (a)(b)
	2016/09/18	13,100	10 years	0 to 4 years' service; Description (a)(b)
	2016/09/29	20,000	10 years	0 to 4 years' service; Description (a)(b)
	2016/11/02	7,000	10 years	0 to 4 years' service; Description (a)(b)
	2018/07/02	215,000	10 years	2 to 4 years' service; Description (j)
	2018/09/28	172,000	10 years	2 to 4 years' service; Description (j)
	2018/12/11	51,000	10 years	2 to 4 years' service; Description (j)
	2019/04/11	26,500	10 years	2 to 4 years' service; Description (j)
	2020/07/21	347,360	10 years	2 to 4 years' service; Description (j)
	2020/08/11	72,000	10 years	2 to 4 years' service; Description (j)
	2021/01/05	25,500	10 years	2 to 4 years' service; Description (j)
	2021/03/18	10,500	10 years	2 to 4 years' service; Description (j)
	2021/05/14	331,800	10 years	2 to 4 years' service; Description (j)
	2021/09/06	34,500	10 years	2 to 4 years' service; Description (j)
	2021/11/08	83,500	10 years	2 to 4 years' service; Description (j)

Type of arrangement	Grant date	Quantity granted	Contract period	Vesting conditions
Restricted stocks to employees (Note)	2012/01/21	224,500	10 years	0 to 4 years' service; Description (a)(b)(c)(e)
	2013/06/21	804,000	10 years	4 years' service; Description (b)(g)
	2013/11/03	12,000	10 years	4 years' service; Description (b)
	2014/01/14	116,000	10 years	4 years' service; Description (b)
	2014/06/16	33,500	10 years	0 to 4 years' service; Description (a)(b)(g)
	2014/09/26	33,000	10 years	0 to 4 years' service; Description (a)(b)(e)(f)
	2018/06/01	167,000	2 years	1 to 2 years' service; Description (i)
	2018/06/15	161,000	1 year	Description (h)
	2018/12/20	20,000	2 years	1 to 2 years' service; Description (i)

Type of arrangement	Grant date	Quantity granted	Contract period	Vesting conditions
Cash capital increase reserved for employee preemption	2020/05/11	399,857	Not applicable	Vested immediately

The fair value of the abovementioned restricted stocks to employees were measured based on the 30 business days average transaction price of the Group's stocks.

Description:

(a) Vested immediately.

(b) 25% of options were vested after the employee renders one-year service, then the option was vested one of forty-eighth options every month.

(c) Vested one of twenty-fourth options every month based on straight-line method.

(d) Vested one-sixth options every month based on straight-line method.

(e) Vested one-twelfth options every month based on straight-line method.

(f) Vested one-third options every month based on straight-line method.

(g) Vested one of forty-eighth options every month based on straight-line method.

(h) 100% of options vested immediately whilst the Group's multiplex diagnostic testing products, 17-Plex Gastrointestinal Pathogen Panel 1, and instruments successfully obtained FDA510K approval.

(i) 50% of options vested whilst the condition of one-year service is fulfilled, and subsequently vested 50% of options whilst the condition of two-year service is fulfilled.

(j) 50% of options vested at the date that the option holder had two-year service, and the option holder is subsequently granted 25% (1/4) every year.

(Note) The restricted stocks issued by the Group cannot be transferred during the vesting period, but voting right and dividend right are not restricted on these stocks. Employees are required to return the stocks but not required to return the dividends received if they resign during the vesting period. On November 15, 2016, the Group issued new shares through the transfer of capital surplus, and each share of common stock as well as the unvested restricted stocks to employees had been distributed an additional 0.4 share of common stock.

The share-based payment arrangements above are settled by equity.

B. Details of the share-based payment arrangements are as follows:

	2021	
	No. of options	Weighted-average exercise price (in dollars)
Options outstanding at January 1	992,473	$ 43.25
Options granted	485,800	46.40
Options forfeited	(160,310)	75.13
Options exercised	(90,220)	14.83
Options outstanding at December 31	1,227,743	42.92
Options exercisable at December 31	394,468	20.69

	2020	
	No. of options	Weighted-average exercise price (in dollars)
Options outstanding at January 1	972,027	$ 22.18
Options granted	419,360	89.93
Options forfeited	(95,366)	58.88
Options exercised	(303,548)	10.32
Options outstanding at December 31	992,473	43.25
Options exercisable at December 31	418,563	13.68

(Note) The employee stock options issued by the Group cannot be transferred during the vesting period. On November 15, 2016, the Group issued new shares through the transfer of capital surplus and each share of common stock had been distributed an additional 0.4 share of common stock, and the exercise price of the outstanding employee stock options which were not exercised before November 15, 2016 had been adjusted accordingly.

C. As of December 31, 2021 and 2020, the ranges of exercise prices of stock options outstanding were $11.21～$101 (in dollars) and $11.83～$101 (in dollars), respectively; the weighted-average remaining contractual periods were 6.79 years and 6.59 years, respectively.

D. Aside from restricted stocks to employees, the fair value of stock options granted on grant date is measured using the Black-Scholes option-pricing model. Relevant information is as follows:

Type of arrangement	Grant date	Stock price (in dollars)	Exercise price (in dollars)	Expected price volatility	Expected option life	Expected dividends	Risk-free interest rate	Fair value per unit (in dollars)
Cash capital increase reserved for employee preemption	2020/05/11	$65.73	$48.00	-	0.00 year	0%	0.56%	$17.73
Employee share options	2020/07/21	$98.30	$98.30	57.87%	6.37 years	0%	0.39%	$53.14
Employee share options	2020/08/11	$101	$101	57.87%	6.37 years	0%	0.39%	$55.38
Employee share options	2021/01/05	57.20	57.20	59.97%	6.37 years	0%	0.57%	$31.97
Employee share options	2021/03/18	48.45	49.81	60.02%	6.37 years	0%	1.20%	$27.23
Employee share options	2021/05/14	50.00	50.00	59.91%	6.37 years	0%	1.14%	$28.33
Employee share options	2021/09/06	37.85	37.85	58.86%	6.37 years	0%	0.99%	$21.07
Employee share options	2021/11/08	31.90	31.90	58.31%	6.37 years	0%	1.30%	$17.77

E. Expenses incurred on share-based payment transactions are shown below:

	Year ended December 31, 2021	Year ended December 31, 2020
Equity-settled	$ 8,565	$ 13,533

(11) Pensions

Defined contribution plan

A. The Company's subsidiary, Applied BioCode, Inc., provides a 401(K) retirement plan, which is a defined contribution plan. Under the plan, the employees contribute an amount based on a certain percentage of the employees' salaries and wages to the employees' individual pension accounts, and Applied BioCode, Inc. also contributes an amount as pension expense to the employees' individual pension accounts accordingly. For the years ended December 31, 2021 and 2020, the pension contributed to the employees' individual pension accounts by Applied BioCode, Inc. accordingly amounted to $4,625 and $4,712, respectively.

B. The Company's subsidiary, Applied BioCode Taiwan Ltd., has 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 subsidiary contributes 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. For the years ended December 31, 2021 and 2020, the Group recognised pension cost of $869 and $808, respectively.

(12) Share capital

As of December 31, 2021, the Company's authorised capital was $900,000, consisting of 90,000 thousand shares, and the paid-in capital was $817,292 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 common shares outstanding are as follows:

	2021	2020
	No. of shares (in thousands)	No. of shares (in thousands)
At January 1	81,639	72,285
Employee stock options exercised	90	304
Cash capital increase	-	9,050
At December 31	81,729	81,639

A. The Board of Directors approved the proposal of IPO application through TWSE and the capital infusion on December 17, 2019. The Company planned to issue 9,050 thousand new shares with a par value of $10 (in dollars) per share before IPO application. The tentative subscription price per share was $38 and the total issuance amount was $343,900. The Company then submitted the IPO application through TWSE on December 24, 2019 and obtained the approval by the authorities on March 12, 2020.

B. In June 2020, the Company issued 9,050 thousand shares of new common shares and received total proceeds of $709,409 which included the shares sold through auction at an average price of $90.21 (in dollars) per share and the shares sold at the underwriting public price of $48 (in dollars) per share.

(13) Capital surplus

A. Pursuant to the Company's Articles of Incorporation, 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.

	2021				
	Share premium	Employee restricted shares	Employee stock options	Donated assets	Total
At January 1	$ 1,369,117	$ 14,419	$ 10,050	$ 1,097	$ 1,394,683
Compensation cost of employee stock options	-	-	8,565	-	8,565
Employee stock options exercised	1,226	-	(790)	-	436
Capital surplus used to offset accumulated deficits	(1,052,108)	-	-	-	(1,052,108)
At December 31	$ 318,235	$ 14,419	$ 17,825	$ 1,097	$ 351,576

	2020				
	Share premium	Employee restricted shares	Employee stock options	Donated assets	Total
At January 1	$ 747,463	$ 14,419	$ 7,941	$ 1,097	$ 770,920
Compensation cost of employee stock options	-	-	12,702	-	12,702
Employee stock options exercised	10,658	-	(10,578)	-	80
Options forfeited or expired	15	-	(15)	-	-
Cash capital increase	610,981	-	-	-	610,981
At December 31	$ 1,369,117	$ 14,419	$ 10,050	$ 1,097	$1,394,683

The Company used capital surplus to offset the beginning accumulated deficits amounting to $1,052,108 thousand as resolved at the shareholders' meeting on July 5, 2021. After the offset, there was no beginning balance of accumulated deficits to be covered.

(14) Retained earnings/Accumulated deficit

A. Under the Company's Articles of Incorporation, 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, and setting aside special reserve in accordance with related laws or a resolution made by the Board of Directors. The remainder, if any, shall set aside no more than 12% as compensation to employee, and no more than 3% as remuneration for the directors. The remainder, if any, to be retained or to be appropriated shall be resolved by the

shareholders. The dividend distribution amount shall not be less than 10 percent of the remaining distributable amount. The Company's dividends may be paid in cash or shares.

B. In determining the Company's dividend policy, the Board recognizes that the Company is in the growth stage. In determining the amount, if any, of the dividend or other distribution it recommends to Board members for approval in any financial year, the Board may take into consideration the earnings of the Company, overall development, financial planning, capital needs, industry outlook and future prospects of the Company in the relevant financial year.

C. Legal reserve shall be used to cover the Company's accumulated deficit or issue new shares or cash to shareholders in proportion to their share ownership.

(15) Other equity

	2021		
	Foreign currency translation	Unearned employees' compensation	Total
At January 1	($ 71,738)	($ 232)	($ 71,970)
Group foreign currency translation	(28,742)	-	(28,742)
At December 31	($ 100,480)	($ 232)	($ 100,712)

	2020		
	Foreign currency translation	Unearned employees' compensation	Total
At January 1	($ 13,449)	($ 1,063)	($ 14,512)
Compensation costs of employee restricted stocks	-	831	831
Group foreign currency translation	(58,289)	-	(58,289)
At December 31	($ 71,738)	($ 232)	($ 71,970)

(16) Operating revenue

A. Disaggregation of revenue from contracts with customers

	Year ended December 31, 2021	Year ended December 31, 2020
Sales revenue	$ 288,411	$ 266,089
Rental revenue	11,664	15,061
Royalty revenue	2,012	1,676
Other operating revenue	17,875	16,189
	$ 319,962	$ 299,015

B. Contract liabilities

(a) The Group has recognised the following revenue-related contract liabilities:

	December 31, 2021	December 31, 2020	January 1, 2020
Current contract liabilities :			
Technology royalties	$ 1,653	$ 1,615	$ 1,323
Product selling	334	344	-
	$ 1,987	$ 1,959	$ 1,323
Non-current contract liabilities :			
Technology royalties	7,988	9,092	7,175
	$ 7,988	$ 9,092	$ 7,175

(b) Revenue recognised that was included in the contract liability balance at the beginning of the periods is as follows:

	Year ended December 31, 2021	Year ended December 31, 2020
Revenue from contracts with customers :		
Revenue from technology royalties	$ 1,609	$ 1,676
Sales revenue	-	1,122
	$ 1,609	$ 2,798

(17) Interest income

	Year ended December 31, 2021	Year ended December 31, 2020
Interest income from bank deposits	$ 3,111	$ 3,732

(18) Other gains and losses

	Year ended December 31, 2021	Year ended December 31, 2020
Losses on disposals of property, plant and equipment	($ 10)	$ -
Foreign exchange (losses) gains	(1)	3,805
PPP loan forgiveness revenue	-	28,062
Other losses	(463)	(1,244)
	($ 474)	$ 30,623

(19) Finance costs

	Year ended December 31, 2021	Year ended December 31, 2020
Interest expense from lease liabilities	$ 2,870	$ 3,532
Interest expense from bank borrowings	-	781
	$ 2,870	$ 4,313

(20) Expenses by nature

	Year ended December 31, 2021		
	Operating costs	Operating expenses	Total
Raw materials and supplies and manufacturing cost	$ 86,570	$ -	$ 86,570
Employee benefit expense	$ 28,023	$ 208,195	$ 236,218
Depreciation charges	$ 16,002	$ 30,889	$ 46,891
Amortisation charges	$ -	$ 4,068	$ 4,068

	Year ended December 31, 2020		
	Operating costs	Operating expenses	Total
Raw materials and supplies and manufacturing cost	$ 68,178	$ -	$ 68,178
Employee benefit expense	$ 28,066	$ 202,746	$ 230,812
Depreciation charges	$ 9,247	$ 30,209	$ 39,456
Amortisation charges	$ -	$ 4,139	$ 4,139

(21) Employee benefit expense

	Year ended December 31, 2021		
	Operating costs	Operating expenses	Total
Wages and salaries	$ 24,806	$ 164,178	$ 188,984
Labour and health insurance fees	829	11,408	12,237
Pension costs	612	4,882	5,494
Other personnel expenses	1,776	27,727	29,503
	$ 28,023	$ 208,195	$ 236,218

	Year ended December 31, 2020		
	Operating costs	Operating expenses	Total
Wages and salaries	$ 24,668	$ 167,673	$ 192,341
Labour and health insurance fees	995	10,622	11,617
Pension costs	555	4,965	5,520
Other personnel expenses	1,848	19,486	21,334
	$ 28,066	$ 202,746	$ 230,812

(22) Income taxes

A. Components of income tax expense:

	Year ended December 31, 2021	Year ended December 31, 2020
Current tax:		
Current tax on profits for the year	$ 23	$ 24
Income tax expense	$ 23	$ 24

B. Reconciliation between income tax expense and accounting profit (loss)

	Year ended December 31, 2021	Year ended December 31, 2020
Tax calculated based on loss before tax and statutory tax rate	($ 46,066)	($ 29,133)
Expenses disallowed by tax regulation	-	57
Origination and reversal of temporary differences	8,103	7,459
Taxable loss not recognised as deferred tax assets	35,050	20,413
Effect from Alternative Minimum Tax	23	24
Permanent differences	2,368	11
Effect of different tax rates in countries in which the Group operates	545	1,193
Income tax expense	$ 23	$ 24

C. Amounts of deferred tax assets or liabilities as a result of temporary differences, tax losses and investment tax credits are as follows:

	2021			
	January 1	Recognised in profit or loss	Translation differences	December 31
Deferred tax assets:				
-Temporary differences:				
Tax losses	$ 4,600	($ 1,384)	$ 297	$ 3,513
	$ 4,600	($ 1,384)	$ 297	$ 3,513
Deferred tax liabilities:				
Book-tax difference on intangible assets	($ 4,600)	$ 1,107	$ 119	($ 3,374)
Book-tax difference on fixed assets	-	227	(416)	(139)
	($ 4,600)	$ 1,384	($ 297)	($ 3,513)
	$ -	$ -	$ -	$ -

	2020			
	January 1	Recognised in profit or loss	Translation differences	December 31
Deferred tax assets:				
-Temporary differences:				
Tax losses	$ 5,979	($ 1,101)	($ 278)	$ 4,600
	$ 5,979	($ 1,101)	($ 278)	$ 4,600
Deferred tax liabilities:				
Book-tax difference on intangible assets	($ 5,979)	$ 1,101	$ 278	($ 4,600)
Book-tax difference on fixed assets	-	-	-	-
	($ 5,979)	$ 1,101	$ 278	($ 4,600)
	$ -	$ -	$ -	$ -

D. Details of the amount the Group is entitled as investment tax credit and unrecognised deferred tax assets are as follows:

December 31, 2021			
Qualifying items	Unused tax credits	Unrecognised deferred tax assets	Expiry year
General Business Credits－Federal tax	$31,205	$31,205	2029~2040

December 31, 2020			
Qualifying items	Unused tax credits	Unrecognised deferred tax assets	Expiry year
General Business Credits－Federal tax	$36,178	$36,178	2029~2040

E. Expiration years of unused loss carryforward and amounts of unrecognised deferred tax assets are as follows:

U.S. Federal tax

December 31, 2021				
Year incurred	Amount filed / assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2021	$118,989	$118,989	$118,989	No deduction limitation
2020	65,449	65,449	65,449	"
2019	268,836	268,836	268,836	"
2018	258,833	258,833	258,833	"
2017	213,166	213,166	213,166	2037
2016	179,700	179,700	179,700	2036
2015	193,557	193,557	193,557	2035
2014	144,284	144,284	144,284	2034
2013	76,859	76,859	76,859	2033
2012	25,910	25,910	25,910	2032
2011	16,205	16,205	16,205	2031
2010	21,927	21,927	21,927	2030
2009	20,941	20,941	20,941	2029
2008	5,815	5,815	2,198	2028

California State tax

December 31, 2021				
Year incurred	Amount filed / assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2021	$125,023	$125,023	$125,023	2041
2020	84,608	84,608	84,608	2040
2019	221,257	221,257	221,257	2039
2018	224,214	224,214	224,214	2038
2017	190,090	190,090	190,090	2037
2016	171,732	171,732	171,732	2036
2015	195,061	195,061	195,061	2035
2014	143,987	143,987	143,987	2034
2013	19,672	19,672	19,672	2033
2012	53,843	53,843	53,843	2032
2011	25,815	25,815	25,815	2031
2010	15,226	15,226	15,226	2030
2009	22,022	22,022	18,405	2029

U.S. Federal tax

December 31, 2020				
Year incurred	Amount filed / assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2020	$ 74,445	$ 74,445	$ 74,445	No deduction limitation
2019	275,036	275,036	275,036	"
2018	273,342	273,342	273,342	"
2017	225,115	225,115	225,115	2037
2016	189,773	189,773	189,773	2036
2015	204,407	204,407	204,407	2035
2014	152,372	152,372	152,372	2034
2013	81,167	81,167	81,167	2033
2012	27,362	27,362	27,362	2032
2011	17,113	17,113	17,113	2031
2010	23,156	23,156	23,156	2030
2009	22,115	22,115	22,115	2029
2008	6,141	6,141	1,283	2028

California State tax

December 31, 2020				
Year incurred	Amount filed / assessed	Unused amount	Unrecognised deferred tax assets	Expiry year
2020	$ 84,629	$ 84,629	$ 84,629	No deduction limitation
2019	253,666	253,666	253,666	"
2018	269,274	269,274	269,274	"
2017	225,855	225,855	225,855	2037
2016	200,990	200,990	200,990	2036
2015	205,995	205,995	205,995	2035
2014	152,058	152,058	152,058	2034
2013	20,775	20,775	20,775	2033
2012	56,861	56,861	56,861	2032
2011	27,262	27,262	27,262	2031
2010	16,079	16,079	16,079	2030
2009	23,257	23,257	23,257	2029
2008	21,660	21,660	16,802	2028
2009	23,257	23,257	23,257	2029
2008	21,660	21,660	16,802	2028

F. The amounts of deductible temporary differences that were not recognised as deferred tax assets are as follows:

	December 31, 2021	December 31, 2020
Deductible temporary differences	$ 111,722	$ 108,002

(23) Loss per share

	Year ended December 31, 2021		
	Amount after tax	Weighted average number of ordinary shares outstanding (share in thousands)	Loss per share (in dollars)
Basic (diluted) loss per share			
Loss attributable to ordinary shareholders of the Company	($ 165,199)	81,701	($ 2.02)

	Year ended December 31, 2020		
	Amount after tax	Weighted average number of ordinary shares outstanding (share in thousands)	Loss per share (in dollars)
Basic (diluted) loss per share			
Loss attributable to ordinary shareholders of the Company	($ 103,496)	77,570	($ 1.33)

Note: Outstanding options and warrants as of December 31, 2021 and 2020 will reverse diluted loss per share if full conversion is assumed; therefore, options and warrants were excluded from diluted loss per share calculation.

(24) Supplemental cash flow information

Investing activities with partial cash payments：

	Year ended December 31, 2021	Year ended December 31, 2020
Purchase of property, plant and equipment	$ 13,633	$ 53,662
Add: Ending balance of prepayments for equipment	-	-
Add: Opening balance of payables for equipment	2,038	-
Less: Opening balance of prepayments for equipment	-	(24,044)
Less: Ending balance of payables for equipment	(153)	(2,038)
Cash paid during the year	$ 15,518	$ 27,580

(25) Changes in liabilities from financing activities

	2021	
	Lease liabilities	Liabilities from financing activities - gross
At January 1	$ 61,428	$ 61,428
Changes in cash flow from financing activities	(15,526)	(15,526)
Payment of interest expenses	(2,870)	(2,870)
Amortisation of interest expenses	2,870	2,870
Increase in lease principal	10,779	10,779
Net foreign exchange differences	2,076	2,076
At December 31	$ 58,757	$ 58,757

	2020			
	Short-term borrowings	Lease liabilities	Long-term borrowings	Liabilities from financing activities - gross
At January 1	$ 60,212	$ 74,485	$ -	$ 134,697
Changes in cash flow from financing activities	(60,212)	(15,685)	28,062	(47,835)
PPP loan forgiveness revenue	-	-	(28,062)	(28,062)
Amortisation of interest expenses	-	3,532	-	3,532
Increase in lease principal	-	2,953	-	2,953
Net foreign exchange differences	-	(3,857)	-	(3,857)
At December 31	$ -	$ 61,428	$ -	$ 61,428

7. RELATED PARTY TRANSACTIONS

Key management compensation

	Year ended December 31, 2021	Year ended December 31, 2020
Salaries and short-term employee benefits	$ 67,083	$ 64,145
Share-based payment	2,733	4,370
	$ 69,816	$ 68,515

8. Pledged Assets

A. The Group's assets pledged as collateral are as follows:

Pledged asset	Book value		Purpose
	December 31, 2021	December 31, 2020	
Restricted asset (other non-current assets)	$ 5,657	$ 5,702	Performane guarantee
Restricted asset (other current assets, others)	-	7,202	Performane guarantee
	$ 5,657	$ 12,904	

B. The Company's US subsidiary, Applied BioCode Inc., entered into a lease agreement for the new plant and office on March 21, 2020. In accordance with the lease agreement, CTBC Bank Corp. (USA) issued a standby letter of credit to the lessor as a performance guarantee. As of December 31, 2021 and 2020, the balance of standby letter of credit amounted to US$204 thousand and US$200 thousand, respectively.

C. On April 30, 2020, the Company repaid the borrowings obtained from CTBC Bank Corp. (USA) amounting to US$2,500 thousand on June 22, 2018 and cancelled the guarantee for credit line of all assets (including tangible and intangible assets) based on the loan agreement.

9. Significant Contingent Liabilities and Unrecognised Contract Commitments

(1) Contingencies

None.

(2) Commitments

None.

10. Significant Disaster Loss

None.

11. Significant Events after the Balance Sheet Date

None.

12. Others

(1) Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

(2) Financial instruments

A. Financial instruments by category

	December 31, 2021	December 31, 2020
Financial assets		
Financial assets at amortised cost		
Cash and cash equivalents	$ 646,070	$ 847,910
Accounts receivable	67,805	49,472
Other receivables	-	5,388
Other current assets, others	-	7,202
Guarantee deposits paid	12,804	12,829
	$ 726,679	$ 922,801
Financial liabilities		
Financial liabilities at amortised cost		
Accounts payable	$ 9,428	$ 27,602
Other accounts payable	34,234	35,506
	$ 43,662	$ 63,108
Lease liability	$ 58,757	$ 61,428

B. Financial risk management policies

(a) The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk), credit risk and liquidity risk. The Group's overall risk management policies focuses on the unpredictable events in the financial market and seeks to reduce the 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 management. Group treasury identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

C. Significant financial risks and degrees of financial risks

(a) Market risk

i. Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from the transactions of the Company and its subsidiaries used in various function currency, primarily with respect to the USD and NTD. Foreign exchange risk arises from future commercial transactions and recognised assets and liabilities and net investments in foreign operations.

ii. Cash flow and fair value interest rate risk

The Group's main interest rate risk arises from long-term borrowings with variable interest rates, which expose the Group to cash flow interest rate risk. During 2021 and 2020, the

Group's borrowings at variable interest rate were mainly denominated in US Dollars.

(i) Deposits issued at variable interest rates expose the Group to cash flow interest rate risk, part of which is offset by cash and cash equivalents held at variable interest rates. Time deposits issued at fixed interest rates expose the Group to the risk of changes in fair value.

(ii) The Group's borrowings are measured at amortised cost. The borrowings are periodically contractually repriced and to that extent are also exposed to the risk of future changes in market interest rates.

(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.

ii. According to the Group's credit policy, the Group is responsible for managing and analysing the credit risk for 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 management. The utilisation of credit limits is regularly monitored.

iii. The Group adopts the assumptions under IFRS 9, the default occurs when the contract payments are past due over 360 days.

iv. The Group adopts following assumption under IFRS 9 to assess whether there has been a significant increase in credit risk on that instrument since initial recognition:
If the contract payments were past due over 90 days based on the terms, there has been a significant increase in credit risk on that instrument since initial recognition.

v. The Group classifies customers' accounts receivable in accordance with credit rating of customer and historical default. The Group applies the modified approach based on the loss rate methodology to estimate expect credit loss.

vi. The Group used the forecast ability to adjust historical and timely information to assess the default possibility of accounts receivable. On December 31, 2021 and 2020, the loss rate methodology is as follows:

	Not past due	Up to 90 days past due	91 to 180 days past due	181 to 360 days past due	Over 360 days past due	Total
December 31, 2021						
Expected loss rate	0%	0%	5%	50%	100%	
Total book value	$ 61,774	$ 175	$ 3,065	$ 5,925	$ 214	$71,153
Loss allowance	$ -	$ -	$ 153	$ 2,981	$ 214	$ 3,348
December 31, 2020						
Expected loss rate	0.03%	0.03%	100%	100%	100%	
Total book value	$ 42,514	$ 6,938	$ 107	$ -	$ -	$49,559
Loss allowance	$ -	$ -	$ 87	$ -	$ -	$ 87

vii. Movements in relation to the Group applying the modified approach to provide loss allowance for accounts receivable are as follows:

	2021	2020
	Accounts receivable	Accounts receivable
At January 1	$ 87	$ -
Provision for impairment	5,668	91
Write-offs	(2,367)	-
Net exchange differences	(40)	(4)
At December 31	$ 3,348	$ 87

For provisioned loss in 2021 and 2020, the impairment losses arising from customers' contracts are $5,668 and $91, respectively.

(c) Liquidity risk

i. Cash flow forecasting is performed in the operating entities of the Group and aggregated by Group treasury. Group treasury monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs.

ii. 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. The amounts disclosed in the table are the contractual undiscounted cash flows.

Non-derivative financial liabilities

December 31, 2021	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Accounts payable	$ 9,428	$ -	$ -	$ -	$ -
Other payables	34,234	-	-	-	-
Lease liability	4,144	12,594	16,019	32,963	-
Total	$ 47,806	$ 12,594	$ 16,019	$ 32,963	$ -

December 31, 2020	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Accounts payable	$ 27,602	$ -	$ -	$ -	$ -
Other payables	35,506	-	-	-	-
Lease liability	3,834	11,622	13,662	41,976	-
Total	$ 66,942	$ 11,622	$ 13,662	$ 41,976	$ -

(3) Others

The SARS-Cov-2 reagent developed by the Group was authorized by the U.S. FDA under EUA on June 16, 2020 and has been shipped starting July 2020. This reagent combined with the Group's 20-Plex Respiratory Infection Panel reagent have contributed to the Group's revenue in the second half of 2020 and reduced the overall operational risks caused by the Covid-19 pandemic.

However, after the increase in vaccination coverage in 2021, the Group's sales of SARS-Cov-2 Direct Test Reagent has slowed down since the second half of 2021. In addition, the purchase volume of other products, such as Barcoded Magnetic Beads (BMB), Instruments and other Reagents (17-Plex Gastrointestinal Pathogen Panel and 20-Plex Respiratory Infection Panel), have gradually increased due to the slowdown of the pandemic. The operating revenue in 2021 has increased compared to 2020. Thus, the pandemic had no significant impact on the Group's ability to continue as a going concern, impairment of assets and financing risks for the current year based on the assessment.

13. Supplementary Disclosures

(1) 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): None.

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 period: None.

J. Significant inter-company transactions during the reporting period: None.

(2) Inform action on investees

Names, locations and other information of investee companies (not including investees in Mainland China): Please refer to table 1.

(3) Inform action on investments in Mainland China

None.

(4) Major shareholders information

Please refer to table 2.

14. Segment Information

(1) General information

The core business of the Group is the research and development of multiplexing testing platform technologies, as well as the development, production, sales and authorization of Barcoded Magnetic Beads, optical scanner and reagents, etc. The Group operates business only in a single industry. The Board of Directors who allocates resources and assesses performance of the Group as a whole, has identified that the Group has only one reportable operating segment.

(2) Measurement of segment information

The accounting policies of the Group's operating segment are the same as the summary description of the significant accounting policies described in the notes to the consolidated financial statements. The profit and loss of the operating segment is measured by the after-tax profit and loss and used as the basis for evaluating the performance of the operating segment.

(3) Information about segment profit or loss

The Group is a single reportable segment, and therefore, the reportable information is the same as the financial statements.

(4) Reconciliation for segment income (loss)

The segment's net operating loss reported by the Group to the chief operating decision-maker is measured in a manner consistent with the revenue and expense that in the consolidated income statement. Therefore, the reconciliation for the net operating loss are the same as the consolidated statement of comprehensive income.

(5) Information on products and services

	Year ended December 31, 2021	Year ended December 31, 2020
Sales revenue	$ 288,411	$ 266,089
Rental revenue	11,664	15,061
Royalty revenue	2,012	1,676
Other operating revenue	17,875	16,189
	$ 319,962	$ 299,015

(6) Geographical information

The Group's geographical revenue is classified based on the geographic location of customers, while geographical non-current assets are classified based on the geographic location of assets. The geographical information for 2021 and 2020 are as follows:

	Year ended December 31, 2021		Year ended December 31, 2021	
	Revenue	Non-current assets	Revenue	Non-current assets
USA	$ 294,599	$ 168,657	$ 276,057	$ 195,902
China	25,048	-	22,645	-
Taiwan	197	7,546	156	5,642
Others	118	-	157	-
Total	$ 319,962	$ 176,203	$ 299,015	$ 201,544

(7) Major customer information

	Year ended December 31, 2021	Year ended December 31, 2020
	Revenue	Revenue
I Company	$ 137,845	$ 49,719
P Company	48,191	89,442
Q Company	33,371	29,634

Applied BioCode Corporation and Subsidiaries

Information on investees

Year ended December 31, 2021

Table 1

Expressed in thousands of NTD

(Except as otherwise indicated)

Investor	Investee	Location	Main business activities	Initial investment amount		Shares held as at December 31, 2021			Net loss of the investee for the year ended December 31, 2021	Investment loss recognized by the Company for the year ended December 31, 2021	Footnote
				Balance as at December 31, 2021	Balance as at December 31, 2020	Number of shares	Ownership (%)	Book value			
Applied BioCode, Corporation	Applied BioCode, Inc.	USA	Barcoded Magnetic Beads of multiplex in-vitro diagnostics, platform technology of assays and instruments and research and development, production, sales and leasing.	$ 1,598,105	$ 1,598,105	43,140	100%	$ 472,450	($ 141,340)	($ 141,340)	Subsidiary
Applied BioCode, Inc.	Applied BioCode Taiwan Ltd.	Taiwan	Barcoded Magnetic Beads of multiplex in-vitro diagnostics, platform technology of assays and instruments and research and development, production and sales of products.	$ 88,850	$ 75,350	8,885	100%	$ 31,942	($ 6,821)	($ 6,821)	Second-tier subsidiary

Applied BioCode Corporation and Subsidiaries
Information of major stockholders
Year ended December 31, 2021

Table 2

Name of major stockholders	Number of stock held	Ownership (%)
Maxwell Sensors Incorporation	8,307,042	10.16%
Fu Long-Xu	6,854,723	8.39%
Custody account of GRC SinoGreen Fund entrusted under Bank SinoPac.	4,169,131	5.10%

Note : If company applies Taiwan Depository & Clearing Corporation for the information of the table, the following can be explained in the notes of the table.

(a) The major shareholders' information was derived from the data using the Company issued common shares (including treasury shares) and preference shares in dematerialised form which were registered and held by the shareholders above 5% on the last operating date of each quarter and was calculated by Taiwan Depository & Clearing Corporation. The share capital which was recorded on the financial statements may differ from the actual number of shares in dematerialised form due to the difference of calculation basis.

(b) If the aforementioned data contains shares which were kept in the trust by the shareholders, the data was disclosed as a separate account of the client which was set by the trustee. As for the shareholder who reports share equity as an insider whose shareholding ratio was greater than 10% in accordance with Securities and Exchange Act, the shareholding ratio included the self-owned shares and trusted shares, at the same time, persons who have power to decide how to allocate the trust assets. For the information on reported share equity of insiders, please refer to the Market Observation Post System.