GENSCRIPT BIOTECH CORPORATION
金斯瑞生物科技股份有限公司*

(incorporated in the Cayman Islands with limited liability)
Stock Code: 1548

2019 ANNUAL REPORT

*For identification purposes only

Genscript Biotech Corporation (the "**Company**" or "**Genscript**", together with its subsidiaries referred to as the "**Group**") is a global biotech company. The Company's mission is to "Make the Human and Nature Healthier through Biotechnology".

The Group is a leading life sciences research and application service and product provider that applies its proprietary technology to various fields from basic life sciences research to translational biomedical development, industrial synthetic products, and cell therapeutic solutions. Leveraging in the Group's proprietary gene synthesis and other technology and know-hows, the Group has established four major platforms including (i) a leading contracted research organization ("**CRO**") platform to provide one-stop solutions to global research communities; (ii) a contract development and manufacturing organization ("**CDMO**") platform; (iii) an industrial synthetic products platform; and (iv) an integrated global cell therapy platform. The CRO platform remains as the strong and stable revenue generating foundation for the entire corporate. The CDMO platform provides end-to-end biologics discovery and development services to pharmaceutical, biotech, government and academic customers worldwide. The industrial synthetic products platform develops products for food and feed processing and other industrial uses. The cell therapy platform provides cell therapy solutions to patients with refractory diseases including cancer and inflammatory diseases.

Backed by gene synthesis and editing technology, the Group has made significant progress in its synthetic biology research and application, which mainly materialized into its innovative chimeric antigen receptor ("**CAR**") T-cell ("**CAR-T**") therapy and industrial enzyme businesses.

With a strong sales and marketing team and strong research and development capabilities, the Company maintains a stable and sustainable growth.

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CORPORATE PROFILE

GenScript Biotech Corporation (the "**Company**" or "**GenScript**", together with its subsidiaries, the "**Group**") is a well-recognized global biotech company. Leveraging the Group's proprietary gene synthesis and other technology and know-hows, the Group has established four major platforms including (i) a leading contract research organization ("**CRO**") platform to provide one-stop solutions to global life sciences research communities, (ii) a contract development and manufacturing organization ("**CDMO**") platform for biological drugs, (iii) an industrial synthetic products platform (Bestzyme), and (iv) an integrated global cell therapy platform (Legend). These four internally-built platforms have demonstrated their stable growth from research and development and commercial delivery perspectives for the year ended December 31, 2019 (the "**Year**" and the "**Reporting Period**").

Our business comprises four segments, namely, (i) life science services and products, (ii) biologics development services, (iii) industrial synthetic biology products, and (iv) cell therapy. For the Reporting Period, we had generated approximately US$170.4 million, US$22.5 million, US$23.1 million, and US$57.4 million from our four segments, representing approximately 62.3%, 8.2%, 8.5%, and 21.0% of our total revenue, respectively. With a strong sales and marketing team and strong research and development capabilities, the Company maintains a stable and sustainable growth.

The Group has been inspired by the mission "Make Human and Nature Healthier through Biotechnology" to fulfill its strategic goals over the past 17 years. Our clients' business demands and requirements is our first priority and the ultimate cornerstone for the Group to pursuit its long term development. We help to improve our clients' competitiveness through providing our superior quality, fast-delivery and cost-effective services and products. Internally, we focus on performing continuous management reforms to streamline our operational workflows and procedures. Externally, we promote the value of strategic collaboration with business partners with the vision to build up a healthy biotech eco-system. We would like to contribute more of our efforts to support the strong growth of the whole biotech and biopharma industries, to create multi-win situations among all the participating partners in this industry.

The Group has business operations in over 100 countries worldwide with our legal entities located in the United States, Mainland China, Hong Kong, Japan, Singapore, Netherlands and Ireland. We have 3,738 employees as of December 31, 2019.

The life science services and products segment (CRO platform) remains as the strong and stable revenue generating foundation for the Group. We have maintained the position as one of the world's largest molecular biology CRO companies. We offer services and products covering gene synthesis, oligo nucleotide synthesis, peptide synthesis, protein production, antibody development, and convenient and high-put-through equipment and consumables. We have active and healthy interactions with the global life science research community. Our services and products have been cited in over 42,200 international peer reviewed journal articles as at December 31, 2019.

The biologics development services segment (CDMO platform) provides end-to-end gene and cell therapy and biologics discovery and development services to pharmaceutical, biotech, government and academic customers worldwide. The team focused on building the Good Manufacturing Practice ("**GMP**") capabilities during the Year. GMP facilities have been under construction according to our strategic planning with phase by phase delivery of the discovery, development, and medium to large scale manufacturing services to our customers.

Legend Biotech Corporation ("**Legend**") is the clinical stage biopharmaceutical subsidiary of the Group that specifically engages in the discovery and development of novel cell therapies for oncology and other indications. Our lead product candidate, LCAR-B38M/JNJ-4528, is a chimeric antigen receptor T-cell ("**CAR-T**") therapy, that Legend is jointly developing with Janssen Biotech, Inc. ("**Janssen**"), for the treatment of multiple myeloma or MM. Our clinical results achieved to date demonstrate that LCAR-B38M/JNJ-4528 has the potential to deliver deep and durable antitumor responses in relapsed and refractory multiple myeloma ("**RRMM**") patients with a manageable safety profile. In addition, JNJ-4528 has been granted Breakthrough Therapy designation and orphan drug designation by the Food and Drug Administration of the United States and "PRIority Medicines" designation, enabling accelerated assessment, by the European Medicines Agency. Please refer to the previous announcements dated April 4, 2019, December 8, 2019 and December 9, 2019 for details. Our new pipeline CAR-T programs have been under active development, with additional U.S./China Investigational New Drug ("**IND**") approval anticipated to be obtained in the upcoming 12 months. A world-class management team covering all the professional functionalities has been established to lead Legend to become a global and fully integrated biopharma company in the near future.

Bestzyme Biotech Corporation ("**Bestzyme**") is one of the subsidiaries of the Group engaged in the synthetic biology fields. Bestzyme uses our advanced enzyme engineering technology to develop products for food and feed processing and other industrial markets. Our long-term goals are: (i) to improve the quality of people's daily lives, (ii) to address environmental problems, and (iii) to use enzymes in various industry sectors at a large scale to improve performance and to reduce costs. We believe synthetic biology offers us new opportunities from both technical and commercial perspectives.

As of December 31, 2019, our customers include pharmaceutical and biotech companies, colleges and universities, research institutes, government bodies (including government testing and diagnostic centres), and distributors. For the year ended December 31, 2019, our sales to such categories of customers generated approximately 72.2%, 15.0%, 3.9%, 3.9% and 5.0% of our total revenue, respectively.

We have established an extensive direct sales network, reaching over 100 countries in North America, Europe, the PRC, Japan, and the other Asia Pacific regions. We primarily sell our life sciences research and application services and products through our own direct sales force to our customers worldwide, while we also sell our services and products through independent third-party distributors to expand our market presence and facilitate communication with end users. For the year ended December 31, 2019, we have generated approximately US$168.9 million, US$55.5 million, US$26.6 million, US$16.0 million, US$4.8 million, and US$1.6 million from our sales to customers in North America, the PRC, Europe, Asia Pacific (excluding the PRC and Japan), Japan, and others, representing approximately 61.8%, 20.3%, 9.7%, 5.9%, 1.7%, and 0.6% of our total revenue, respectively.

CORPORATE INFORMATION

BOARD OF DIRECTORS

Executive Directors

Dr. Zhang Fangliang *(Chairman and Chief Executive Officer)*
Ms. Wang Ye *(President)*
Mr. Meng Jiange *(Secretary of the Board of Directors)*

Non-Executive Directors

Dr. Wang Luquan
Mr. Pan Yuexin
Ms. Wang Jiafen

Independent Non-Executive Directors

Mr. Guo Hongxin
Mr. Dai Zumian
Mr. Pan Jiuan

AUDIT COMMITTEE

Mr. Dai Zumian *(Chairman)*
Mr. Pan Jiuan
Mr. Guo Hongxin

REMUNERATION COMMITTEE

Mr. Guo Hongxin *(Chairman)*
Ms. Wang Ye
Mr. Dai Zumian

NOMINATION COMMITTEE

Dr. Zhang Fangliang *(Chairman)*
Mr. Pan Jiuan
Mr. Dai Zumian

SANCTIONS RISK CONTROL COMMITTEE

Dr. Zhang Fangliang *(Chairman)*
Ms. Wang Ye
Mr. Meng Jiange
Mr. Eric Wang
Mr. Shawn Wu

COMPANY SECRETARY

Ms. Wong Wai Ling

AUTHORISED REPRESENTATIVES

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Mr. Meng Jiange

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COMPANY WEBSITES

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PLACE OF LISTING OF SHARES

The Stock Exchange of Hong Kong Limited
– Main Board

STOCK CODE

1548

STOCK NAME

GENSCRIPT BIO

FINANCIAL HIGHLIGHT

- For the year ended December 31, 2019, revenue of the Group was approximately US$273.4 million, representing an increase of 18.4% as compared with approximately US$231.0 million for the year ended December 31, 2018.

- For the year ended December 31, 2019, gross profit increased by 13.8% from approximately US$158.5 million in 2018 to approximately US$180.3 million.

- Loss of the Group for the year ended December 31, 2019 was approximately US$117.5 million, whilst profit was approximately US$20.8 million for the year ended December 31, 2018. The adjusted net loss (excluding share based payment expenses) was approximately US$107.1 million for the year ended December 31, 2019, whilst the adjusted net profit was approximately US$29.6 million for the year ended December 31, 2018.

  During the Reporting Period, the Group invested significantly into research and development and the talent pools, both of which are key drivers for a sustainable business growth in the long run. For the year ended December 31, 2019, the Group's research and development expense was approximately US$186.0 million, representing an increase of 151.0% as compared with approximately US$74.1 million for the year ended December 31, 2018, in which the research and development expense in connection with the cell therapy segment was approximately US$157.0 million for the year ended December 31, 2019.

- For the year ended December 31, 2019, loss attributable to owners of the Company was approximately US$96.9 million, whilst profit attributable to owners of the Company was approximately US$21.2 million for the year ended December 31, 2018. The adjusted net loss attributable to owners of the Company (excluding share based payment expenses) was approximately US$86.7 million, whilst the adjusted net profit attributable to owners of the Company of approximately US$30.1 million for the year ended December 31, 2018.

FIVE-YEAR FINANCIAL SUMMARY

	For the year ended December 31,				
	2015	2016	2017	2018	**2019**
			US$'000		
Operation Results					
Revenue	86,709	114,735	152,649	231,017	**273,354**
Gross profit	57,078	76,229	104,591	158,539	**180,290**
Profit/(Loss) after income tax	17,504	26,535	27,005	20,759	**(117,516)**
Profit/(Loss) attributable to shareholders of the Company	17,504	26,170	26,123	21,216	**(96,912)**
Non-controlling interest	–	365	882	(457)	**(20,604)**
Basic earnings/(loss) per share *(US$)*	0.0147	0.0157	0.0152	0.0118	**(0.0523)**
Diluted earnings/(loss) per share *(US$)*	0.0143	0.0153	0.0151	0.0115	**(0.0523)**
Assets					
Non-current assets	49,060	62,123	106,369	237,513	**335,365**
Current assets	133,014	163,909	397,895	679,463	**554,046**
Current liabilities	30,894	39,215	272,716	153,515	**224,505**
Net current assets	102,120	124,694	125,179	525,948	**329,541**
Non-current liabilities	1,932	2,796	3,229	270,162	**292,608**
Net assets	149,248	184,021	228,319	493,299	**372,298**
Cash and cash equivalents	103,720	136,464	123,857	494,558	**252,397**
Inventories turnover days *(day)*	26	35	49	55	**70**
Trade receivables turnover days *(day)*	65	61	66	71	**75**
Trade payables turnover days *(day)*	33	35	47	48	**47**

CHAIRMAN'S STATEMENT

Dear fellow shareholders,

On behalf of the Board of Directors (the "**Board**"), I am pleased to present the results of the Group for the year ended December 31, 2019 (the "**Year**" and the "**Reporting Period**").

Since Genscript went public in 2015, our stock has risen over 800% as at March 27, 2020, vastly outperforming the Hang Seng Index. In fact, Genscript stock is among the top performing stocks listed on the HK exchange since listing. This is the result of our continued investments into R&D, quality of services and products, and our talents. These investments drive the future prospects of our company and position it to grow in the decades to come.

During the Year, our revenue growth continues to be strong. Excluding revenue recognized from upfront and milestone payments from our collaboration partner, we grew topline by 20.4%, our gross profit grew 15.1%. Gross profit margin is lower year over year mainly due to mix change. Margin is typically lower for our newer products and services before they reach scale while our more mature products and services maintained stable margin despite showing respectable growth. Net profit decreased significantly as we are investing heavily to advance our clinical programs as well as new products and services.

At the consolidated group level, our current profit and loss is not a measure we focus on. Rather, we believe intelligent shareholders understand the potential of the businesses we are developing and we believe we generate tremendous shareholder return in the long run by placing calculated bets on strategic initiatives in high potential areas. While our stock price can be volatile from time to time, in the long run our stock performance is a good measure of our business progress over the years.

CUSTOMER FIRST

The only reason for our businesses to exist is to serve our customers. In our CRO business, this means providing high quality services at rapid speed and competitive prices. In our CDMO business, this means ensuring we strive to provide services according to the highest standard of GMP. At our Legend subsidiary, this means developing the best drug candidate to satisfy the unmet needs of cancer patients. Within our synthetic biology business, this means providing solutions that make feed and other industrial productions more efficient and environmentally friendly.

Throughout the history of our company, we have continuously invested in our people and capabilities to improve our value proposition to customers. In 2019, we invested to automate a portion of our gene synthesis capability. This investment enables us to deliver high quality DNA to customers at a lower price. Our life sciences business is also investing in GMP grade facilities to meet our customers' demand in diagnostic and therapeutic grade research tools and reagents. We believe the compelling value we offer will continue to improve customer adoption of outsourced life science research services.

In our synthetic biology business, we have focused on key accounts, which are large customers with high standards and sophisticated needs for enzymes and drug APIs. Despite the impact from the African swine flu outbreak that negatively affected demand for feed related enzymes, our R&D investment allowed us to come up with differentiated high quality products which allowed us to grow much faster than industry peers against a difficult industry backdrop.

DARE TO TRY

As the company grows, we have to be willing to expand as well. That means, we have to be willing to enter areas with high growth and high customer demand, but requires more upfront investments so as to chase opportunities that are big enough to move the needle. Of course, we are not going to make such investments cavalierly. We think long and hard to evaluate each project's risk reward profile and try our best to execute against our plans.

Often times, the path to success for such projects is not a straight forward one. Some of these projects require re-evaluation and reshaping of the initial plans. Some may even fail. However, we will certainly fail as a company if we do not dare to make good bets. And for our shareholders, the return on the successful bets can more than cover the occasional bad ones.

Legend has been one of such bets. Understanding the tremendous customer (patient) needs and market potential, we leveraged our antibody design technology and experience to develop the JNJ4528/LCAR38M CAR-T therapy. In December 2019 at the annual American Society of Hematology meeting, Legend presented data from Phase 1b/2 CARTITUDE-1 study conducted in the US evaluating the efficacy and safety of JNJ4528 in as a last line treatment for relapsed or refractory multiple myeloma. The results demonstrated early and high responses in advanced relapsed or refractory multiple myeloma. Based on such data, the U.S. FDA awarded JNJ4528 the Breakthough Therapy Designation, which expedites the clinical development and review process. We have finished enrolling all the US patients needed for our Phase 1b/2 CARTITUDE-1 study by the end of 2019. Legend and Janssen are also conducting further clinical trials evaluating JNJ4528 in earlier lines of RRMM patients.

Legend's US results are highly consistent with those from our earlier clinical trials conducted in China, validating our clinical development strategy using Investigator Initiated Trials in China to validate pre-clinical studies quickly and inexpensively. Following this strategy, Legend continues to make progress in R&D to diversify its product portfolio. Legend now has 10 pipeline programs currently in clinical development, targeting various blood cancers, solid tumors, and infectious diseases using both autogenic and heterogenic CAR-T technologies.

At the group level, we also decided to make another strategic bet in the CDMO business. The global biologics drug industry is experiencing fast growth driven by an aging population and advances in precision medicine. The U.S. FDA is approving record-setting number of new biologics drugs and bio-similars in recent years. The Chinese government policy is also highly supportive of innovations in the pharmaceutical industry. We believe leveraging our existing antibody drug discovery capability and our successful experience with CAR-T cell therapy development, we have the opportunity to become a major player in the biologics drug CDMO field.

Even though our CDMO business's financial performance has been less than stellar in 2019, much has been learned during this period. We have established GMP R&D and manufacturing facilities. We have put together a highly experienced and talented team. We also signed collaborative deals with leading international player to leverage their capabilities to serve our customers. These are key ingredients for us to gain customers' trust and build a track record of successfully delivering projects.

OPTIMIZING LONG TERM VALUE

The management team at the Company believes that the best way to maximize shareholder value is to invest for future growth. This requires us to make many of the aforementioned investments through our balance sheet. Some of the investment in the form of R&D expenses and high caliber talents will also put pressure on our near term profitability.

Let me be clear, we are not running the Company to optimize near term profitability. As long as we continue to see attractive opportunities that allow us to leverage existing capabilities and gain new capabilities, we will invest to pursue such opportunities.

Nevertheless, we are carefully evaluating each investment projects in terms of market potential, our competitive advantages and expected returns. More importantly, we will measure our own performance against such expectations and make adjustment when needed. Ultimately, the management team's goal is to optimize long term value for our shareholders through intelligent capital allocation.

Throughout the history of the Company, we have been very diligent with how we fund our growth. We only raised funds from outside capital once before going public in 2015. Since then, we only raised approximately an additional US$251.3 million from the Company's top-up placing. Legend raised US$160.5 million to accelerate Legend's clinical development. Please refer to our previous announcements dated June 14, 2018, March 31, 2020, April 14, 2020 and April 16, 2020 for details. Our shareholders' support has been a critical part of our success so far. We want to thank you for entrusting your capital with us.

Going forward, we are committed to fulfill our business and financial objectives as approved by the Board in 2020. We have the required financial resources and talents to provide high quality services to our customers, treat our patients, and create value to our shareholders.

Thank You.

Dr. Zhang Fangliang
Chairman and Chief Executive Officer

March 27, 2020

MANAGEMENT'S DISCUSSION AND ANALYSIS

POSITIONING OF THE COMPANY

The Group is a well-established global biotech company inspired by the mission "Make Human and Nature Healthier through Biotechnology". Over the past 17 years, we have invested heavily into research and development, resulting in proprietary gene synthesis and other technology and know-hows. We have established four major platforms including (i) a leading Contract Research Organization (the "**CRO**") platform to provide one-stop solutions to global life science research communities, (ii) a Contract Development and Manufacturing Organization (the "**CDMO**") platform for biological drugs, (iii) an industrial synthetic products platform (Bestzyme), and (iv) an integrated global cell therapy platform (Legend). We believe these four internally built platforms can continue their growth and generate positive returns to our shareholders.

The Group's business operation spans over 100 countries worldwide with legal entities located in the United States, Mainland China, Hong Kong, Japan, Singapore, Netherlands and Ireland. We have 3,738 employees as of December 31, 2019.

The life science services and products segment (CRO platform) remains as the strong and stable revenue generating foundation for the Group. We have maintained the position as one of the world's largest molecular biology CRO companies. We offer services and products covering gene synthesis, oligonucleotide synthesis, peptide synthesis, protein production, antibody development, and convenient and high-put-through equipment and consumables. We have active and healthy interactions with the global life science research community. Our services and products have been cited in over 42,200 international peer reviewed journal articles by December 31, 2019.

The biologics development services segment (CDMO platform) provides end-to-end gene and cell therapy and biologics discovery and development services to pharmaceutical, biotech, government and academic customers worldwide. The team focused on building the Good Manufacturing Practice ("**GMP**") capabilities during the Year. GMP facilities have been under construction according to our strategic planning with phase by phase delivery of the discovery, development, and medium to large scale manufacturing services to our customers.

Legend Biotech Corporation ("**Legend**") is the clinical stage biopharmaceutical subsidiary of the Group that specifically engages in the discovery and development of novel cell therapies for oncology and other indications. Our lead product candidate, LCAR-B38M/JNJ-4528, is a chimeric antigen receptor T-cell ("**CAR-T**") therapy, that Legend is jointly developing with Janssen Biotech, Inc. ("**Janssen**"), for the treatment of multiple myeloma or MM. Our clinical results achieved to date demonstrate that LCAR-B38M/JNJ-4528 has the potential to deliver deep and durable antitumor responses in relapsed and refractory multiple myeloma ("**RRMM**") patients with a manageable safety profile. JNJ-4528 has been granted Breakthrough Therapy designation and orphan drug designation by the Food and Drug Administration of the United States and "PRIority Medicines" designation, enabling accelerated assessment, by the European Medicines Agency. Please refer to the previous announcements dated April 4, 2019, December 8, 2019 and December 9, 2019 for details. Our new pipeline CAR-T programs have been under active development, with additional U.S./China Investigational New Drug ("**IND**") approval anticipated to be obtained in the upcoming 12 months. A world-class management team covering all the professional functionalities has been established to lead Legend growing up to a global and fully integrated biopharma company in the near future.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Bestzyme Biotech Corporation ("**Bestzyme**") is one of the subsidiaries of the Group engaged in the synthetic biology fields. Bestzyme uses our advanced enzyme engineering technology to develop products for food and feed processing and other industrial markets. Our long-term goals are: (i) to improve the quality of people's daily lives, (ii) to address environmental problems, and (iii) to use enzymes in various industry sectors at a large scale to improve performance and to reduce costs. We believe synthetic biology offers us new opportunities from both technical and commercial perspectives.

During the Reporting Period, the Group achieved growth in sales revenue for all business units, and we also invested significantly into strategic research and development activities which will drive sustainable business growth in the long run. We are confident that our persistent efforts on both technical and managerial aspects will be paid off ultimately and will allow us to achieve a better future.

BUSINESS REVIEW

During the Reporting Period, overall revenue of the Group was approximately US$273.4 million, representing an increase of 18.4% as compared with approximately US$231.0 million for the year ended December 31, 2018. Gross profit was approximately US$180.3 million, representing an increase of 13.8% as compared with approximately US$158.5 million for the year ended December 31, 2018. The increase in revenue was primarily attributable to (i) the continued stable increase growth from life science services and products from major strategy customers and new competitive services and products, (ii) the increase of contract revenue derived from Legend's collaboration with Janssen on JNJ-4528, and (iii) the increase in both the number of customers and their purchase volume of industrial synthetic biology products. The increase in gross profit was mainly attributable to higher revenue, and was slightly offset by high start-up costs and GMP facility expenses in our biologics development, primarily due to the upgraded products and sales team.

During the Reporting Period, the loss was approximately US$117.5 million, whilst profit was approximately US$20.8 million for the year ended December 31, 2018. The adjusted net loss (excluding share-based payment expenses) was approximately US$107.1 million, whilst adjusted net profit was approximately US$29.6 million for the year ended December 31, 2018.

The loss attributable to owners of the Company was approximately US$96.9 million, whilst profit attributable to owners of the Company was approximately US$21.2 million for the year ended December 31, 2018. The adjusted net loss attributable to owners of the Company (excluding share-based payment expenses) was approximately US$86.7 million, whilst adjusted net profit attributable to owners of the Company was approximately US$30.1 million for the year ended December 31, 2018.

During the Reporting Period, the Company generated revenue of approximately US$170.4 million, US$22.5 million, US$23.1 million and US$57.4 million from the four segments, namely, (i) life science services and products, (ii) biologics development services, (iii) industrial synthetic biology products, and (iv) cell therapy, representing approximately 62.3%, 8.2%, 8.5% and 21.0% of the total revenue, respectively.

Results Analysis of the Four Business Segments

1. Life science services and products

This segment provides comprehensive research services in seven key categories, namely, gene synthesis and molecular cloning, oligonucleotide synthesis, protein engineering, peptide synthesis, antibody development, molecular diagnostics tools and genome editing materials. These services and products are essential to a wide range of life sciences research and application areas, including basic biology studies, pharmaceutical and drug discovery, disease and vaccine, diagnostics, agriculture, environmental studies, and the food industry.

Results

During the Reporting Period, revenue generated from life science services and products was approximately US$170.4 million, representing an increase of 20.9% as compared with approximately US$141.0 million for the year ended December 31, 2018. During the same period, the gross profit was approximately US$110.6 million, representing an increase of 15.7% as compared with approximately US$95.6 million for the year ended December 31, 2018. The increase in both revenue and gross profit was primarily attributable to (i) successful commercial operation that focuses on synthetic biology industry sector especially in gene synthesis and synthetic libraries business, (ii) production facility in Zhenjiang, along with the automated peptide production line, becoming fully operational, which boosted production capacity and competitiveness of life science business and increased market share in customized peptide market, (iii) improved commercial operations including the (a) establishment of Europe and Asia Pacific sites with new leadership on the ground team to support regional strategy, (b) increased spending in exhibitions as well as content marketing on diverse media platforms, to enhance brand image and awareness, (c) launching of user-friendly online services platform to attract new customers and improve customers' loyalty, and (iv) appointment of new leadership in research and development, with continuous investment that enabled more competitive new products and services to be launched onto the market.

Development strategies

The Company intends to (i) develop and launch a comprehensive on-line platform that incorporates information sharing, project design, ordering and project management in molecular biology, antibody engineering, peptide and next generation sequencing applications, in order to further expand customer base and enhance customer experience, (ii) upgrade current reagent services to offer integrated solutions with assisted design capability to certain fast growing frontier areas, including metabolic pathway engineering, protein engineering and antibody engineering, (iii) launch next generation sequencing solutions including target enrichment kits and related reagents, and globally commercialize such solutions in both research and diagnostics setting, and (iv) establish research and development, production and commercialization capability for pre-clinical and clinical grade nucleic acid and peptide materials for gene therapy, cell therapy and other immune therapy applications, by collaborating and partnering with top biotech or pharmaceutical companies.

2. *Biologics development service*

This segment provides comprehensive services in five key categories, namely, antibody drug discovery, antibody drug pre-clinical development, antibody drug clinical development, plasmid & virus pre-clinical development, and plasmid & virus clinical development. These services and associated products help biopharmaceutical and biotech companies accelerate the development of therapeutic antibodies and viral vectors for gene or cell therapy products with an integrated platform from the very beginning of drug discovery stage to pre-clinical and clinical development stage.

Results

During the Reporting Period, revenue generated from biologics development services was approximately US$22.5 million, representing an increase of 8.7% as compared with approximately US$20.7 million for the year ended December 31, 2018. During the same period, the gross profit was approximately US$7.0 million, representing a decrease of 20.5% as compared with approximately US$8.8 million for the year ended December 31, 2018. Total backlog for biologics development services increased by 172.9% from US$18.1 million from the year ended December 31, 2018 to US$49.4 million for the year ended December 31, 2019. The increase in revenue and backlog was primarily attributable to (i) successful delivery of the ongoing projects, (ii) completion of out-license and collaboration deals of Bi-Specific Single Domain Antibody ("**SMAB**") platform, (iii) growing talent pool, and (iv) expanded capacity of development and manufacturing in plasmid and virus and antibody platform. The decrease in gross profit was primarily attributed to (i) fast growing talent pool and introduction of senior management teams, and (ii) increased depreciation and other start-up costs.

Development strategies

The Company intends to (i) continue to enhance the antibody drug discovery platforms by developing and introducing advanced technologies, including but not limited to fully-human antibodies from transgenic animals, human antibody libraries and single B cell technology, (ii) exploit the power of SMAB bi-specific antibody platform and other multi-specific antibody and fusion protein platforms through collaboration with external biopharma or biotech companies and continuous development of new molecules in-house, including monoclonal antibodies and single domain antibodies, (iii) build the capability in lentivirus vector and other key viral vectors through in-house development and external collaborations, (iv) increase pre-clinical and clinical development capacity through the opening of new GMP facilities for both antibody drug and virus vectors, (v) penetrate into the market in the U.S. and the Asia Pacific through in-house capability and external collaborations, (vi) launch and continuously promote the independent brand name of "GenScript ProBio", and (vii) enhance senior management and research and development teams with talents who have international biopharma background.

3. *Industrial synthetic biology products*

This segment leverages over our technical experience in protein engineering and synthetic biology to contract non-pathogenic microbial strains to produce high-quality industrial enzymes that can be used in a variety of industries, such as the food and feed processing, feed, pharmaceutical, and chemical industries. Synthetic biology technology has also brought a series of innovative breakthroughs in producing synthetic fine chemical products for the pharmaceutical and other uses.

Results

During the Reporting Period, revenue generated from industrial synthetic biology products was approximately US$23.1 million, representing an increase of 30.5% as compared with approximately US$17.7 million for the year ended December 31, 2018. Excluding impact from foreign currency conversion, constant currency revenue increased by 34.6%. During the same period, the gross profit was approximately US$5.3 million, representing an increase of 112.0% as compared with US$2.5 million for the year ended December 31, 2018. The increase in both revenue and gross profit was primarily attributable to (i) the launch of innovative products and the entrance to bio-synthesis market, (ii) the increased penetration in industries and territories with upgraded marketing strategy from a product seller to a solution provider, and (iii) cost reduction and quality improvement from optimizing production process.

Development strategies

The Company intends to be a leading bio-synthetic product supplier and well-recognized enzyme company by providing enzymes and microorganisms solution to our customers.

The Company intends to (i) drive business growth and profit improvement by taking advantage of our strong competency in strain optimization and product engineering, (ii) leverage our production capacity to gain market share, (iii) provide non-antibiotic animal health and nutrition solutions to key customers, and (iv) continue to optimize our operation process and reinvest in research and research to development capability to serve better in existing industries and targeted new business.

4. Cell therapy

This segment was initiated from GenScript's proprietary antibody development platform, and is primarily conducted through Legend Biotech Corporation and its subsidiaries (collectively, the "**Legend Group**"). With the strength in the optimization of CAR structures and the development of multi-specific antibodies, the Legend Group is engaged in the discovery and development of novel cell therapies for oncology and other indications, including with the application of its proprietary technologies for CAR-T, and allogenic cell therapies. Based on its fully-integrated and global cell therapy capabilities, the Legend Group is developing a variety of product candidates for the treatment of hematologic malignancies, solid tumor and infectious diseases, among which the B-cell maturation antigen ("**BCMA**") CAR-T program is the most mature one, for which the Legend Group has entered into a worldwide collaboration with Janssen to jointly develop and commercialize LCAR-B38M/JNJ-4528, a structurally differentiated autologous CAR-T cell therapy that targets BCMA, in multiple myeloma. In the Year, LCAR-B38M/JNJ-4528 was granted the Orphan Drug Designation and the Breakthrough Therapy Designation by the United States Food and Drug Administration, and was granted the "PRIority MEdicines" Designation by the European Medicines Agency. As at the date hereof, the Phase 1b/2 registration trial of LCAR-B38M/JNJ-4528 in the United States and Japan is ongoing and has completed the enrollment of patients in the United States. A Phase 2 confirmatory trial of LCAR-B38M/JNJ-4528 is also on going in China.

Results

During the Reporting Period, revenue generated from cell therapy segment was approximately US$57.4 million, representing an increase of 11.2% as compared with approximately US$51.6 million for the year ended December 31, 2018. During the same period, gross profit was approximately US$57.4 million, representing an increase of 11.2% as compared with approximately US$51.6 million for the year ended December 31, 2018. The increase in both revenue and gross profit was primarily attributable to further recognition of contract revenue from the collaboration with Janssen on developing JNJ-4528.

Development strategies

The Company intends to (i) conduct clinical trials in earlier-stage MM patients who may have fewer comorbidities and may be more likely to respond to therapies than late-stage RRMM patients, and (ii) continue the development of a broad portfolio of product candidates in investigator-initiated trials in China and preclinical development targeting various hematological malignancies, solid tumors and infectious diseases. Legend and its subsidiaries (the "**Legend Group**") plans to use data from the investigator-initiated clinical trials in China to prioritize product candidates to advance into broader clinical testing globally.

FINANCIAL REVIEW

	2019	2018	Change
	US$'000	US$'000	US$'000
Revenue	**273,354**	231,017	42,337
Gross profit	**180,290**	158,539	21,751
(Loss)/Profit after income tax	**(117,516)**	20,759	(138,275)
Net (loss)/profit excluding share-based payment expenses	**(107,146)**	29,611	(136,757)
(Loss)/Profit attributable to shareholders of the Company	**(96,912)**	21,216	(118,128)
(Loss)/Profit attributable to shareholders of the Company, excluding share-based payment expenses	**(86,735)**	30,068	(116,803)
(Loss)/Earnings per share *(US cent per share)*	**(5.23)**	1.18	(6.41)

Revenue

In 2019, the Group recorded revenue of US$273.4 million, representing an increase of 18.4% from US$231.0 million in 2018. This was primarily attributable to (i) the continuing increase from life science services and products from major strategy customers and new competitive services and products, (ii) the increase of contract revenue derived from Legend's collaboration with Janssen on JNJ-4528, and (iii) the increase in both the number of customers and their purchase volume of industrial synthetic biology products, primarily due to the upgraded products and sales team.

Gross Profit

In 2019, the Group's gross profit increased by 13.8% to US$180.3 million from US$158.5 million in 2018. The increase in gross profit was primarily attributable to higher revenue, partially offset by investment in talents and capacity as well as start-up costs for our biologics development services segment.

Selling and Distribution Expenses

The selling and distribution expenses increased by 81.4% to US$70.4 million in 2019 from US$38.8 million in 2018. This was mainly attributable to (i) enhanced marketing activities including participation in high-profile exhibitions and industry conferences and use of enhanced advertisements placed to improve the Group's brand image among the targeted audiences, and (ii) increased investment into the commercial talent pool by recruiting more experienced personnel and improved incentive packages to enable our services and products to be able to penetrate into the key markets.

Administrative Expenses

In 2019, the administrative expenses increased by 36.2% to US$55.3 million from US$40.6 million in 2018. This was mainly caused by (i) competitive compensation package for our employees including shared-based payment provided to recruit experienced talents for all business segments, (ii) the reinforcement of some key functions such as human resources, quality control, and finance to build up capable and professional administrative team to support the Group's overall business expansion, and (iii) the set-up of the European and Asia-Pacific Regional centers to accelerate the Group's global market penetration.

Research and Development Expenses

The research and development expenses increased by 151.0% to US$186.0 million in 2019 from US$74.1 million in 2018. This was mainly due to (i) our investment in developing CAR-T programs in our cell therapy segment, (ii) our continuous investment in research and development activities to secure and maintain high-level research and development talents, and (iii) our participation in certain new challenging research and development projects to strengthen our competitiveness in the market and improved our production efficiency.

Income Tax Expenses

The income tax expenses increased from US$1.9 million in 2018 to US$3.8 million in 2019. The actual tax rate was (3.4)% for the year ended December 31, 2019(for the year ended December 31, 2018: 8.6%). The increase of tax expenses in 2019 was mainly caused by unrecognized taxable losses.

Net Profit/(Loss)

During the Reporting Period, net loss of the Group was approximately US$117.5 million, whilst the net profit for the same period of 2018 was approximately US$20.8 million.

Trade Receivables

	2019	2018
Trade receivables turnover *(day)*	**75**	71

The increase of trade receivables of the Group was mainly caused by the long-term contracts with our customers of biologics development service.

Inventories

	2019	2018
Inventory turnover *(day)*	**70**	55

The increase of inventory turnover of the Group was mainly caused by the increase of the level of safe stock due to the expanded sales of products, and the increase of workload in the process of biologics development service.

Property, Plant, and Equipment

Property, plant and equipment include buildings, machinery equipment and construction in progress. As at December 31, 2019, the property, plant and equipment of the Group amounted to US$236.0 million, representing an increase of 49.4% from the property, plant and equipment of US$158.0 million as at December 31, 2018. This was mainly due to the construction of new factories to support the increased scale of production, especially for biologics development service and cell therapy.

Intangible Assets

Intangible assets include software, patents and licenses. As at December 31, 2019, the Group's net intangible assets amounted to US$25.5 million, representing an increase of 30.1% from US$19.6 million as at December 31, 2018. The increase in intangible assets was mainly due to the new purchased license for gene sequences.

Working Capital and Financial Resources

As at December 31, 2019, the cash and cash equivalents of the Group amounted to US$252.4 million (2018: US$494.6 million). There was no restricted fund.

Cash Flow Analysis

During the Reporting Period, the annual cash outflow used in operating activities of the Group was US$30.0 million.

During the Reporting Period, the annual cash outflow used in investing activities of the Group was US$208.6 million. This was mainly due to (i) proceeds from the financial assets at fair value through profit or loss in the amount of US$42.8 million, (ii) proceeds from the equity investments designated at fair value through other comprehensive income in the amount of US$5.0 million, (iii) the purchases of items of property, plant and equipment, other intangible assets and the prepayment of land lease payments for the purpose of enlarging production capability in the amount of US$118.5 million, (iv) loans to an associate in the amount of US$2.0 million, and (v) the purchases of time deposits in the amount of US$148.7 million, and (vi) cash collected from pledged short-term deposits in the amount of US$11.7 million.

During the Reporting Period, the annual cash outflow used in financing activities of the Group was US$2.8 million. This was mainly due to (i) proceeds from exercise of share options in the amount of US$3.7 million, (ii) proceeds from bank loans in the amount of US$27.3 million, (iii) capital injection received from minority shareholder in the amount of US$0.4 million, (iv) repayment of bank loans in the amount of US$19.0 million, (v) payment for shares in the amount of US$7.8 million, (vi) purchases of minority interests in the amount of US$6.0 million, and (vii) the principle portion of lease payments in the amount of US$1.4 million.

Capital Expenditure and Capital Commitment

During the Reporting Period, the expenditure of purchasing intangible assets, namely software, patents and license, was US$1.3 million, the expenditure of purchasing property, plant and equipment amounted to US$110.4 million, and the expenditure of purchasing land use right amounted to US$6.8 million.

Material Acquisitions and Disposals

During the Reporting Period, the Company did not have any material acquisition or disposal of subsidiaries, associates or assets.

Contingent Liabilities and Guarantees

As at December 31, 2019, the Group did not have any material contingent liabilities or guarantees.

Charges on Group Assets

As at December 31, 2019, the building located in Tokyo, Japan of approximately JPY1.3 billion (equivalent to approximately US$11.5 million) was pledged by GenScript Japan Inc. ("**GS JP**") to secure a loan of JPY250.0 million (equivalent to approximately US$2.3 million).

As at December 31, 2019, bank balances of approximately US$716,000 was pledged by Nanjing Jinsirui Biotechnology Co., Ltd. ("**GS China**") for notes payable of approximately US$716,000, and of approximately US$256,000 was pledged by Legend Biotech USA Incorporated ("**Legend USA**") for credit cards.

Save as above, the Group did not have any other charges over its assets as of December 31, 2019.

Current Ratio and Gearing Ratio

As at December 31, 2019, the Group's current ratio (current assets to current liabilities) approximately 2.5 (as at December 31, 2018: 4.4); and gearing ratio (total liabilities to total assets) was approximately 58.1% (as at December 31, 2018: 46.2%).

SIGNIFICANT INVESTMENTS HELD, MATERIAL ACQUISITIONS AND DISPOSALS

As at December 31, 2019, significant investments held by the Group are as follows:

	December 31, 2019 US$'000	December 31, 2018 US$'000
Financial assets at fair value through profit or loss		
– Current	**25,434**	70,056
– Non-current	**4,667**	3,405
Equity investment designated at fair value through other comprehensive income	**–**	4,949
Total	**30,101**	78,410

The current part of financial assets at fair value through profit or loss represent investments in wealth management products issued by banks in China and Hong Kong.

The wealth management products which we purchased during the Reporting Period, including the close-end funds, structured deposits, premium cash plus (pure floating rate notes) US dollar and supply chain finance fund, were with floating interests ranging from 1.73% to 7.09% per annum and with maturity dates between 1 day and 365 days. These products did not guarantee the return of principals upon maturity, and none of them was past due or impaired as of December 31, 2019, except those put options. As of December 31, 2019, the Group has redeemed those wealth management products at maturation and has no intention to dispose of all the investments in the long-term.

As part of our treasury management plan, we have purchased wealth management products as an auxiliary means to improve utilization of our cash on hand on a short-term basis. We have made such purchases only when (i) we have surplus funds after we have fully considered the cash requirement of our operations for the year and allocated accordingly, and (ii) our management has carefully assessed the risks and benefits and decided to make such purchases (including, among others, the availability of certain wealth management products which have high liquidity and generate interest income meeting our standards).

All investments were made in low-risk, liquid and sound wealth management products and low risk trust products, such as capital preservation products, fixed-income products, trust products with agreed yield expectations and adequate safeguards, and trust products backed by highly liquid collaterals.

Any purchase and redemption of our investments in wealth management products shall be reviewed and approved by our vice president of finance.

During the Reporting Period, we had only invested in wealth management products issued by major reputable banks in China and Hong Kong, and we preserved all our invested capital in these products and did not encounter any default by the issuing banks. We had not invested, and are prohibited, under our internal control policies, from directly investing in any listed financial product, and our investments had not been pledged to secure our borrowings during the period ended December 31, 2019.

Information in relation to the current part of financial assets at fair value through profit or loss as at December 31, 2019 are set out as follows:

	Banks	Product type/description	Investment cost: Original amount In RMB or US$	Investment cost: In US$'000	Fair value as of December 31, 2019 In US$'000	Purchase date	Maturity date	Redemption date
1.	Citigroup Global Markets Holdings Inc.	Term notes	US$5,000,000	5,000	5,000	10/15/2018	10/15/2021	On call
2.	Credit Suisse AG, Hong Kong Branch	Premium Cash Plus (Pure FRNs) USD	US$10,000,000	10,000	10,326	02/12/2019	N/A	On call
3.	Credit Suisse AG, Hong Kong Branch	Supply Chain Finance Fund	US$9,998,999	9,999	10,176	01/30/2019	N/A	On call
4.	Bank of Ningbo	Put Option	–	–	(78)	02/22/2019	02/21/2020	–
5.	Bank of Ningbo	Put Option	–	–	(76)	03/05/2019	03/05/2020	–
6.	Citibank N.A.	Forward Exchange Transaction	–	–	86	11/28/2019	02/20/2020	–
	Total:			24,999	25,434			

Information in relation to the non-current part of financial assets at fair value through profit or loss as at December 31, 2019 are set out as follows:

Name of investee company/fund	Principal business or investment scope	Nature of investment	Number of shares/units/ amount of investments held	Percentage of total share capital/units owned by the Group as at December 31, 2019	Investment Cost	Market value as at December 31, 2019	Percentage to the Group's total assets as at December 31, 2019	Realised gain on change in fair value for the period ended December 31, 2019	Unrealised gain/(loss) on change in fair value for the period ended December 31, 2019	Dividends received for the period ended December 31, 2019
				%	US$'000	US$'000	%	US$'000	US$'000	US$'000
Yuanming Prudence SPC – Healthcare Fund I Segregated Portfolio (Note)	Equity investment	Investment in fund/securities	486.43	0.28	500	500	0.06	–	–	–
Panacea Venture Healthcare Fund I, L.P. (Note)	Equity investment	Investment in fund/securities	Not applicable	5.54	4,322	4,167	0.47	–	(233)	–

(Note) Given the value of investments is minimal, accounted for less than 1% of the total assets of the Group as of December 31, 2019, the Company has not prepared an analysis on their prospects.

For the Reporting Period, we recorded the investment gain on the financial assets at fair value through profit or loss of US$839,000 and a fair value gain at US$202,000.

During the Reporting Period, the Group did not have any significant investments held, material acquisitions or disposals of subsidiaries and associated companies.

MARKET RISKS

The Group is exposed to various types of market risks in the ordinary course of business, including foreign exchange risk, cash flow and fair value interest rate risk and credit risk. The Group manages its exposure to such risks and other market risks through regular operation and financial activities.

Foreign Exchange Risk

The Group mainly operates in the PRC and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to United States dollar. Foreign exchange risk arises from foreign currencies held in certain overseas subsidiaries. Since January 2019, the Group has entered into a series of forward contracts to manage the Group's currency risk.

Cash Flow and Fair Value Interest Rate Risk

Other than bank balances with variable interest rate and short-term deposits with fixed interest rates, the Group has financial products of approximately US$25.4 million related to fair value interest rate risk.

Credit Risk

The carrying amounts of cash and cash equivalents, trade, other receivables and other current assets are the Group's maximum exposure to credit risk in relation to its financial assets. The objective of the Group's measures to manage credit risk is to control potential exposure to recoverability problems.

In respect of trade and other receivables, individual credit evaluations are performed on customers and counterparties. These evaluations focus on the counterparty's financial position and past history of making payments, and they take into account information specific to the counterparty as well as pertaining to the economic environment in which the counterparty operates. Monitoring procedures have been implemented to ensure that follow-up actions will be taken to recover overdue debts. Credit limits were granted to certain customers in consideration of their payment history and business performance. Prepayment agreements were sometimes entered into with certain customers from food companies, colleges, universities, and research institutes in China, as well as occasionally with other customers in the United States and Europe. In addition, the Group reviews the recoverable amount of each individual transaction and other receivable balance at the end of the year to ensure that adequate impairment losses are made for irrecoverable amounts.

NON-ADJUSTING EVENTS AFTER THE REPORTING PERIOD

The outbreak of the novel coronavirus (COVID-19) in early January 2020 has spread throughout China and to countries across the world. The COVID-19 caused delay on the Group's employees' return to work and has certain impact on the Group's shipping service and customers' on-site audit. The Group will continue to monitor and assess the impact of the ongoing development of the epidemic on the financial position and operating results of the Group and respond accordingly. Up to date of the report, the assessment is still in progress.

Prospects

In the year of 2019, we continued to witness fast paced innovations in personalized and precision medicine and tectonic regulatory changes.

In the year of 2019, the Food and Drug Administration of the United States (the "**FDA**") approved a number of new biologics drugs including Zolgensma, a gene therapy medication used to treat spinal muscular atrophy (SMA). Despite it being one of the most expensive medicines in the world, hundreds of patients had received this treatment since the patients' benefit obviously outweighs the cost. The U.S. Centers for Medicare & Medicaid Services increased the reimbursement for CAR-T cell therapies to allow more patients access to such treatments. The first two CAR-T cell therapy treatments approved by the FDA, Kymriah and Yescarta, combined have generated over US$700 million in 2019.

Encouraged by these successes, a rising number of gene therapy and cell therapy clinical trials are being conducted globally.

The Chinese government has aggressively rolled out policies such as collective bargaining aiming at lowering prices of generic drugs. Although not directly impacting innovative healthcare companies, these policies help to free up payer resources that can be redirect toward more innovative and effective healthcare in the future.

We believe the global regulatory framework is still much favorable for companies that pushing the boundaries of science and technology to provide better healthcare, from which Legend and many of our life science CRO and biologics CDMO customers will continue to benefit. Together with an aging global population, we believe the demands for life science research and preclinical and clinical stage development services will continue to rise in the foreseeable future.

Future Development Strategies

Looking forward to 2020, the Group continues to optimize research and development, go-to-market and capital allocation strategies:

i. Further investment in research and development, focusing on the following key business areas:

   a) Cell therapies – We will put increasing effort to this space. We aim to develop and gain advanced CAR-T, and other technologies, extend our current autologous platform into allogeneic platform. We intend to target onto hematologic malignancies, solid tumors and infectious diseases;

   b) Biologics CDMO service – We aim to expand the application of our SMAB platform and enhance our ability to provide plasmid and virus production; and

   c) Molecular biology CRO – We will further strengthen our global leading position in gene synthesis through automation and invest in GMP grade diagnostic and therapeutic life sciences products and services.

ii. Further strengthening of the following sales and marketing priorities:

a) The cell therapy commercial team in the United States and the China markets will continue to prepare for the necessary procedures and certifications as well as have market access meetings with key payers and caregivers with the intention to conduct a global commercial launch of JNJ-4528/LCAR-B38M;

b) Establish an independent brand "Genscript Probio" for our CDMO business and further strengthen the collaboration with the biotech and biopharma community;

c) Enhance the penetration into the key accounts for industrial synthetic biology products; and

d) Leverage our leading position on gene synthesis to drive cross selling of other molecular biology services and products.

iii. Further optimize the capital allocation:

a) The proposed initial listing of the Legend's shares to provide flexible funding pipeline for Legend's clinical development while retaining the significant upside potential for our existing shareholders;

b) Using the Group's balance sheet and cash flow to invest in GMP facilities in order to quickly scale our biologics CDMO business; and

c) Pursuing opportunistic tuck-in acquisitions and investments for cutting-edge technologies as they arise in order to complement the existing internal capacity and to speed up the overall growth of the Group.

EMPLOYEES

As at December 31, 2019, the Group had a total of approximately 3,738 employees. The Group had entered into employment contracts covering positions, employment conditions and terms, salaries, employees' benefits, responsibilities for breach of contractual obligations, and reason for termination with its employees. The remuneration package of the Group's employees includes basic salary, subsidies, and other employees' benefits, which are determined with reference to experience, number of years with the Group, and other general factors.

During the Reporting Period, the Company's total expenses on the remuneration of employees (including the Directors) was approximately US$153.5 million, representing approximately 56.1% of the total revenue of the Company.

On July 15, 2015, the Company adopted the pre-IPO share option scheme (the "**Pre-IPO Share Option Scheme**"). On December 7, 2015, the Company adopted the post-IPO share option scheme (the "**Post-IPO Share Option Scheme**"). On December 21, 2017, the Company approved and adopted the share option scheme of Legend, being the direct non-wholly owned subsidiary of the Company (the "**Subsidiary Share Option Scheme**", together with the Pre-IPO Share Option Scheme and the Post-IPO Share Option Scheme, the "**Share Option Schemes**"). On March 22, 2019, the Company adopted the Restricted Share Award Scheme (the "**RSA Scheme**"). No further share options have been granted under the Pre-IPO Share Option Scheme since the Company was listed on The Stock Exchange of Hong Kong (the "**Stock Exchange**").

4,515,000 share options with an exercise price of HK$18.3 per share and 5,885,000 share options with an exercise price of HK$19.132 per share were granted under the Post-IPO Share Option Scheme to certain employees on July 19, 2019 and November 29, 2019, respectively. Please refer to our announcements dated July 19, 2019 and November 29, 2019 for details. Save as disclosed, no other options have been granted under the Post-IPO Share Option Scheme during the Reporting Period.

1,048,116 restricted shares and 150,000 restricted shares were granted under the RSA Scheme to certain employees on July 19, 2019 and November 29, 2019, respectively. Please refer to our announcements dated July 19, 2019 and November 29, 2019 for details. Save as disclosed, no other shares have been granted under the RSA Scheme during the Reporting Period.

During the Reporting Period, 3,757,000 share options were granted under the Subsidiary Share Option Scheme.

The number of employees of the Group categorized by function as of December 31, 2019 is set forth as follows:

	Number of employees	Percentage of total (%)
Function		
Production	1,341	35.9
Sales and marketing	350	9.4
Administration	489	13.1
Research and development	1,034	27.6
Management	524	14.0
Total	3,738	100.0

The Group invests in continuing education and training programmes for its employees with a view to constantly upgrading their skills and knowledge and providing the employees with an environment that encourages them to develop their career with the Group. The Group has arranged continuous on-the-job training for its employees. These training courses cover a broad spectrum, including technical know-how of various business segments, environmental, health and safety management systems, and mandatory training required by applicable laws and regulations.

In accordance with relevant PRC regulations on social insurance, the Group makes contribution to social insurance fund, including basic pension insurance, medical insurance, unemployment insurance, childbirth insurance, work-related injury insurance funds, and housing reserve fund for its employees.

DIRECTORS AND SENIOR MANAGEMENT

DIRECTORS

The Board currently consists of nine directors of the Company (the "**Directors**"), comprising three executive Directors, three non-executive Directors, and three independent non-executive Directors. The following table sets out certain information concerning our Directors.

Name	Age	Position	Date of Appointment
Executive Directors			
Zhang Fangliang	55	Chairman, executive Director and chief executive officer	May 21, 2015
Wang Ye	51	Executive Director and president	May 21, 2015
Meng Jiange	51	Executive Director and secretary of the Board	August 24, 2015 (appointed as the secretary of the Board on January 1, 2020)
Non-executive Directors			
Wang Luquan	50	Non-executive Director	May 21, 2015
Pan Yuexin	61	Non-executive Director	August 24, 2015
Wang Jiafen	68	Non-executive Director	November 26, 2018
Independent non-executive Directors			
Guo Hongxin	56	Independent non-executive Director	August 24, 2015
Dai Zumian	42	Independent non-executive Director	August 24, 2015
Pan Jiuan	51	Independent non-executive Director	November 26, 2018

Executive Directors

Dr. Zhang Fangliang (章方良), aged 55, is the co-founder, chairman, an executive Director, and chief executive officer of the Company. He was appointed as a Director on May 21, 2015 and redesignated as an executive Director on August 24, 2015. He is primarily responsible for the development, positioning, and strategy planning of the Group. He is one of the founders and a director of Genscript Corporation ("**GS Corp**"). Dr. Zhang is currently the director of the Company's subsidiaries, namely, GenScript Bioscience (BVI) Limited ("**GS BVI**") (formerly known as Genscript Biotech Limited), Genscript (Hong Kong) Limited ("**GS HK**"), GenScript Biotech (Singapore) Pte. Ltd., Nanjing Jinsirui Biotechnology Co., Ltd.* (南京金斯瑞生物科技有限公司) ("**GS China**"), Jiangsu GenScript Biotech Co., Ltd. (江蘇金斯瑞生物科技有限公司), GenScript Biotech (Netherlands) B.V., Jinsikang Technology (Nanjing) Co., Ltd.* (金斯康科技(南京)有限公司), Genscript USA Incorporated ("**GS USA**"), GenScript USA Holding, Inc., CustomArray, Inc., Legend Biotech Corporation ("**Legend**"), Legend Biotech Limited ("**Legend BVI**"), Legend Biotech HK Limited (香港傳奇生物科技有限公司) ("**Legend HK**"), Legend Biotech (Netherlands) B.V., Legend Biotech USA Inc., Legend Biotech Ireland Limited, Nanjing Legend Biotech Co., Ltd.,* (南京傳奇生物科技有限公司), Yangtze Investment (BVI) Limited, Yangtze (HK) Limited, Yangzte Holdings (BVI) Limited, Yangzte Investment USA Inc., Bestzyme Biotech Corporation, Bestzyme Biotech Limited ("**BSJ BVI**"), Nanjing Bestzyme Bioengineering Co., Ltd.* (南京百斯傑生物工程有限公司) ("**Nanjing Bestzyme**"), Bestzyme Biotech Inc., Bestzyme Biotech HK Limited (香港百斯傑生物科技有限公司) ("**BSJ HK**"), Genscript International Limited ("**GS International**"), Jinan Bestzyme Bio-Engineering Co., Ltd. (濟南百斯傑生物工程有限公司), Jinan Bestzyme biological engineering Co. Ltd., Downtown Branch Company* (濟南百斯傑生物工程有限公司市中分公司) (formerly known as Jinan Nornoon Bio-Engineering Co., Ltd. Downtown Branch Company* (濟南諾能生物工程有限公司市中分公司), Shandong Bestzyme Biotech Co., Ltd.* (山東百斯傑生物科技有限公司). Dr. Zhang is the chairman of our nomination committee ("**Nomination Committee**") and oversees the sanctions risk control committee ("**Sanctions Risk Control Committee**").

Dr. Zhang has over 20 years of experience in the biotechnology industry. Prior to joining the Group, from 1995 to 2002, he worked as a postdoctoral research fellow and an associate principal scientist at Schering-Plough. Dr. Zhang worked in the tumour biology department during his postdoctoral research at Schering-Plough. Dr. Zhang was also one of the key team members for an anti-cancer drug, farnesyl transferase inhibitor. After Dr. Zhang's postdoctoral studies, he was recruited to the department of central nervous system and cardiovascular system at Schering-Plough. He became one of the project leaders focusing on G-protein coupled receptors and led a group of scientists to discover the drug target for a billion-dollar drug. As a result of this discovery, Dr. Zhang won a Presidential Award at Schering-Plough in 2001. From 2002 to the present, Dr. Zhang worked as the chief executive officer of the Group, where he was involved in a variety of key biotechnological research projects and provided guidance and directions to those biotechnological research projects. Dr. Zhang was also awarded the Jiangsu Province High-Level Creative Talent Strategic Award* (江蘇省高層次創新創業人才引進計劃獎) in 2011. Dr. Zhang was awarded as the "Person of the Year" at the China Healthcare Summit 2019. Dr. Zhang has published more than 20 biotechnology related scientific papers in international peer-reviewed journals and has been the inventor for more than five patents in relation to biotechnological products and/or services.

Dr. Zhang obtained a Bachelor of Engineering degree from Chengdu College of Geology* (成都地質學院) (currently known as Chengdu University of Technology* (成都理工大學)) in the PRC in July 1984 and a Master of Science degree from Nanjing University in the PRC in July 1987. He also obtained a Doctor of Philosophy degree from Duke University in the U.S. in September 1995.

He is the brother-in-law of Mr. Chen Zhiqiang, the vice president of the China Business Department of the Company.

Ms. Wang Ye (王燁), aged 51, is the co-founder, an executive Director and president of the Company. She was appointed as a Director on May 21, 2015 and redesignated as an executive Director on August 24, 2015 and is primarily responsible for the Group's strategies and overall operational management. Ms. Wang is currently the director of BSJ Cayman, BSJ BVI, BSJ HK, BSJ US, Legend, Legend BVI, GS BVI, GS HK, GS International, GS USA, Qragen Biotech Corporation, Qragen Biotech (BVI) Limited, Qragen Biotech (HK) Limited and Maple Bio (Nanjing) Co., Ltd.* (楓楊生物研發(南京)有限公司) Ms. Wang is the partner of Nanjing Genbest Enterprise Management Center (Limited Partner)* (南京金百企業管理中心(有限合夥)). Ms. Wang is a member of our remuneration committee ("**Remuneration Committee**").

She joined GS Corp in August 2002 and served as the sales account manager until January 2005. In the Group, she worked as the sales and marketing director from February 2005 to August 2009, vice-president of operations from September 2009 to August 2011, and executive vice-president of operations from September 2011 to March 2014. She has been the chief operating officer of GS Corp in April 2014 and redesignated as the president since December 1, 2018. Prior to joining the Group, she worked as the environmental monitoring engineer at Shenzhen Futian Environment Protection Surveillance Station* (深圳市福田區環境保護監測站) from July 1993 to July 2000.

Ms. Wang obtained a Bachelor of Science in Microbiology and a Master of Science degree from Wuhan University* (武漢大學) in the PRC in July 1990 and in August 1993, respectively. She also obtained a Master of Science in Computer Sciences degree from Bridgeport University in the United States in December 2003. She obtained an Executive Master of Business Administration degree from the China Europe International Business School* (中歐國際工商學院) in the PRC in August 2014.

Mr. Meng Jiange (孟建革), aged 51, was appointed as an executive Director of the Company on August 24, 2015 and was appointed as the secretary of the Board on January 1, 2020. He is primarily responsible for assisting the chairman of the Board to deal with daily operations of the Board and external investment and major information disclosure. He was appointed as the vice president of finance of the Group in April 2010 when he joined the Group and was the vice president of investor relations between December 1, 2018 to December 31, 2019.

Mr. Meng has over 25 years of experience in finance and accounting. Prior to joining the Group, from July 1990 to October 1997, Mr. Meng worked at CCCC Guangzhou Dredging Co., Ltd.* (中交廣州航道局有限公司). From January 1999 to May 2000, Mr. Meng worked as the national finance manager at Guangdong Whirlpool Home Appliance Group* (廣東惠而浦家電集團)). From May 2000 to July 2004, Mr. Meng worked at Schering-Plough China* (先靈葆雅中國公司) as a branch finance manager and the accounting and IT manager in the head office. From September 2004 to December 2007, Mr. Meng worked as the Asia finance controller of Saint Gobain Grains and Powder Division. From March 2008 to March 2010, Mr. Meng worked as the chief financial officer of Quay Magnesium.

Mr. Meng graduated from Changsha Communications Institute* (長沙交通學院) (currently known as Changsha University of Science Technology* (長沙理工大學)) in the PRC with a Bachelor of Engineering degree in July 1990.

Non-executive Directors

Dr. Wang Luquan (王魯泉), aged 50, is a co-founder and a non-executive Director of the Company. He was appointed as a Director on May 21, 2015 and redesignated as a non-executive Director of the Company on August 24, 2015 and is primarily responsible for the Group's strategies and operational management. From 2003 to 2014, Dr. Wang was the president of GS Corp and is still currently a director of GS Corp. Dr. Wang is currently the director of two of the Company's subsidiaries, namely, GS HK and GS USA.

Dr. Wang has nearly 25 years of experience in the biotechnology industry. Prior to joining the Group, from 1991 to 1996, he worked as a graduate research assistant, and from 1995 to 1996, a bioinformatics staff at Rutgers University in the United States. From 1996 to 2003, Dr. Wang was a senior principal scientist at Schering-Plough Research Institute.

Dr. Wang obtained a Bachelor of Science in Biochemistry degree from Shandong University* (山東大學) in the PRC in July 1991 and a Doctor of Philosophy degree from Rutgers University in the United States in October 1996.

Mr. Pan Yuexin (潘躍新), aged 61, was appointed as a non-executive Director of the Company on August 24, 2015 and is primarily responsible for the Group's strategies and operational management.

Mr. Pan graduated from the Zhejiang Branch of the Open University of China* (中央廣播電視大學浙江分校) with a Chinese language and literature diploma in July 1985. Mr. Pan graduated from the Chinese Academy of Social Sciences* (中國社會科學院) with a business law post graduate degree in July 1987.

Mr. Pan has been a partner of Jun He Law Offices (君合律師事務所) from October 1992 to May 2003 and July 2009 to February 2013, as well as a partner of Shanghai Ridingsheng Equity Investment Services Ltd.* (上海日鼎盛股權投資服務有限公司) since March 2013. Mr. Pan has been the chairman of Shaoxing Lvpai Enterprise Management Co, Ltd.* (紹興律派企業管理股份有限公司) from December 2019 and the chairman of Shanghai Lvpai Enterprise Management Consulting Co, Ltd.* (上海律派企業管理諮詢有限公司) from May 2015.

Mr. Pan was the committee member and secretary general of the Education Committee of the All China Lawyers Association, PRC* (中華全國律師協會) from 2001 to 2003. He was also the director of the Hainan and Shanghai branches of Jun He Law Offices (君合律師事務所) from October 1992 to May 2003 and deputy director of the Education Committee of the Shanghai Bar Association* (上海市律師協會) from 2000 to 2003.

Mr. Pan was an independent non-executive director of Jiangling Motors Co., Ltd.* (江鈴汽車股份有限公司, SZSE: 000550), which is listed on the Shenzhen Stock Exchange, from 2005 to 2009, Sinochem International Corporation* (中化國際貿易股份有限公司, SHA: 600500), which is listed on the Shanghai Stock Exchange, from 2002 to 2003, Shanghai Tunnel Engineering Co., Ltd.* (上海隧道工程股份有限公司, SHA: 600820), which is listed on the Shanghai Stock Exchange, from 2009 to 2015, Great Wall Movie and Television Co., Ltd.* (長城影視股份有限公司, SZSE: 002071), which is listed on the Shenzhen Stock Exchange, from 2011 to 2014, and Simei Media Co., Ltd* (思美傳媒股份有限公司, SZSE: 002712) from 2009 to 2012 before it was listed on the Shenzhen Stock Exchange in 2014.

Ms. Wang Jiafen (王佳芬), aged 68, was appointed as a non-executive Director of the Company on November 26, 2019 and is primary responsible for the Group's strategies and operational management.

Ms. Wang has over 40 years of experience in corporate management across various industries, including financial, food and retail services. She is currently the chairman of Shanghai Guanji Enterprise Management Consulting Co., Ltd.* (上海觀詰企業管理諮詢公司) and a coach of Shanghai Lingjiao Enterprise Management Consulting Co. Ltd* (上海領教企業管理諮詢有限公司). She has previously served as the vice chairman of Ping An Trust Co., Ltd.* (平安信託有限責任公司) from 2011 to 2015. From 2008 to 2011, she was a partner of Granite Global Ventures (紀源資本). From 1996 to 2008, Ms. Wang served as the chairman and general manager of Bright Dairy Co., Ltd.*(光明乳業股份有限公司) (SHA: 600597). From 1992 to 2002, she served as the chairman and general manager of Shanghai Diary Company* (上海市牛奶公司).

Ms. Wang has been serving as a non-independent director of Shanghai Rongtai Health Technology Corporation Limited* 上海榮泰健康科技股份有限公司(SHA: 603579) since October 2019, an independent director of UE Furniture Co, Ltd (浙江永藝傢俱股份公司) (SHA: 603600) since 2018, an independent director of BESTORE Co., Ltd. 良品鋪子股份有限公司(SHA：603719) since November 2017, an independent director of Zhende Medical Co., Ltd (振德醫療用品股份有限公司) (SHA: 603301) since 2015 and a director of Shanghai Xintonglian Packaging Co., Ltd (上海新通聯包裝股份有限公司) (SHA: 603022) since 2011. She has also served as an independent director of Eurocrane (China) Co., Ltd*(法蘭泰克重工股份有限公司) (SHA: 603966) from 2018 to 2019 and a director of Meinian Onehealth Healthcare Holdings Co., Ltd 美年大健康產業控股股份有限公司(SZSE: 002044) from 2013 to November 2019.

Ms. Wang obtained her college degree in business management from Shanghai Television University* (上海電視大學) in 1986 (now known as Shanghai Open University* 上海開放大學). She obtained her master degree in business administration from China Europe International Business School (中歐國際工商學院) in 2004.

Independent Non-executive Directors

Mr. Guo Hongxin (郭宏新), aged 56, was appointed as an independent non-executive Director of the Company on August 24, 2015. Mr. Guo is the chairman of our remuneration committee and a member of our audit committee ("**Audit Committee**").

From July 1983 to March 1998, Mr. Guo was working at the Nanjing School of Chemical Engineering. Since April 1998, he has been the chairman of the board of Sunpower Group Ltd, which was listed on the Singapore Exchange SESDAQ in March 2005 and has been listed on the Singapore Exchange Mainboard since August 2007 (SPWG: Singapore Exchange).

Mr. Guo obtained a Diploma in Chemical Thermal Engineering from Nanjing Chemical Engineering College* (南京化工動力專科學校) (currently known as Nanjing Normal University) in the PRC in July 1983. Mr. Guo obtained a senior engineering qualification from Nanjing University of Chemical Technology* (南京化工大學) (currently known as Nanjing Tech University* (南京工業大學)) in the PRC in March 1997. He also obtained a Doctor of Philosophy in Geotechnical Engineering degree from the Chinese Academy of Sciences* (中國科學院) in the PRC in January 2010. He also obtained an Executive Master of Business Administration degree from Tsinghua University* (清華大學) in the PRC in July 2014.

Mr. Dai Zumian (戴祖勉), aged 42, was appointed as an independent non-executive Director of the Company on August 24, 2015. Mr. Dai is the chairman of the Audit Committee, and a member of the Remuneration Committee and the Nomination Committee.

Mr. Dai is a member of the Chinese Institute of Certified Public Accounts as well as a fellow of Association of Chartered Certified Accountants. From July 1999 to August 2006, he gained over seven years' experience in auditing. His experience in auditing includes that gained at PricewaterhouseCoopers Zhongtian Certified Public Accountants (普華永道中天會計師事務所) from February 2005 to August 2006.

Mr. Dai was the qualified accountant and company secretary of Hisense Kelon Electrical Holdings Limited (海信科龍電器股份有限公司, HKSE: 921, SZSX: 000921), which is listed on the Main Board of the Hong Kong Stock Exchange and the Shenzhen Stock Exchange, from September 2006 to August 2007. Mr. Dai served as the chief financial officer of Shanghai Golden Monkey Food Joint Stock Co., Ltd.* (.上海金絲猴食品股份有限公司)) from February 2009 to April 2012, of Xiezhong International Holdings Limited (協眾國際控股有限公司, HKSE: 3663) which is listed on the Main Board of the Hong Kong Stock Exchange, from May 2012 to June 2018, and of Roseonly Group Co., Ltd.* (諾誓集團有限公司) from October 2017 to April 2019. Mr. Dai has been appointed as the chief financial officer of Shanghai Sanxi Big Data Technology Co., Ltd.* (上海三熙大數據技術有限公司) since April 2019.

Mr. Dai graduated from Shanghai University of Finance and Economics* (上海財經大學) in the PRC with a Bachelor of International Business Administration degree in June 1999. He also holds an Executive Master of Business Administration degree from China Europe International Business School* (中歐國際工商學院) in the PRC earned in October 2013.

Mr. Pan Jiuan (潘九安), aged 51, was appointed as an independent non-executive Director of the Company on November 26, 2019. Mr. Pan is the member of the Audit Committee and the Nomination Committee.

Mr. Pan has over 20 years of experience in human resources and management across various industries, including education, kitchen electrical appliances, office automated facilities, textile and garment. He is currently the chief human resources officer of Shanghai Lingjiao Enterprise Management Consulting Co. Ltd*(上海领教企業管理諮詢有限公司). From 2010 to 2013 and 2003 to 2010, he served as the corporate group director of human resources of each of K-Boxing Men's Wear (Shanghai) Co. Ltd.* (勁霸男裝(上海)有限公司) and Ningbo Fotile Kitchen Appliances Co. Ltd.*.(寧波方太廚具有限公司), respectively. From 1994 to 2002, he was the deputy manager, manager, and senior manager of Minolta Industries (HK) Limited (美能達實業(香港)有限公司).

Mr. Pan obtained his bachelor degree in law from Central South University of Technology* (中南工業大學)(now known as Central South University*(中南大學)) in 1991. He obtained his qualification as a lawyer in the People's Republic of China in 1994. He also obtained the national manager qualification*(國家一級經理人資格) from Shanghai Jiao Tong University Center for Quality Management*(上海交通大學卓越管理中心) in 2015. He further obtained the certificate of chief human resources officer from Remin University*(中國人民大學) in 2019.

* *For identification purpose only*

SENIOR MANAGEMENT

The following table sets out certain information concerning our senior management:

Name	Age	Year of joining the Group	Date of Appointment
Zhang Fangliang	(see above)	(see above)	(see above)
Wang Ye	(see above)	(see above)	(see above)
Meng Jiange	(see above)	(see above)	(see above)
Zhu Li (ceased to be senior management on July 16, 2019)	70	March 1, 2010	March 1, 2010
Chen Zhiqiang (ceased to be senior management on December 31, 2019)	51	August 15, 2004	January 1, 2014
Xu Yuan	52	March 28, 2018	March 28, 2018
Zhou Xu	50	November 5, 2018	November 5, 2018

Dr. Zhang Fangliang (章方良), is the co-founder, chairman, the executive Director, and chief executive officer of the Company. Please refer to the previous section headed "Executive Directors" for the biography of Dr. Zhang.

Ms. Wang Ye (王燁), is the co-founder, the executive Director, and president of the Company. Please refer to the previous section headed "Executive Directors" for the biography of Ms. Wang.

Mr. Meng Jiange (孟建革), is the executive Director of the Company and the secretary of the Board. Please refer to the previous section headed "Executive Directors" for the biography of Mr. Meng.

Dr. Zhu Li (朱力), aged 70, was appointed as the vice president of strategy of the Group in 2010. Dr. Zhu served as the chief strategy officer of the Company from February 2017 to July 2019 and has been serving as a consultant for the Company since July 16, 2019.

Dr. Zhu worked at Clontech Laboratories, Inc. in California, USA as a director of molecular biology from 1990 to 2000. Dr. Zhu worked at Cathay Biotech, Inc. as a vice president of research from July 2006 to December 2008.

Dr. Zhu obtained a Bachelor of Science of Biology degree from the East China Normal University (華東師範大學) in June 1982 and a Doctor of Philosophy from Stanford University in September 1990.

Mr. Chen Zhiqiang (陳志強), aged 51, was appointed the senior vice president of the Company in January 2014 and was primarily responsible for the Company's public relations. He has being serving as the vice president of the China Business Department since March 2015 and ceased to be a senior management in December 2019.

Mr. Chen joined the Group in August 2004 and was since appointed as the senior vice president of our internal safety centre of the Company, and was then appointed as the senior vice president of our public relation department in January 2014. Prior to joining the Group, from February 1993 to March 2004, he worked for Wuhan Railway Bureau* (武漢鐵路局) as a trainee and as an electrician.

He graduated with a diploma in Computing Communications and Technology from Hubei Radio & TV University* (湖北廣播電視大學)) in July 1992.

He is the brother-in-law of Dr. Zhang Fangliang, the co-founder, chairman, the executive Director, and the chief executive officer of the Company.

Dr. Xu Yuan (許遠), aged 52, was appointed as the chief executive officer of Legend and is primarily responsible for the operations and formulation of strategies of Legend.

Prior to joining Legend, Dr. Xu was the senior vice president of biologics and vaccines at Merck & Co., Inc. from 2015 to 2018. From 2014 to 2015, she worked as the vice president of biologics at Gilead Sciences Inc. From 2008 to 2014, she worked as the vice president at Novartis AG. With more than 25 years of biologics, biosimilar, vaccine, gene and cell therapy discovery, development, commercialization and life-cycle-management experience, Dr. Xu has contributed to the successful commercial launch of nearly 25 products.

Dr. Xu received her bachelor degree of biochemistry from the Nanjing University* (南京大學) in 1989 and her Ph.D. degree of biochemistry from the University of Maryland, College Park in 1993. She performed post-doctoral training in virology and gene therapy at the University of California, San Diego from 1993 to 1995.

Mr. Zhou Xu (周旭), aged 50, was appointed as the general manager of industrial synthetic biology products of Bestzyme and is primarily responsible for the development and formulation of strategies of Bestzyme.

Prior to joining the Group, Mr. Zhou worked as the vice president of Household Care China & Southeast Asia and Technical Industries China at Novozymes (China) Investment Co. Ltd. from 2015 to 2018 and its vice president of China Business Operations from 2015 to 2015. From 2011 to 2015, he worked as a sales and marketing director at Mosaic China. From 2006 to 2011, he worked as a sales director at Johnson & Johnson Vision Care (Shanghai), Inc.. From 1999 to 2005, he worked as a regional manager at Heineken China. From 1994 to 1999. He worked as a product manager at Inchcape JDH Limited.

Mr. Zhou obtained a Bachelor of Chinese Literature degree in Capital Normal University* (首都師範大學) in July 1994 and an Executive Master of Business Administration degree from Renmin University of China* (中國人民大學) in June 2010.

REPORT OF THE DIRECTORS

The Board is pleased to present the report of the Directors together with the audited consolidated financial statements of the Group for the year ended December 31, 2019.

CORPORATE INFORMATION AND GLOBAL OFFERING

The Company was incorporated in the Cayman Islands on May 21, 2015 as an exempted company with limited liability under the laws of the Cayman Islands. The Shares were listed on the Main Board of the Stock Exchange on December 30, 2015 (the "**Listing**" or the "**Listing Date**").

PRINCIPAL ACTIVITIES

The Company is a well-recognized life sciences research and application service and product provider that applies its proprietary technology to various fields from basic life sciences research to translational biomedical development, industrial synthetic products, and cell therapeutic solutions. The broad and integrated life sciences research and application service and product portfolio comprises four segments, namely, (i) life science services and products, (ii) biologics development services, (iii) industrial synthetic biology products, and (iv) cell therapy. The services and products are primarily used by scientists and researchers for conducting fundamental life sciences research, translational biomedical research, and early stage pharmaceutical development. Its development services are used by biopharmaceutical and biotech companies for the development of therapeutic antibodies, and gene or cell therapy products with an integrated platform. Its industrial synthetic biology products are also used by industry users of industrial enzymes, such as those in the food and feed industries. Its cell therapy products are used to treat refractory diseases including cancer and inflammatory diseases. Our customers are primarily located in North America, Europe, the PRC, Japan and the other Asia Pacific regions. The analysis of the principal activities of the Company's subsidiaries are set out in note 1 to the financial statements.

RESULTS AND APPROPRIATIONS

The consolidated results of the Group for the year ended December 31, 2019 are set out on pages 145 and 146 of this annual report.

FINAL DIVIDEND

In order to retain resources for the Group's business development, the Board did not recommend the payment of final dividend for the year ended December 31, 2019.

CLOSURE OF REGISTER OF MEMBERS

In order to determine the entitlement of shareholders to attend and vote at the forthcoming annual general meeting (the "**AGM**") to be held on Monday, June 1, 2020, the register of members of the Company will be closed from Wednesday, May 27, 2020 to Monday, June 1, 2020 (both dates inclusive), during which period no transfer of shares will be registered. All transfer documents, accompanied by the relevant share certificates, shall be lodged with the Company's branch share registrar in Hong Kong, Computershare Hong Kong Investor Services Limited, at Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong for registration no later than 4:30 p.m. on Tuesday, May 26, 2020.

FINANCIAL SUMMARY

A summary of the results and assets and liabilities of the Group for the last five financial years is set out on page 7 of this annual report. This summary does not form part of the audited consolidated financial statements.

MAJOR CUSTOMERS AND SUPPLIERS

Major Customers

The revenue attributable to the top five customers of 2019 accounted for 25.9% of the Company's operating income for the year ended December 31, 2019. The revenue from the largest single customer accounted for 21.0% of the Company's operating income for the year ended December 31, 2019.

Major Suppliers

In 2019, the turnover attributable to the top five suppliers accounted for 22.9% of the Company's total purchases for the year ended December 31, 2019. The turnover of the largest single supplier, accounted for 8.5% of the Company's total purchases for the year ended December 31, 2019.

During the Reporting Period, to the knowledge of the Directors, none of the Directors or any of their close associates or any shareholders (which to the knowledge of the Directors own more than 5.0% of the Company's issued share capital) had an interest in any of the Company's top five customers or suppliers.

PROPERTY, PLANT, AND EQUIPMENT

Details of movements in the property, plant, and equipment of the Group during the Year are set out in note 13 to the financial statements in this annual report.

SHARE CAPITAL

As of December 31, 2019, 1,878,376,650 ordinary shares were issued. Details of movements in the share capital of the Company during the year ended December 31, 2019 are set out in note 31 to the financial statements in this annual report.

RESERVES

Details of movements in the reserves of the Company and the Group during the year are set out in the consolidated statement of changes in equity on pages 149 and 150 in this annual report.

DISTRIBUTABLE RESERVES

As of December 31, 2019, the Company's reserves are available for distribution, calculated in accordance with the provisions of the Companies Law of the Cayman Islands, Cap 22 (Law 3 of 1961, as consolidated and revised), amounted to US$15,580,000 (as of December 31, 2018: approximately US$112,442,000).

BANK LOANS AND OTHER BORROWINGS

As at December 31, 2019, GS China borrowed short-term interest-bearing loans from Citi Bank for a total amount of RMB65,968,000 (equivalent to approximately US$9,456,000) with a fixed interest rate at 4.0% at the first half of the Year and at 3.8% at the end of the Year, which were secured by credit. GS China used such loans to purchase raw materials and replenish working capital.

As at December 31, 2019, Genscript (Hong Kong) Limited ("**GS HK**") borrowed a short-term interest-bearing loan from Citi Bank for a total amount of US$7,000,000 with a floating interest rate at the three-month LIBOR rate plus 0.6%, which were secured by credit. GS HK used such loan to purchase goods and replenish working capital.

As at December 31, 2019, GS JP borrowed a long-term interest-bearing loan from Mizuho Bank for a total amount of JYP250,000,000 (equivalent to approximately US$2,300,000) with a floating interest rate at the TIBOR rate plus 0.25%, which were secured by the buildings and freehold land held by GS JP. GS JP used such a loan to purchase building.

Save as above, the Group did not have any other outstanding, unpaid bank loans and/or other borrowings.

DIRECTORS

The Directors during the year ended December 31, 2019 and up to the date of this annual report were:

Executive Directors

Dr. Zhang Fangliang *(Chairman and Chief Executive Officer)*
Ms. Wang Ye *(President)*
Mr. Meng Jiange *(Secretary of the Board)*

Non-executive Directors

Dr. Wang Luquan
Mr. Pan Yuexin
Ms. Wang Jiafen

Independent Non-executive Directors

Mr. Guo Hongxin
Mr. Dai Zumian
Mr. Pan Jiuan

Pursuant to the Memorandum and Articles of Association of the Company (the "**Articles**"), each of Dr. Wang Luquan, Mr. Pan Yuexin and Mr. Dai Zumian will retire at the AGM and, being eligible, will offer themselves for re-election. Biographical details of the Directors to be re-elected at the AGM will be set out in the circular dated April 24, 2020 to the shareholders.

DIRECTORS' PROFILES

Biographical details of Directors and senior management of the Company is set out on pages 26 to 33 in this annual report.

CONFIRMATION OF INDEPENDENCE OF INDEPENDENT NON-EXECUTIVE DIRECTORS

The Company has received the annual confirmation from each of the independent non-executive Directors in respect of his/her independence pursuant to Rule 3.13 of the Listing Rules. The Company considers all of the independent non-executive Directors to be independent throughout the year ended December 31, 2019 in accordance with Rule 3.13 of the Listing Rules.

DIRECTORS' SERVICE CONTRACTS

Each of the executive Directors has entered into service contracts with the Company for a fixed term of three years commencing on December 1, 2018, which can be terminated before the expiration of the term by not less than six months' notice in writing served by either party on the other.

Each of the non-executive Directors has signed appointment letters with the Company for a term of three years. The effective date of the appointments of Dr. Wang Luquan and Mr. Pan Yuexin is August 24, 2018, and that of Ms. Wang Jiafen is November 26, 2018. Their appointments are subject to termination in accordance with their respective terms.

Each of the independent non-executive Directors has signed appointment letters with the Company for a term of three years. The effective date of the appointment of Mr. Guo Hongxin and Mr. Dai Zumian is August 24, 2018, and that of Mr. Pan Jiuan is November 26, 2018. Their appointments are subject to termination in accordance with their respective terms.

Save as disclosed herein, none of the Directors has entered into any service contract with the Group that is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

DIRECTORS' INTERESTS IN TRANSACTIONS, ARRANGEMENTS AND CONTRACTS OF SIGNIFICANCE

None of the Company or any of its subsidiaries entered into, whether directly or indirectly, any transactions, arrangements and contracts of significance that a Director of the Company had a material interest in, that was related to the Company's business, and/or that subsisted during and up to the end of the Year.

MANAGEMENT CONTRACTS

No contracts concerning the management and administration of the whole or any substantial part of the businesses of the Company were entered into or existed during the Year.

REMUNERATION POLICIES

The Group's remuneration policy and structure for remuneration of the Directors and senior management of the Group are based on the Group's operating results, individual performance and comparable market statistics, and is reviewed by the Remuneration Committee periodically.

The remuneration of the non-executive Directors is recommended by the Remuneration Committee and is decided by the Board while the remuneration of the executive Directors is decided by the Remuneration Committee, having regard to the merit, qualifications, and competence of individual directors, the Group's operating results, and comparable market statistics.

The Company has also adopted the Pre-IPO Share Option Scheme, the Post-IPO Share Option Scheme, the Subsidiary Share Option Scheme and the RSA Scheme. The purpose of the Share Option Schemes and the RSA Scheme is to enable us to grant options or restricted shares to selected participants as incentives or rewards for their contributions. The Directors consider that the Share Option Schemes and the RSA Scheme, with its broad basis of participation, will enable the Company or Legend to reward its employees, Directors, and other selected participants for their contributions.

During the year ended December 31, 2019, 4,515,000 share options with an exercise price of HK$18.3 per share and 5,885,000 share options with an exercise price of HK$19.132 per share were granted under the Post-IPO Share Option Scheme to certain employees on July 19, 2019 and November 29, 2019, respectively. Please refer to our announcements dated July 19, 2019 and November 29, 2019 for details. Save as disclosed, no other options have been granted under the Post-IPO Share Option Scheme during the Reporting Period. During the year ended December 31, 2019, 1,048,116 restricted shares and 150,000 restricted shares were granted under the RSA Scheme to certain employees on July 19, 2019 and November 29, 2019, respectively. Please refer to our announcements dated July 19, 2019 and November 29, 2019 for details. Save as disclosed, no other restricted shares have been granted under the RSA Scheme during the Reporting Period. No option had been granted under the Pre-IPO Share Option Scheme once the Company is listed on the Stock Exchange on the Listing Date. For details of the Share Option Schemes and the RSA Scheme, please see the paragraph headed "Share Option Schemes" and "Restricted Share Award Scheme" below.

PERMITTED INDEMNITY PROVISION

The Articles provides that every Director is entitled to be indemnified out of the assets of the Company against all losses or liabilities which they may sustain or incur in or about the execution of the duties of their office or otherwise in relation thereto. A permitted indemnity provision for the benefit of the Directors is currently in force and was in force throughout the financial year. The Company had taken out and maintained appropriate insurance cover in respect of potential legal actions against its Directors and officers during the Reporting Period.

EQUITY-LINKED AGREEMENTS

Save for the Share Option Schemes of the Company as set out in this report, no equity-linked agreements were entered into by the Group, or existed during the year ended December 31, 2019.

SHARE OPTION SCHEMES

A. Pre-IPO Share Option Scheme

The Company adopted the Pre-IPO Share Option Scheme by a resolution of the then sole shareholder of the Company on July 15, 2015. The Pre-IPO Share Option Scheme is not subject to the provision of Chapter 17 of the Listing Rules as the Pre-IPO Share Option Scheme does not involve the grant of options by the Company to subscribe for Shares once the Company is listed on the Stock Exchange. No further options are granted under the Pre-IPO Share Option Scheme after the Listing.

Set out below are details of the outstanding options under the Pre-IPO Share Option Scheme:

					Number of share options					
Category/Name of Grantee	**Date of Grant**	**Vesting Period**	**Exercise Period**	**Exercise Price per Share (US$)**	**Outstanding as at January 1, 2019**	**Granted during the Reporting Year**	**Cancelled during the Reporting Year**	**Lapsed during the Reporting Year**	**Exercised during the Reporting Year**	**Outstanding as at December 31, 2019**
Directors of the Company										
Wang Ye	December 31, 2009	December 31, 2010 – December 31, 2019 December 31, 2011 – December 31, 2019 December 31, 2012 – December 31, 2019 December 31, 2013 – December 31, 2019 December 31, 2014 – December 31, 2019	December 31, 2010 – December 31, 2019	0.026	3,312,610	–	–	–	3,312,610	–
	May 22, 2012	December 31, 2012 – July 31, 2020 December 31, 2013 – July 31, 2020 December 31, 2014 – July 31, 2020	December 31, 2012 – July 31, 2020	0.103	34,008,093	–	–	–	9,390,000	24,618,093

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (US$)	Number of share options					
					Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
	March 20, 2014	December 31, 2014 – July 31, 2025 December 31, 2015 – July 31, 2025 December 31, 2016 – July 31, 2025	December 31, 2014 – July 31, 2025	0.062	68,016,194	–	–	–	–	68,016,194
Meng Jiange	February 20, 2010	April 1, 2011 – December 31, 2020 April 1, 2012 – December 31, 2020 April 1, 2013 – December 31, 2020 April 1, 2014 – December 31, 2020 April 1, 2015 – December 31, 2020	April 1, 2011 – December 31, 2020	0.077	1,195,320	–	–	–	900,000	295,320

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (US$)	Number of share options					
					Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
	May 1, 2013	May 1, 2016 – December 31, 2020 May 1, 2017 – December 31, 2020 May 1, 2018 – December 31, 2020 May 1, 2019 – December 31, 2020 May 1, 2020 – December 31, 2020	May 1, 2016 – December 31, 2020	0.103	1,943,320	–	–	–	1,476,923	466,397
	January 30, 2015	January 30, 2016 – July 31, 2025 January 30, 2017 – July 31, 2025 January 30, 2018 – July 31, 2025 January 30, 2019 – July 31, 2025 January 30, 2020 – July 31, 2025	January 30, 2016 – July 31, 2025	0.077	1,943,320	–	–	–	–	1,943,320
Wang Luquan	February 10, 2012	February 10, 2013 – July 31, 2019 February 10, 2014 – July 31, 2019	February 10, 2013 – July 31, 2019	0.103	3,216,640	–	–	–	3,216,640	–

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (US$)	Number of share options					
					Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
Senior management of the Company										
Zhu Li (ceased to be senior management on July 16, 2019)	January 27, 2010	March 1, 2011 – July 31, 2019 March 1, 2012 – July 31, 2019 March 1, 2013 – July 31, 2019 March 1, 2014 – July 31, 2019 March 1, 2015 – July 31, 2019	March 1, 2011 – July 31, 2019	0.077	754,656	–	–	–	754,656	–
	March 28, 2014	December 31, 2014 – December 31, 2020 December 31, 2015 – December 31, 2020 December 31, 2016 – December 31, 2020 December 31, 2017 – December 31, 2020 December 31, 2018 – December 31, 2020	December 31, 2014 – December 31, 2020	0.077	1,943,320	–	–	–	175,000	1,768,320

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (US$)	Number of share options: Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
Chen Zhiqiang (ceased to be senior management on December 31, 2019)	August 10, 2009	August 10, 2009 – December 31, 2019	August 10, 2009 – December 31, 2019	0.003	1,232,259	–	–	–	1,232,259	–
	March 28, 2014	December 31, 2014 – December 31, 2020 December 31, 2015 – December 31, 2020 December 31, 2016 – December 31, 2020 December 31, 2017 – December 31, 2020 December 31, 2018 – December 31, 2020	December 31, 2014 – December 31, 2020	0.077	831,320	–	–	–	–	831,320
Other employees										
Employees	October 17, 2005 – March 30, 2015	October 17, 2008 – December 31, 2025	October 17, 2008 – December 31, 2025	0.003-0.103	65,997,142	–	–	13	20,874,485	45,122,644
					184,394,194	–	–	13	41,332,573	143,061,608

Notes:

(1) The weighted average closing price immediately before the dates on which the options were exercised was HK$17.98.

(2) For further details of the Pre-IPO Share Option Scheme, please refer to Appendix V "Statutory and General Information" of the Prospectus and note 32 to the financial statements in this annual report.

B. POST-IPO SHARE OPTION SCHEME

The Company approved and adopted the Post-IPO Share Option Scheme by written resolutions of its then sole shareholder on December 7, 2015. The Post-IPO Share Option Scheme is subject to the requirements under Chapter 17 of the Listing Rules. Options to subscribe for 10,400,000 Shares had been granted under the Post-IPO Share Option Scheme from the date of its adoption to December 31, 2019.

Set out below are details of the outstanding options under the Post-IPO Share Option Scheme:

						Number of share options					
Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (HK$)	Closing Price Per Share immediately before the date of grant (HK$)	Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
Directors of the Company											
Pan Yuexin	November 29, 2018	November 29, 2018 – November 28, 2023 November 29, 2019 – November 28, 2023 November 29, 2020 – November 28, 2023 November 29, 2021 – November 28, 2023 November 29, 2022 – November 28, 2023	November 29, 2018 – November 28, 2023	14.04	14.32	400,000	–	–	–	–	400,000
Guo Hongxin	November 29, 2018	November 29, 2018 – November 28, 2023 November 29, 2019 – November 28, 2023 November 29, 2020 – November 28, 2023 November 29, 2021 – November 28, 2023 November 29, 2022 – November 28, 2023	November 29, 2018 – November 28, 2023	14.04	14.32	400,000	–	–	–	–	400,000
Dai Zumian	November 29, 2018	November 29, 2018 – November 28, 2023 November 29, 2019 – November 28, 2023 November 29, 2020 – November 28, 2023 November 29, 2021 – November 28, 2023 November 29, 2022 – November 28, 2023	November 29, 2018 – November 28, 2023	14.04	14.32	400,000	–	–	–	–	400,000

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per Share (HK$)	Closing Price Per Share immediately before the date of grant (HK$)	Number of share options: Outstanding as at January 1, 2019	Granted during the Reporting Year	Cancelled during the Reporting Year	Lapsed during the Reporting Year	Exercised during the Reporting Year	Outstanding as at December 31, 2019
Senior management of the Group											
Zhu Li (ceased to be senior management on July 16, 2019)	October 11, 2017	December 31, 2019 – October 10, 2027 December 31, 2020 – October 10, 2027 December 31, 2021 – October 10, 2027 December 31, 2022 – October 10, 2027 December 31, 2023 – October 10, 2027	December 31, 2019 – October 10, 2027	8.330	8.07	800,000	–	–	–	–	800,000
Other employees											
	June 22, 2016	June 22, 2016 – June 21, 2026	June 22, 2016 – June 21, 2026	1.2040	1.210	8,435,637	–	–	–	120,000	8,315,637
	September 23, 2016	September 23, 2017 – September 22, 2026	September 23, 2017 – September 22, 2026	2.406	2.300	11,445,000	–	–	–	766,000	10,679,000
	April 25, 2017	April 25, 2019 – April 24, 2027	April 25, 2019 – April 24, 2027	3.512	3.450	25,157,500	–	–	360,000	795,000	24,002,500
	October 11, 2017	July 25, 2018 - October 10, 2027	July 25, 2018 – October 10, 2027	8.330	8.070	10,375,000	–	–	–	–	10,375,000
	November 20, 2017	December 31, 2019 - November 19, 2027	December 31, 2019 – November 19, 2027	9.350	8.910	8,635,000	–	–	250,000	–	8,385,000
	May 4, 2018	January 1, 2019 – May 3, 2028	January 1, 2019 – May 3, 2028	26.46	26.65	9,600,000	–	–	200,000	–	9,400,000
	November 29, 2018	November 29, 2019 – November 28, 2028	November 29, 2019 – November 28, 2028	14.040	14.32	1,800,000	–	–	1,000,000	–	800,000
	July 19, 2019	July 19, 2020 – July 18, 2029	July 19, 2020 – July 18, 2029	18.3	17.86	–	4,515,000	–	–	–	4,515,000
	November 29, 2019	November 29, 2020 – November 28, 2029	November 29, 2020 – November 28, 2029	19.132	19.54	–	5,885,000	–	–	–	5,885,000
						77,448,137	10,400,000	–	1,810,000	1,681,000	84,357,137

Notes:

(1) The weighted average closing price immediately before the dates on which the options were exercised was HK$18.46.

For further details of the Post-IPO Share Option Scheme, please refer to Appendix V "Statutory and General Information" of the Prospectus and note 32 to the financial statements in this annual report.

C. SUBSIDIARY SHARE OPTION SCHEME

The Company approved and adopted the Subsidiary Share Option Scheme on December 21, 2017. The Subsidiary Share Option Scheme is subject to the requirements under Chapter 17 of the Listing Rules.

Options to subscribe for 19,847,000 shares of Legend had been granted (of which 1,834,000 options had lapsed) under the Subsidiary Share Option Scheme from the date of its adoption to December 31, 2019.

Set out below are details of the outstanding options under the Subsidiary Share Option Scheme:

					Number of share options					
Category/Name of Grantee	**Date of Grant**	**Vesting Period**	**Exercise Period**	**Exercise Price per share (USD)**	**Outstanding as at January 1, 2019**	**Granted during the Reporting Period**	**Cancelled during the Reporting Period**	**Lapsed during the Reporting Period**	**Exercised during the Reporting Period**	**Outstanding as at December 31, 2019**
Senior management of the Group										
Xu Yuan	August 30, 2018	July 1, 2019 – August 29, 2028 July 1, 2020 – August 29, 2028 July 1, 2021 – August 29, 2028 July 1, 2022 – August 29, 2028 July 1, 2023 – August 29, 2028	July 1, 2019 – August 29, 2028	1.0	4,400,000	–	–	–	–	4,400,000
Other employees	December 26, 2017	December 25, 2019 – December 25, 2027	December 25, 2019 – December 25, 2027	0.5	6,347,000	–	–	–	–	6,347,000
	August 30, 2018	January 1, 2019 – August 29, 2028	January 1, 2019 – August 29, 2028	1.0	2,888,000	–	–	5,000	–	2,883,000
	December 31, 2018	December 31, 2019 – December 30, 2028	December 31, 2019 – December 30, 2028	1.0	676,000	–	–	40,000	–	636,000
	January 14, 2019	December 31, 2019 – December 30, 2028	December 31, 2019 – December 30, 2028	1.0	–	10,000	–	–	–	10,000
	January 28, 2019	December 31, 2019 – December 30, 2028	December 31, 2019 – December 30, 2028	1.0	–	10,000	–	–	–	10,000
	July 2, 2019	July 2, 2020 – July 1, 2029	July 2, 2020 – July 1, 2029	1.5	–	2,233,000	–	10,000	–	2,223,000

Category/Name of Grantee	Date of Grant	Vesting Period	Exercise Period	Exercise Price per share (USD)	Number of share options					
					Outstanding as at January 1, 2019	Granted during the Reporting Period	Cancelled during the Reporting Period	Lapsed during the Reporting Period	Exercised during the Reporting Period	Outstanding as at December 31, 2019
	July 8, 2019	July 2, 2020 – July 1, 2029	July 2, 2020 – July 1, 2029	1.5	–	2,000	–	–	–	2,000
	July 22, 2019	July 2, 2020 – July 1, 2029	July 2, 2020 – July 1, 2029	1.5	–	1,000,000	–	–	–	1,000,000
	November 29, 2019	November 29, 2020 – November 28, 2029	November 29, 2020 – November 28, 2029	1.5	–	472,000	–	–	–	472,000
	December 9, 2019	November 29, 2020 – November 28, 2029	November 29, 2020 – November 28, 2029	1.5	–	30,000	–	–	–	30,000
					14,311,000	3,757,000	–	55,000	–	18,013,000

Apart from the movements as stated above, no options were granted, exercised, lapsed or cancelled under the Subsidiary Share Option Scheme during the year ended December 31, 2019.

SUMMARY OF THE SHARE OPTION SCHEMES

	Details	Pre-IPO Share Option Scheme	Post-IPO Share Option Scheme	Subsidiary Share Option Scheme
1.	Purpose	To recognise and acknowledge the contributions that the eligible participants have or may have made to the Group and to provide the eligible participants with an opportunity to have a personal stake in the Company with a view to (1) attract skilled and experienced personnel; (2) incentivise them to remain with the Group; and (3) motivate them to strive for the future development and expansion of the Group by providing them with the opportunity to acquire equity interests in the Company.	To provide participants with the opportunity to acquire proprietary interests in the Company and to encourage participants to work towards enhancing the value of the Company and its Shares for the benefit of the Company and its shareholders as a whole. The Post-IPO Share Option Scheme will provide the Company with a flexible means of either retaining, incentivising, rewarding, remunerating, compensating, and/or providing benefits to participants.	To provide participants with the opportunity to acquire proprietary interests in Legend and to encourage participants to work towards enhancing the value of Legend and its shares for the benefit of Legend and its shareholders as a whole. The Subsidiary Share Option Scheme will provide Legend with a flexible means of either retaining, incentivising, rewarding, remunerating, compensating and/or providing benefits to participants.
2.	Participants	Directors, employees, or consultants of any member of the Group.	The Board may offer to grant an option to any participants as the Board may, in its absolute discretion, select.	Directors (including executive directors, non-executive directors and independent non-executive directors) and employees of any member of the Group; provided that for any participant who is subject to the tax laws of the United States of America (the "**U.S. Participant**"), such participant must be a natural person and a director or employee of Legend or a subsidiary of Legend that is at least 50% owned by Legend.

	Details	Pre-IPO Share Option Scheme	Post-IPO Share Option Scheme	Subsidiary Share Option Scheme
3.	Maximum number of Shares to be allotted	As of December 31, 2019, options to subscribe for Shares aggregate of 143,061,608 were outstanding, representing approximately 7.62% of the issued share capital of the Company as of December 31, 2019. No further option may be granted under the Pre-IPO Share Option Scheme.	The maximum number of Shares in respect of which options may be granted under the Post-IPO Share Option Scheme was 160,000,000, representing approximately 8.52% of the issued share capital of the Company as of December 31, 2019. The maximum number of Shares that may be issued upon exercise of all outstanding options granted and yet to be exercised under the Post-IPO Share Option Scheme and any other scheme of the Company must not in aggregate exceed 30% of the total number of Shares in issue from time to time. Options to subscribe for 10,400,000 Shares had been granted under the Post-IPO Share Option Scheme for the year ended December 31, 2019.	The maximum number of shares of Legend in respect of which options may be granted under the Subsidiary Share Option Scheme was 20,000,000, representing approximately 10% of the issued share capital of Legend as of December 31, 2019. The maximum number of shares of Legend that may be issued upon exercise of all outstanding options granted and yet to be exercised under the Subsidiary Share Option Scheme and other scheme of Legend must not exceed 30% of the shares of Legend in issue from time to time. Options to subscribe for 3,757,000 shares of Legend had been granted under the Subsidiary Share Option Scheme for the year ended December 31, 2019.
4.	Maximum – entitlement of each participant	–	1% of the issued share capital of the Company from time to time within any 12 month period up to the date of the latest grant.	1% of the issued share capital of Legend from time to time within any 12 month period up to the date of the latest grant.

	Details	Pre-IPO Share Option Scheme	Post-IPO Share Option Scheme	Subsidiary Share Option Scheme
5.	Option period	At any time and from time to time up to December 31, 2025.	The period of time to be notified by the Board to each grantee at the time of making an offer, which shall be determined by the Board in its absolute discretion at the time of grant, but such period must not exceed 10 years from the date of grant of the relevant option. The terms of an offer may include any minimum periods for which an option must be held and/or any minimum performance targets that must be reached, before the options can be exercised in whole or in part, and may include at the discretion of the Board other terms imposed (or not imposed), either on a case by case basis or generally.	The period of time to be notified by the board of Legend to each grantee at the time of making an offer, which shall be determined by the board of Legend in its absolute discretion at the time of grant, but such period must not exceed 10 years from the date of grant of the relevant option (or 5 years in the case of an incentive stock option within the meaning of Section 422 of the United States Internal Revenue Code of 1986 (the "**Internal Revenue Code**") granted to a U.S. Participant who is an employee of Legend or a subsidiary corporation (as defined in Section 1.424-1(f)(1) and (2)of the U.S. Treasury Regulations) of Legend, who owns (or is treated as owning) stock possessing more than 10% of the total combined voting power of all classes of stock of the corporation employing the grantee or of any parent corporation or subsidiary corporation as defined in Section 1.424-1(f)(1) and (2) of the U.S. Treasury Regulations). The terms of an offer may include any minimum periods for which an option must be held or any performance targets that must be reached, before the options can be exercised, and may include at the discretion of the board of Legend other terms imposed either on a case by case basis or generally.

	Details	Pre-IPO Share Option Scheme	Post-IPO Share Option Scheme	Subsidiary Share Option Scheme
6.	Acceptance of offer	On acceptance of the offer of the option, the participant shall execute and return an acceptance letter in accordance with the terms and conditions set by the Company.	An option shall remain open for acceptance by the participant concerned for a period of 21 days from the date of the offer. HK$1.00 is payable by the grantee to the Company on acceptance of the offer of the option.	An option shall remain open for acceptance by the participant concerned for a period of 21 days from the date of the offer. US$1.00 (or its equivalent in RMB) is payable by the grantee to Legend on acceptance of the offer of the option.
7.	Exercise Price	From US$0.003 to US$0.103	The Subscription Price shall be no less than the highest of: (1) the closing price of the Shares as stated in the daily quotations sheet issued by the Stock Exchange on the date of grant; (2) the average closing price of the Shares as stated in the daily quotations sheets issued by the Stock Exchange for the five business days immediately preceding the date of grant (provided that in the event that any option is proposed to be granted within a period of less than five business days after the trading of the Shares first commences on the Stock Exchange, the new issue price of the Shares for the Global Offering shall be used as the closing price for any business day falling within the period before listing of the Shares on the Stock Exchange); and (3) the nominal value of a Share on the date of grant.	The Subscription Price payable by any grantee (including a non-U.S. Participant or a U.S. Participant) shall be no less than the value of a share of Legend on the date of grant, determined by the board of Legend in good faith with reference to a valuation report to be obtained from time to time and in a manner that complies with Sections 409A and 422 of the Internal Revenue Code, subject to rounding adjustments as may be determined by the board of Legend at its absolute discretion, provided that with respect to the period from the date when the Company resolves to seek a separate listing of Legend on The Stock Exchange of Hong Kong Limited, Growth Enterprise Market, or an overseas stock exchange and up to the listing date (if any), the rules under note (2) to rule 17.03(9) of the Listing Rules is complied with.

	Details	Pre-IPO Share Option Scheme	Post-IPO Share Option Scheme	Subsidiary Share Option Scheme
8.	Remaining life of the scheme	The Pre-IPO Share Option Scheme expired on December 30, 2015.	It shall be valid and effective for a period of ten years commencing on December 7, 2015.	It shall be valid and effective for a period of ten years commencing on December 21, 2017.

RESTRICTED SHARE AWARD SCHEME

The Company adopted its Restricted Share Award Scheme (the "**RSA Scheme**") on March 22, 2019 (the "**Adoption Date**") to, among other things, recognize the contributions by any Director or employee of the Company or any of its subsidiaries selected by the Board in accordance with the terms of the RSA Scheme (the "**Selected Participant**"). The Company and Computershare Hong Kong Trustees Limited as the trustee (the "**Trustee**") entered into the trust deed in respect of the appointment of the Trustee for the administration of the RSA Scheme (the "**Trust Deed**"). Pursuant to the RSA Scheme, the share that may be offered by the Company to any Selected Participant (the "**Restricted Shares**") will be satisfied by (i) existing shares to be acquired by the Trustee on the market, and/or (ii) new shares to be allotted and issued to the Trustee. The total number of the Restricted Shares underlying all grants made pursuant to the RSA Scheme shall not exceed ten (10)% of the issued share capital of the Company as at March 22, 2019. The RSA Scheme will initially be valid and effective for a period of ten years commencing on the Adoption Date. Vesting shall only occur upon satisfaction (or where applicable, wavier by the Board) of conditions imposed by the Board. Neither the Selected Participant nor the Trustee may exercise any of the voting rights in respect of any Restricted Shares that have not yet vested.

During the Reporting Period, 1,048,116 Restricted Shares and 150,000 Restricted Shares ("**RSA Shares**") were granted under the RSA Scheme to certain employees (the "**Grantees**") on July 19, 2019 and November 29, 2019, respectively. The closing price of the Shares on the Stock Exchange was HK$18.30 per share and HK$18.90 per share on July 19, 2019 and November 29, 2019, respectively. None of the Grantees is a Director, chief executive or substantial shareholder (as defined in the Listing Rules) of the Company, or an associate (as defined in the Listing Rules) of any of them.

The RSA Shares have been acquired by the Trustee through on-market transactions and are currently held by the Trustee in according with the Listing Rules and the Trust Deed until the end of the relevant vesting date and be transferred to the Grantees upon satisfaction of the relevant vesting conditions as may be specified by the Board at the time of making the grant of RSA Shares.

As no new Shares will be issued by the Company as a result of the grant of the RSA Shares as mentioned above, the grant of the RSA Shares will not result in any dilution effect on the shareholdings of existing shareholders of the Company.

Save as disclosed, no other RSA Shares have been granted under the RSA Scheme during the Reporting Period.

For details, please refer to the Company's announcement dated March 22, 2019, July 19, 2019 and November 29, 2019.

Set out below are details of the outstanding shares under the RSA Scheme:

			Number of Shares			
Category/Name of Grantee	Date of Grant	As at March 22, 2019	Granted during the Reporting Year	Vesting during the Reporting Year	Lapsed during the Reporting Year	As at December 31, 2019
Employees other than Directors	July 19, 2019	–	1,048,116	–	–	1,048,116
	November 29, 2019	–	150,000	–	–	150,000
		–	1,198,116	–	–	1,198,116

REMUNERATION OF DIRECTORS AND FIVE HIGHEST PAID INDIVIDUALS

Details of the remuneration of Directors and the five highest paid individuals are set out in note 8 and note 9 to the financial statements in this annual report.

CHANGES TO INFORMATION OF DIRECTORS

Dr. Zhang Fangliang ceased to be the director of Hubei Bestzyme Biotechnology Co., Ltd.* (湖北百斯杰生物科技有限公司) in July 2018. He ceased to be the director of Shanghai Jingrui Biotechnology Co., Ltd* (上海璟睿生物科技有限公司) in 2019. Dr. Zhang Fangliang was appointed as a director of GenScript Biotech (Singapore) Pte. Ltd. in November 2019 and of Shandong Bestzyme Biotech Co., Ltd.* (山東百斯傑生物科技有限公司) in August 2019.

Ms. Wang Jiafen has been serving as an independent director of BESTORE Co., Ltd.*良品鋪子股份有限公司 (a company listed on the Shanghai Stock Exchange (stock code: 603719.SH) in February 2020) since November 2017 and a non-independent director of Shanghai Rongtai Health Technology Corporation Limited* 上海榮泰健康科技股份有限公司 (SHA: 603579) since October 2019. Ms. Wang ceased to be a director of Meinian Onehealth Healthcare Holdings Co., Ltd. 美年大健康產業控股股份有限公司(SZSE: 002044) in November 2019.

Saved as disclosed in this annual report, there had been no change to any of the information required to be disclosed in relation to any Director pursuant to paragraphs (a) to (e) and (g) of Rule 13.51 (2) of the Listing Rules during the Reporting Period that required to be disclosed pursuant to Rule 13.51B(1) of the Listing Rules.

DIRECTORS' AND CHIEF EXECUTIVE'S INTERESTS AND SHORT POSITIONS IN SHARES, UNDERLYING SHARES, AND DEBENTURES

As of December 31, 2019, the interests and short positions of the Directors and chief executive of the Company in the Shares, underlying Shares, and debentures of the Company or its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the "**SFO**")), which were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions, which they were taken or deemed to have under such provisions of the SFO), or were required, pursuant to Section 352 of the SFO, to be entered in the register referred to therein, or were required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the "**Model Code**") contained in Appendix 10 to the Listing Rules, are set out as follows:

Long positions in the ordinary Shares and underlying Shares of the Company as of December 31, 2019

Name of Director	Capacity/Nature of Interest	Number of Shares held/ interested	Approximate Percentage of Shareholding (%)
Zhang Fangliang	Interest in controlled corporation (Note 1), parties acting in concert (Note 2) and founder of a discretionary trust (Note 7)	973,000,522	51.80
Wang Luquan	Interest in controlled corporation (Note 3) and parties acting in concert (Note 2),	973,000,522	51.80
Wang Ye	Interest in controlled corporation (Note 4), parties acting in concert (Note 2), beneficial owner (Note 5) and founder of a discretionary trust (Note 8)	973,000,522	51.80
Meng Jiange	Beneficial owner (Note6)	2,705,037	0.14
Pan Yuexin	Beneficial owner(Note 9)	400,000	0.02
Guo Hongxin	Beneficial owner(Note 10)	400,000	0.02
Dai Zumian	Beneficial owner(Note 11)	400,000	0.02

* The percentage has been calculated based on 1,878,376,650 Shares in issue as at December 31, 2019.

Notes:

(1) As of December 31, 2019, Zhang Fangliang held approximately 28.38% of the issued share capital of GS Corp and was deemed, or taken to be interested in, all the Shares held by GS Corp for the purpose of the SFO.

(2) On August 14, 2008, Zhang Fangliang, Wang Luquan, and Wang Ye entered into the GS Corp Shareholder Voting Agreement, whereby Zhang Fangliang, Wang Luquan, and Wang Ye agreed to vote unanimously in the shareholder meetings of GS Corp and, contemporaneously, proxies were conferred by Wang Luquan and Wang Ye to Zhang Fangliang authorising Zhang Fangliang to vote and exercise all voting and related rights with respect to the shares that each of Wang Luquan and Wang Ye beneficially owned in GS Corp, which held 880,366,235 Shares. On May 29, 2015, Wu Yongmei signed a proxy agreement whereby she conferred all her voting and related rights in relation to all the shares that she owned in GS Corp, i.e. 102,089,792 shares of GS Corp to Zhang Fangliang.

(3) As of December 31, 2019, Wang Luquan held approximately 23.19% in the issued share capital of GS Corp. Pursuant to the GS Corp Shareholder Voting Agreement and for the purpose of the SFO, Wang Luquan was deemed, or taken to be interested in, all the Shares held by GS Corp.

(4) As of December 31, 2019, Wang Ye held approximately 5.86% in the issued share capital of GS Corp. Pursuant to the GS Corp Shareholder Voting Agreement and for the purpose of the SFO, Wang Ye was deemed, or taken to be interested in, all the Shares held by GS Corp.

(5) Wang Ye held 92,634,287 underlying Shares under the options conditionally granted to her under the Pre-IPO Share Option Scheme.

(6) Meng Jiange held 2,705,037 underlying Shares under the options conditionally granted to him under the Pre-IPO Share Option Scheme.

(7) On October 12, 2017, Zhang Fangliang set up 2017 Fang Liang Zhang Trust (the "**Zhang Trust**"), an irrevocable discretionary family trust, with his three children and their respective living issue as beneficiaries. Jin Weihong, the spouse of Zhang Fangliang, is the trustee of the Zhang Trust. The Zhang Trust transferred 626,840 shares of GS Corp to Zhang Fangliang on December 11, 2019, on the same day Zhang Fangliang made a gift of 3,265,300 shares of GS Corp to the Zhang Trust. The Zhang Trust (through its trustee), held approximately 12.53% of the entire issued share capital of GS Corp and was deemed, or taken to be interested in, all the Shares held by GS Corp for the purpose of the SFO.

(8) On October 5, 2017, Wang Ye set up 2017 Wang Ye Family Trust (the "**Wang Trust**"), an irrevocable discretionary family trust, with her spouse, her son and his living issue as beneficiaries. Hu Zhiyong, the spouse of Wang Ye, is the trustee of the Wang Trust. The Wang Trust transferred 313,420 shares of GS Corp to Wang Ye on December 11, 2019, on the same day Wang Ye made a gift of 1,632,650 shares of GS Corp to the Wang Trust. The Wang Trust (through its trustee) held approximately 6.28% of the entire issued share capital of GS Corp and was deemed, or taken to be interested in, all the Shares held by GS Corp for the purpose of the SFO.

(9) Pan Yuexin held 400,000 underlying Shares under the options granted to him under the Post-IPO Share Option Scheme.

(10) Guo Hongxin held 400,000 underlying Shares under the options granted to him under the Post-IPO Share Option Scheme.

(11) Dai Zumian held 400,000 underlying Shares under the options granted to him under the Post-IPO Share Option Scheme.

DIRECTORS' RIGHTS TO ACQUIRE SHARES OR DEBENTURES

Save as disclosed in the section headed "Share Option Schemes", no rights to acquire benefits by means of the acquisition of Shares in or debentures of the Company were granted to any Director or their respective spouses or children under 18 years of age, nor were any such rights exercised by them, nor was the Company or any of its subsidiaries a party to any arrangement to enable the Directors, or their respective spouses or children under 18 years of age, to acquire such rights in any other body corporate at any time during the Year.

SUBSTANTIAL SHAREHOLDERS' INTEREST IN SHARES

As of December 31, 2019, within the knowledge of the Directors, the following persons (other than the Directors or chief executive of the Company) had an interest or a short position in the Shares or underlying Shares that would be required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO or as recorded in the register required to be kept pursuant to Section 336 of the SFO:

Long position in the ordinary Shares of the Company as of December 31, 2019

Name	Capacity/Nature of Interest	Number of Shares/ underlying Shares held/ interested	Approximate Percentage of Shareholding (%)
GS Corp *(Note 1)*	Beneficial owner	880,366,235	46.87
Jin Weihong *(Note 2)*	Interest in controlled corporation, parties acting in concert and trustee	973,000,522	51.80
Hu Zhiyong *(Note 3)*	Interest in controlled corporation, parties acting in concert and trustee	973,000,522	51.80

* The percentage has been calculated based on 1,878,376,650 Shares in issue as at December 31, 2019.

Notes:

(1) As of December 31, 2019, GS Corp is a company incorporated in the State of Delaware in the United States and owned as to approximately 28.38%, approximately 12.53%, approximately 23.19%, approximately 10.73%, approximately 0.77%, approximately 7.13%, approximately 3.91%, approximately 5.86%, approximately 6.28%, approximately 1.04% and approximately 0.18% by Zhang Fangliang, the Zhang Trust, Wang Luquan, Wu Yongmei, the Wu 2017 Trust*(Note 4)*, the Wu 2018 Trust*(Note 4)*, the Wu 2019 Trust*(Note 4)*, Wang Ye, the Wang Trust, Mu Yingjun and Charity B, respectively.

(2) On October 12, 2017, Zhang Fangliang set up the Zhang Trust, an irrevocable discretionary family trust, with his three children and their respective living issue as beneficiaries. Jin Weihong, the spouse of Zhang Fangliang, is the trustee of the Zhang Trust. The Zhang Trust transferred 626,840 shares of GS Corp to Zhang Fangliang on December 11, 2019, on the same day Zhang Fangliang made a gift of 3,265,300 shares of GS Corp to the Zhang Trust. Jin Weihong, as the trustee of the Zhang Trust, held approximately 12.53% of the entire issued share capital of GS Corp and was deemed, or taken to be interested in, all the Shares held by GS Corp for the purpose of the SFO.

(3) On October 5, 2017, Wang Ye set up the Wang Trust, an irrevocable discretionary family trust, with her spouse, her son and his living issue as beneficiaries. Hu Zhiyong, the spouse of Wang Ye, is the trustee of the Wang Trust. The Wang Trust transferred 313,420 shares of GS Corp to Wang Ye on December 11, 2019, on the same day Wang Ye made a gift of 1,632,650 shares of GS Corp to the Wang Trust. Hu Zhiyong, as the trustee of the Wang Trust, held approximately 6.28% of the entire issued share capital of GS Corp and was deemed, or taken to be interested in, all the Shares held by GS Corp for the purpose of the SFO.

(4) On December 17, 2017, Wu Yongmei set up 2017 Wu Yongmei Trust (the "**Wu 2017 Trust**"), an irrevocable family trust, with her two children and their respective living issue as beneficiaries. Wu Yongmei and her two children, are the trustees of the Wu 2017 Trust. On October 29, 2018, Wu Yongmei set up 2018 Wu Yongmei Trust (the "**Wu 2018 Trust**"), an irrevocable family trust, with her two children and their respective living issue as beneficiaries. Wu Yongmei is the trustee of the Wu 2018 Trust. On October 31, 2019, Wu Yongmei set up Yongmei Wu 2019 Trust ("**Wu 2019 Trust**"). Wu Yongmei is the initial trustee of the Wu 2019 Trust.

Save as disclosed above, as of the date of this annual report, the Directors have not been aware of any person who had interests or short positions in the Shares or underlying Shares that would be required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO as recorded in the register and required to be kept pursuant to Section 336 of the SFO.

TAX RELIEF

The Company is not aware of any relief on taxation available to the Shareholders by reason of their holdings of the Shares.

PURCHASE, REDEMPTION, OR SALE OF THE LISTED SECURITIES

During the Reporting Period, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's listed securities, except that the trustee of the RSA Scheme purchased on the Stock Exchange a total of 3,512,800 shares of the Company at a total consideration of approximately HK$60,848,824 (equivalent to approximately US$7,800,000) to satisfy the award of shares to selected employees pursuant to the terms of the rules and trust deed of the RSA Scheme.

TOP-UP PLACING

On June 5, 2018, the Company entered into a placing and subscription agreement with Genscript Corporation, one of the controlling shareholders of the Company (the "**Vendor**") and placing agents pursuant to which (i) the Vender completed a placing through placing agents 75,000,000 ordinary shares of the Company to certain placees at the price of HK$26.50 per share, and (ii) the Vender subscribed for an aggregate of 75,000,000 shares of the Company of HK$26.50 per share (the "**Top-up Placing**"). The net proceeds of the Top-up Placing is HK$1,971,702,660.50 (equivalent to approximately US$251.3 million). Please refer to the announcements dated June 4, 2018, June 5, 2018, June 8, 2018, June 13, 2018 and June 14, 2018 for details.

A detailed breakdown and description of the use of the net proceeds from the Top-Up Placing is set forth as follows:

Item	**Unutilized amount as at January 1, 2019** US$ million	**Utilized amount during the Reporting Period** US$ million	**Unutilized amount as at December 31, 2019** US$ million	**Intended year of application**
Building up CAR-T R&D and production facility in China, the US and Europe	100.7	42.7	58.0	2020 to 2021
Global team building for the Group's talent program and CAR-T therapies, including regulatory, R&D, production and commercialization	19.0	19.0	–	–
Building up the GMP manufacturing facilities for plasmid and biologics products	72.4	8.7	63.7	2020 to 2021
General working capital purpose	26.3	26.3	–	–
Total	218.4	96.7	121.7	

PRE-EMPTIVE RIGHTS

There are no provisions for pre-emptive rights under the Articles or the laws of the Cayman Islands that would oblige the Company to offer new shares on a pro rata basis to existing shareholders.

NON-COMPETING UNDERTAKINGS

The controlling shareholders of the Company, namely Zhang Fangliang, Wang Luquan, Wang Ye and GS Corp, or any of them (the "**Controlling Shareholders**"), have signed the deed of non-competition (the "**Deed of Non-competition**") dated December 7, 2015, pursuant to which, each of our Controlling Shareholders shall, and shall procure that their respective close associates and/or companies controlled by them (other than the Group) (i) not, directly or indirectly, either on its own account or in conjunction with or on behalf of any person, firm, or company, among other things, carry on, participate, or be interested or engage in or acquire or hold (in each case whether as a shareholder, director, partner, agent, employee, or otherwise, and whether for profit, reward, or otherwise) any activity or business that competes or is likely to compete, directly or indirectly, with the business of the Group referred to in the Prospectus and any other business from time to time conducted, carried on, or contemplated to be carried on by any member of the Group or in which any member of the Group is engaged or has invested, or which any member of the Group has otherwise publicly announced its intention to enter into, engage in, or invest in (whether as principal or agent and whether undertaken directly or through any body corporate, partnership, joint venture, or other contractual or other arrangement) (the "**Restricted Activity**"), (ii) provide all information requested by the Company that is necessary for an annual review by our independent non-executive Directors of its compliance with the Deed of Non-competition and the enforcement of the Deed of Non-competition, (iii) procure the Company to disclose decisions on matters reviewed by our independent non-executive Directors relating to the compliance and enforcement of the Deed of Non-competition, either through the annual report or by way of announcement(s) to the public, and (iv) make an annual declaration on compliance with its undertaking under the Deed of Non-competition in the annual reports of the Company as our independent non-executive Directors think fit and/or as required by the relevant requirements under the Listing Rules. Details of the Deed of Non-competition are set out in the section headed "Relationship with Controlling Shareholders" of the Prospectus.

The Company has received the annual confirmation of controlling shareholders in respect of their compliance with the non-competition undertakings under the Deed of Non-competition during the year ended December 31, 2019.

The independent non-executive Directors also reviewed the Controlling Shareholders' compliance with the non-competition undertakings. The independent non-executive Directors confirmed that the Controlling Shareholders were not in breach of the non-competition undertakings during the year ended December 31, 2019.

DIRECTORS' INTERESTS IN COMPETING BUSINESS

Save as disclosed in this annual report, as at December 31, 2019, no executive Director, non-executive Director or any of their close associates had any interests in any business that competed or was likely to compete, either directly or indirectly, with the business of the Group under Rule 8.10(2) of the Listing Rules.

CONNECTED TRANSACTIONS AND CONTINUING CONNECTED TRANSACTIONS

During the year ended December 31, 2019, the Company had no connected transactions or continuing connected transactions that were required to be disclosed pursuant to the provisions under Chapter 14A of the Listing Rules.

CHARITABLE DONATIONS

During the year ended December 31, 2019, the Group donated US$172,000 to non-profit organisations for charitable and community purposes.

MATERIAL LEGAL PROCEEDINGS

As of December 31, 2019, the Group was not involved in any material litigation or arbitration, and no material litigation or claim was pending or threatened against the Group as far as the Directors were aware of.

AUDIT COMMITTEE

The Audit Committee has reviewed the annual results announcement for 2019 and the financial statements for the year ended December 31, 2019 prepared in accordance with the HKFRS.

COMPLIANCE WITH THE CODE ON CORPORATE GOVERNANCE PRACTICES

The Company is committed to maintaining the highest standards of corporate governance practices. The Company has applied the principles set out in the Corporate Governance Code and the Corporate Governance Report (the "**CG Code**") contained in Appendix 14 to the Listing Rules. During the Reporting Period, save as disclosed in the Corporate Governance Report, the Company has complied with the mandatory code provisions of the CG Code. For details, please refer to the Corporate Governance Report on pages 65 to 79 in this annual report.

SUFFICIENCY OF PUBLIC FLOAT

Based on information publicly available to the Company and within the knowledge of the Directors, the Directors confirmed that the Company had maintained a sufficient public float of more than 25% of the Company's issued share capital as required under the Listing Rules as of the date of this annual report.

CONSULTING PROFESSIONAL TAX ADVISERS

The Company's shareholders are recommended to consult professional advisers if they are in any doubt as to the tax implications of the purchasing, holding, disposal of, buying, and selling of the Company's Shares or exercising any rights concerned.

AUDITORS

Ernst & Young, Certified Public Accountants ("**Ernst & Young**") was appointed as the auditors to audit the financial statements prepared in accordance with the HKFRS for the year ended December 31, 2019. Ernst & Young shall retire at the forthcoming AGM and is eligible and has offered itself for re-election. The resolution regarding the re-appointment of Ernst & Young as the auditors, of the Company will be proposed at the forthcoming AGM.

BUSINESS REVIEW PURSUANT TO SCHEDULE 5 OF THE COMPANIES ORDINANCE (CHAPTER 622 OF THE LAWS OF HONG KONG)

A fair review of the business of the Company and a discussion and analysis of the Group's performance during the Reporting Period and the material factors underlying its results and financial position are provided in the section headed "Management Discussion and Analysis" from pages 11 to 25 of this annual report.

PRINCIPAL RISKS AND UNCERTAINTIES

The principal risks and uncertainties facing the Group include commercial, operational and financial risks.

Commercial Risks

The Group is facing keen competition with other life sciences research and application services and products providers. To maintain the Group's competitiveness, the management uses cost leadership strategy as well as diversifies its business strategies to outperform other competitors.

Operational Risks

The Group is exposed to operational risks associated with each business segment of the Group. To manage the operational risks, the senior management regularly reviews the Group's operations to ensure that the Group's risks of losses, whether financial or otherwise, resulting from fraud, errors, omissions and other operational and compliance matters, are adequately managed. The senior management is also responsible for overseeing the implementation of the Group's risk management policies and procedures and shall report any irregularities to the Directors and seek directions. The Group emphasises ethical values and prevention of fraud and bribery. In this regard, the Directors consider that the Group's operational risks are effectively mitigated.

Financial Risks

The principle financial risks are set out in the note 41 to the financial statements in this report headed "Financial Risk Management Objectives and Policies".

IMPORTANT EVENTS

In April 2019, The European Medicines Agency ("**EMA**") granted a "PRIority MEdicines" designation to Janssen-Cilag International N.V. for JNJ-68284528 ("**JNJ-4528**") the investigational B cell maturation antigen (BCMA) chimeric antigen receptor T-cell (CAR-T) therapy, which has been previously identified as LCAR-B38M. The U.S. Food and Drug Administration granted a Breakthrough Therapy Designation ("**BTD**") to Janssen Research & Development, LLC for JNJ-4528. The BTD for JNJ-4528 is based on the Phase 1b CARTITUDE-1 (MMY2001, NCT03548207) study. The initial results from the CARTITUDE-1 study in the United States and the long term follow-up clinical development of the LEGEND-2 study in China were presented at the American Society of Hematology meeting on December 7, 2019 and December 9, 2019. Please refer to the announcements dated April 4, 2019, November 7, 2019, December 8, 2019 and December 9, 2019 for details.

On November 12, 2019, GenScript (Hong Kong) Limited (金斯康(香港)有限公司), the Company's indirect wholly-owned subsidiary, and Zhenjiang Economic and Technological Development Zone Management Committee*鎮江經濟技術開發區管理委員會entered into an investment agreement in relation to the investment by the Group into the Jiangsu Genscript Innovative Biological Medicine CMO (Contracted Manufacturing Organization) Project in Zhenjiang Economic and Technical Development Zone* 中國鎮江經濟技術開發區 ("**Zhenjiang New Area**"). Please refer to the announcement dated November 12, 2019 for details.

On December 26, 2019, GenScript (Hong Kong) Limited (金斯康(香港)有限公司), the Company's indirect wholly-owned subsidiary, and Zhenjiang New Area Management Committee* (鎮江新區管理委員會) entered into an investment agreement in relation to the lease of three factories for expanding the scale of the project of the research and development of molecular biology in Zhenjiang New Area. Please refer to the announcement dated December 30, 2019 for details.

By January 2020, the second, third and fourth milestones relating to the clinical trial of LCAR-B38M (JNJ-68284528) in the United States have been achieved according to the terms and conditions of the collaboration and license entered into among Legend USA., Legend Ireland ("**Legend USA/Ireland**") and Janssen. Legend USA/Ireland received milestone payments in the amount of US$25,000,000, US$30,000,000 and US$30,000,000 payable by Janssen for the second, third and fourth milestones, respectively. Please refer to the announcements dated July 28, 2019 and January 28, 2020 for details. Additionally, Legend is eligible to receive further potential milestone payments up to US$125,000,000 for the achievement of specified manufacturing milestones and an additional potential US$1,115,000,000 for the achievement of specified future development, regulatory and sales milestones.

The Company has obtained approval from the Stock Exchange to proceed with the proposed spin-off of Legend Biotech Corporation ("**Legend**"). On March 9, 2020 (New York time), Legend has submitted on a confidential basis to the U.S. Securities and Exchange Commission a draft registration statement to the proposed initial public offering of American depositary shares, representing its ordinary shares. Please refer to the announcements dated March 10, 2020 and March 16, 2020 for details.

On March 31, 2020 and April 11, 2020, Legend entered into purchase agreements with nine purchasers (the "**Purchasers**"), pursuant to which Legend issued and the Purchasers purchased 20,591,629 series A preference shares of Legend at an aggregate consideration of approximately US$160.5 million (the "**Purchases**"). In connection with the Purchase, the Company provided a guarantee to the Purchasers to secure certain guaranteed obligations, including without limitation, the redemption payment amount applicable to each Purchaser upon the exercise of their redemption right. The aggregate amount of the guaranteed obligations shall not exceed US$220,000,000. Please refer to the announcements dated March 31, 2020, April 14, 2020 and April 16, 2020 for details.

FUTURE DEVELOPMENT

Looking forward to 2020, the Group continues to optimize research and development, go-to-market and capital allocation strategies:

i. Further investment in research and development, focusing on the following key business areas:

   a) Cell therapies – We will put increasing effort to this space. We aim to develop and gain advanced CAR-T, and other technologies, extend our current autologous platform into allogeneic platform. We intend to target onto hematologic malignancies, solid tumors and infectious diseases;

   b) Biologics CDMO service – We aim to expand the application of our SMAB platform and enhance our ability to provide plasmid and virus production; and

   c) Molecular biology CRO – We will further strengthen our global leading position in gene synthesis through automation and invest in GMP grade diagnostic and therapeutic life sciences products and services.

ii. Further strengthening of the following sales and marketing priorities:

   a) The cell therapy commercial team in the United States and the China markets will continue to prepare for the necessary procedures and certifications as well as have market access meetings with key payers and caregivers with the intention to conduct a global commercial launch of JNJ-4528/LCAR-B38M;

   b) Establish an independent brand "Genscript Probio" for our CDMO business and further strengthen the collaboration with the biotech and biopharma community;

   c) Enhance the penetration into the key accounts for industrial synthetic biology products; and

   d) Leverage our leading position on gene synthesis to drive cross selling of other molecular biology services and products.

iii. Further optimize the capital allocation:

   a) The proposed initial listing of the Legend's shares to provide flexible funding pipeline for Legend's clinical development while retaining the significant upside potential for our existing shareholders;

   b) Using the Group's balance sheet and cash flow to invest in GMP facilities in order to quickly scale our biologics CDMO business; and

   c) Pursuing opportunistic tuck-in acquisitions and investments for cutting-edge technologies as they arise in order to complement the existing internal capacity and to speed up the overall growth of the Group.

FINANCIAL KEY PERFORMANCE INDICATORS

A summary of the results and assets and liabilities of the Company for the last five financial years is set out on page 7 in this annual report. This summary does not form part of the audited consolidated financial statements.

ENVIRONMENTAL POLICIES AND PERFORMANCE

The Company has been fulfilling social responsibility on the basis of "enhancing environment awareness, promoting energy conservation and emission reduction, and intensifying pollution control".

The Company gives high priority to energy and resource consumption management. In terms of energy consumption, according to the Energy Consumption Management Measures, the Company has carried out standard management of eight categories (including electricity for lighting, electricity for office equipment, and energy consumption of construction) and 23 energy consumption issues.

In terms of resource management, the Company has reduced resource consumption through improvement of programs. In October 2019, the Company launched a renovation project on the original heated water cooling drainage method of Nanjing Legend facilities by using condensers with running water as the cooling medium and increasing the heat exchange area of condensers. After the renovation, 680 tons of running water was saved per month for the treatment of the same amount of heated water.

In terms of production environment management, the Company not only complied with the cleaner production requirements, but also further implemented measures and plans of emission reduction, and achieved certain results in pollutant control and emission reduction management. In August 2019, Nanjing GenScript conducted the selective catalytic reduction (SCR) denitration renovation of two natural gas boilers. The NOx emission concentration of boilers was reduced from 86 mg/m3 to 12 mg/m3 after the renovation.

To reduce the dimethylformamide (DMF) content of organic waste liquid in Jiangsu GenScript facilities, the Company improved the treatment method of waste liquid from incineration to rectification recovery. From July 2019 to December 2019, the improved method had resulted in the disposal of 70 tons of organic waste liquid and resulted in costs saving and pollutant reduction.

COMPLIANCE WITH LAWS AND REGULATIONS

The Group recognises the importance of compliance with regulatory requirements and the risk of non-compliance with such requirements could lead to the termination of operating licenses. The Group has implemented procedures to ensure ongoing compliance with rules and regulations and to maintain cordial working relationships with regulators through effective communications. During the year under review, the Group has complied, to the best of our knowledge, with the SFO, the Listing Rules, and other relevant rules and regulations.

RELATIONSHIPS WITH EMPLOYEES

The Group encouraged the employees to enhance their competitiveness and ability to innovate new services and products. This raised the momentum in the research and development as well as marketing efforts to increase the revenue of the Group. Through solidifying its business foundation and adjusting its operation directives, the Group is striving to forge ahead under adverse conditions to allow us to achieve new progresses in terms of production and operation under a positive and hardworking work culture.

RELATIONSHIPS WITH CUSTOMERS AND SUPPLIERS

We had established a highly diversified customer base, including pharmaceutical and biotech companies, colleges and universities, research institutes, government bodies (including government testing and diagnostic centers), and distributors. The Group strives to "Make Research Easy" by offering life sciences research and application services and products for conducting fundamental life sciences research, translational biomedical research, and early stage pharmaceutical development. Our synthetic biology products are used by industry users, such as those in the food and feed industries. In 2019, we expanded the range of our services and products and developed new customer accounts. The total number of customers has increased by approximately 19.7% compared to the total number of customers in 2018.

Owing to our vast array of services and products, we procure a wide variety of raw materials from a large number of suppliers for our business segments. As of December 31, 2019, we had a total of approximately 372 suppliers of different raw materials for our production that are mostly located in China. In 2019, we maintained sound relationships with our suppliers such that we could meet business challenges and comply with regulatory requirements, thereby deriving cost effectiveness and reaping long term business benefits.

By order of the Board

Dr. Zhang Fangliang
Chairman and Chief Executive Officer

Hong Kong, March 27, 2020

CORPORATE GOVERNANCE REPORT

The Board is pleased to present this corporate governance report as set out in the annual report of the Company for the year ended December 31, 2019.

CORPORATE GOVERNANCE PRACTICES

The Group is committed to maintaining high standards of corporate governance to safeguard the interests of the shareholders and to enhance corporate value and accountability. The Company has adopted the CG Code contained in Appendix 14 to the Listing Rules (as in effect from time to time) as its own code of corporate governance.

Save as disclosed in this corporate governance report on page 67 regarding the deviation from code provision A.2.1 of the CG Code, the Company has complied with all the applicable code provisions as set out in the CG Code during the year ended December 31, 2019 and up to the date of this annual report. The Company will continue to review and enhance its corporate governance practices to ensure compliance with the CG Code.

THE BOARD

Responsibilities

The Board is responsible for the overall leadership of the Group, oversees the Group's strategic decisions, and monitors business and performance. The Board has delegated the authority and responsibility for day-to-day management and operation of the Group to the senior management of the Group. To oversee particular aspects of the Company's affairs, the Board has established four Board committees, including the Audit Committee, the Remuneration Committee, the Nomination Committee, and the Sanctions Risks Control Committee (together, the "**Board Committees**"). The Board has delegated responsibilities to the Board Committees as set out in their respective terms of reference.

All Directors shall ensure that they carry out duties in good faith, in compliance with applicable laws and regulations, and in the interests of the Company and the shareholders at all times.

Board Composition

As of the date of this annual report, the Board comprises nine members, consisting of three executive Directors, three non-executive Directors, and three independent non-executive Directors as set out below:

Executive Directors

Dr. Zhang Fangliang (Chairman and Chief Executive Officer)
Ms. Wang Ye (President)
Mr. Meng Jiange (Secretary of the Board)

Non-executive Directors

Dr. Wang Luquan
Mr. Pan Yuexin
Ms. Wang Jiafen

Independent Non-executive Directors

Mr. Guo Hongxin
Mr. Dai Zumian
Mr. Pan Jiuan

The biographies of the Directors are set out in the section headed "Directors and Senior Management" of this annual report.

During the year ended December 31, 2019 and up to the date of this annual report, the Board met the requirements of Rules 3.10 (1) and 3.10 (2) of the Listing Rules relating to the appointment of at least three independent non-executive Directors with at least one independent non-executive Director possessing appropriate professional qualifications or accounting or related financial management expertise.

The Company has also complied with Rule 3.10A of the Listing Rules, which relates to the appointment of independent non-executive Directors representing at least one-third of the Board.

Each of the independent non-executive Directors has confirmed his/her independence pursuant to Rule 3.13 of the Listing Rules, and the Company considers each of them to be independent.

None of the Directors has any personal relationship (including financial, business, family, or other material/relevant relationship) with any other Director.

All Directors, including independent non-executive Directors, have brought a wide spectrum of valuable business experience, knowledge, and professionalism to the Board for its efficient and effective functioning. Non-executive directors and independent non-executive directors have been participating in Board meetings, taking the lead where potential conflicts of interests arise. Independent non-executive Directors are invited to serve on the Audit Committee, the Remuneration Committee, and the Nomination Committee.

With regards to the CG Code provision requiring directors to disclose the number and nature of offices held in public companies or organisations and other significant commitments, as well as their identities and the times involved in the issuer, the Directors have agreed to disclose their commitments to the Company in a timely manner.

INDUCTION AND CONTINUOUS PROFESSIONAL DEVELOPMENT

Each newly appointed Director is provided with necessary induction and information to ensure that he/she has a proper understanding of the Company's operations and businesses as well as his/her responsibilities under relevant statutes, laws, rules, and regulations. The Company also arranges regular seminars to provide Directors with updates on the latest developments and changes in the Listing Rules and other relevant legal and regulatory requirements from time to time. The Directors are also provided with regular updates on the Group's performance, position and, prospects to enable the Board as a whole and each Director to discharge their duties.

According to the records kept by the Company, all the existing Directors have received continuous and professional development and training, as set out below, with an emphasis on the roles, functions, and duties of directors in listed companies:

Name of Directors	Attending internal briefings or trainings, participating seminars, or reviewing materials
Executive Directors	
Dr. Zhang Fangliang	✓
Ms. Wang Ye	✓
Mr. Meng Jiange	✓
Non-executive Directors	
Dr. Wang Luquan	✓
Mr. Pan Yuexin	✓
Ms. Wang Jiafen	✓
Independent non-executive Directors	
Mr. Guo Hongxin	✓
Mr. Dai Zumian	✓
Mr. Pan Jiuan	✓

CHAIRMAN AND CHIEF EXECUTIVE OFFICER

As required by code provision A.2.1 of the CG Code, the roles of chairman and chief executive officer should be separate and performed by different individuals.

The Company deviates from this provision because Dr. Zhang Fangliang has been assuming the roles of both the chairman of the Board and the chief executive officer of the Company since the Listing Date. The Board believes that resting the roles of both the chairman and the chief executive officer in the same person has the benefit of ensuring consistent leadership within the Group and enables more effective and efficient overall strategic planning for the Group. Although these two roles are performed by the same individual, certain responsibilities are shared with the executive Directors to balance power and authority. In addition, all major decisions are made in consultation with members of the Board, as well as with the senior management. The Board has three independent non-executive Directors who offer different independent perspectives. Therefore, the Board is of the view that the balance of power and safeguards in place are adequate. The Board would review and monitor the situation on a regular basis, and it would ensure that the present structure would not impair the balance of power in the Group.

During the year, the chairman fulfilled his responsibilities, including chairing the Board meetings, ensuring that the Board operates effectively and discharges its responsibilities, ensuring good corporate governance practices and procedures by anchoring with the Listing Rules, facilitating effective contribution of Directors, ensuring effective communications with Shareholders and ensuring constructive relations between executive and non-executive Directors.

APPOINTMENT AND RE-ELECTION OF DIRECTORS

Each of the executive Directors has entered into a service contract with the Company for a fixed term of three years commencing from December 1, 2018, which can be terminated before the expiration of the term by not less than six months' notice in writing served by either party on the other.

Each of the non-executive Directors has signed an appointment letter with the Company for a term of three years. The effective date of the appointments of Mr. Wang Luquan and Mr. Pan Yuexin is August 24, 2018, and that of Ms. Wang Jiafen is November 26, 2018. Their appointments are subject to termination in accordance with their respective terms.

Each of the independent non-executive Directors has signed an appointment letter with the Company for a term of three years. The effective date of the appointment of Mr. Guo Hongxin and Mr. Dai Zumian is August 24, 2018, and that of Mr. Pan Jiuan is November 26, 2018. Their appointments are subject to termination in accordance with their respective terms.

Save as disclosed above, no Director has entered into a service contract with the Group that is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

Pursuant to the Articles, at each annual general meeting, one-third of the Directors shall retire from office by rotation, provided that every Director shall be subject to retirement by rotation at least once every three years. Any Director appointed by the Board to fill a casual vacancy shall hold office only until the first general meeting of the Company after his/her appointment and be subject to re-election at such meeting, and any Director appointed by the Board as an addition to the existing Board shall hold office only until the next following annual general meeting of the Company and shall then be eligible for re-election.

The procedures and process of appointment, re-election and removal of Directors are set out in the Articles. The Nomination Committee is responsible for reviewing the Board composition, and making recommendations to the Board on appointment, re-election, and succession planning of Directors.

BOARD MEETINGS

The Company adopts the practice of holding Board meetings regularly. Notices of not less than 14 days are given for regular board meetings to provide all Directors with an opportunity to attend and include matters in the agenda for a regular meeting.

For other committee meetings, a reasonable notice will be given in writing to all committee members. The meeting notice states the time and place of the meeting. The agenda and accompanying board committee papers will be provided at least three days before the date of meeting to ensure that Directors have sufficient time to review the papers and be adequately prepared for the meetings. When Directors or committee members are unable to attend a meeting, they will be advised of the matters to be discussed and given an opportunity to make their views known to the chairman prior to the meeting.

Minutes of the Board meetings and Board committee meetings will be recorded in sufficient details for the matters considered by the Board and the Board committees and the decisions reached, including any concerns raised by the Directors. Draft minutes of each Board meeting and committee meeting are/will be sent to the Directors for comments within a reasonable time after the date on which the meeting is held.

During the Reporting Period, the Board held six meetings on January 20, 2019, March 22, 2019, June 28, 2019, August 28, 2019, November 29, 2019 and December 16, 2019 to cover the following aspects:

(a) to consider and review the financial statement for the year ended December 31, 2018 and for the six-month period ended June 30, 2019 and matters concerning corporate governance and management;

(b) to discuss the overall strategies of the Group, monitor the financial and operational performance, and approve the annual and interim results of the Group;

(c) to consider and approve the external investments;

(d) to consider and discuss matters concerning the implementation of the Share Option Schemes and RSA Scheme; and

(e) to consider and discuss matters relating to sanctions, audition and remuneration.

The attendance of the individual Directors at the Board meetings mentioned above and the general meeting is set out below:

	Attended/Eligible to attend	
Name of Directors	**Board meetings**	**General Meeting**
Dr. Zhang Fangliang	6/6	1/1
Ms. Wang Ye	6/6	1/1
Mr. Meng Jiange	6/6	1/1
Dr. Wang Luquan	6/6	1/1
Mr. Pan Yuexin	6/6	1/1
Ms. Wang Jiafen	5/6	0/1
Mr. Guo Hongxin	6/6	1/1
Mr. Dai Zumian	6/6	1/1
Mr. Pan Jiuan	6/6	0/1

The Company's external auditors also attended the annual general meeting of the Company held on May 20, 2019.

During the Reporting Period, the chairman of the Board met with the independent non-executive Directors without the presence of the other Directors to discuss and obtain independent advice on the business operations and financial condition of the Company.

MODEL CODE FOR SECURITIES TRANSACTIONS

The Company has adopted its own Code for Securities Transaction by Directors and Specified Individuals (the "**Code**") on terms no less exacting than the required standard set out in the Model Code as set out in Appendix 10 of the Listing Rules. Specific inquiry has been made to all the Directors and each of the Directors has confirmed that he/she has complied with the Code during the Reporting Period.

The Code is also applicable to the Company's relevant employees who are likely to be in possession of unpublished inside information of the Company in respect of their dealings in the Company's securities. No incidents of non-compliance with the Code by the Directors and the relevant employees of the Company were noted by the Company during the Reporting Period.

DELEGATION BY THE BOARD

The Board reserves for its decision on all major matters of the Group, including approval and monitoring of all policy matters, overall strategies and budgets, internal control and risk management systems, material transactions (in particular those that may involve conflict of interests), financial information, appointment of Directors, and other significant financial and operational matters. Directors could have recourse to seek independent professional advice in performing their duties at the Company's expense and are encouraged to access and to consult with the Group's senior management independently.

The daily management, administration, and operation of the Group are delegated to the senior management. The delegated functions and responsibilities are periodically reviewed by the Board. Approval has to be obtained from the Board prior to any significant transactions entered into by the management.

CORPORATE GOVERNANCE FUNCTION

The Board recognises that corporate governance shall be the collective responsibility of the Directors and their corporate governance duties include:

1. to develop and review the Group's policies and practices on corporate governance;

2. to review and monitor the Group's policies and practices on compliance with legal and regulatory requirements;

3. to develop, review, and monitor the code of conduct and compliance manual (if any) applicable to employees and directors; and

4. to review the Group's compliance with the CG Code and disclosure in the Corporate Governance Report.

The duty to review and monitor the training record and continuous professional development of the Directors and senior management of the Group has been delegated to the Remuneration Committee.

BOARD COMMITTEES

Nomination Committee

The Nomination Committee currently comprises three members, including an executive Director, namely, Dr. Zhang Fangliang (chairman of the Nomination Committee) and two independent non-executive Directors, namely, Mr. Pan Jiuan and Mr. Dai Zumian.

The principal duties of the Nomination Committee include:

1. to review the structure, size, composition, and diversity (including but not limited to the gender, age, educational background or professional experience, skills, knowledge, and length of service) of the Board at least annually and make recommendations on any proposed changes to the Board to complement the Company's corporate strategy;

2. to identify individuals suitably qualified to become members of the Board and select or make recommendations to the Board on the selection of individuals nominated for directorships;

3. to assess the independence of independent non-executive Directors;

4. to make recommendations to the Board on the appointment or reappointment of members of the Board and succession planning for members of the Board; and

5. to review the board diversity policy as appropriate to ensure its effectiveness and if necessary, recommend any revision suggestions to the Board for consideration and approval.

In fulfilling its functions, the Nomination Committee has been provided with sufficient resources by the Company to seek independent professional advice to perform its responsibilities.

The written terms of reference of the Nomination Committee are of no less exacting terms than those set out in the CG Code and available on the websites of the Stock Exchange and the Company.

Nomination Policy

The Nomination Committee will assess the candidate or incumbent on criteria such as integrity, experience, skill, and ability to commit time and effort to carry out the duties. The recommendations of the Nomination Committee will then be put to the Board for decision. The Nomination Committee should report back to the Board on its decisions or recommendations after every Nomination Committee meeting.

Board Diversity Policy

Pursuant to code provision A.5.6 of the CG Code, listed issuers are required to adopt a board diversity policy. The Company believes that board diversity can enhance the performance of the Company. After taking into account the Company's own business model and specific needs and upon the recommendation of the Nomination Committee, the Board has adopted a board diversity policy to ensure that in designing the Board's composition, board diversity will be considered from a number of aspects, including but not limited to gender, age, cultural and educational background, professional experience, skills, and knowledge. All Board appointments will be based on meritocracy, and candidates will be considered against objective criteria, having due regard to the benefits of diversity on the Board.

During the Reporting Period, the Nomination Committee held one meeting on March 22, 2019. The specific agenda of the Nomination Committee covered the following aspects:

(a) to review the structure, size, composition and diversity of the Board;

(b) to review the Company's board diversity policy;

(c) to assess the independence of the independent non-executive directors of the Company;

(d) to make recommendation to the re-election of Directors; and

(e) to make recommendation to the appointment of new Directors.

The attendance of the individual committee members at the Nomination Committee meeting mentioned above is set out below:

Name of Committee Member	Committee meetings attended/eligible to attend
Dr. Zhang Fangliang *(chairman)*	1/1
Mr. Dai Zumian	1/1
Mr. Pan Jiuan	1/1

Remuneration Committee

The Remuneration Committee currently comprises three members, including two independent non-executive directors, namely, Mr. Guo Hongxin (chairman of the Remuneration Committee) and Mr. Dai Zumian, and an executive director, namely, Ms. Wang Ye.

The principal duties of the Remuneration Committee include:

1. to make recommendations to the Board on the Company's policy and structure for all remuneration of members of the Board and senior management members and on the establishment of a formal and transparent procedure for developing policy on such remuneration;

2. to make recommendations to the Board of the remuneration of members of the Board who are non-executive Directors;

3. to consult with the chairman and/or the chief executive officer of the Company and, where deemed appropriate, senior management members about the Committee's proposals relating to, and have the delegated responsibility to determine, the specific remuneration packages for the employment of all members of the Board who are executive directors and all senior management members, including benefits in kind, pension rights, and compensation payments, including any compensation payable for loss or termination of their office or appointment;

4. to review and approve performance-based remuneration payable to members of the Board who are executive directors, and senior management members by reference to corporate goals and objectives resolved by the Board from time to time and other measures of performance;

5. to review and approve any compensation additional to that provided for in the remuneration packages determined according to paragraph 3 above, which is payable to members of the Board who are executive directors and senior management members in connection with any loss or termination of their offices or appointments to ensure that it is consistent with contractual terms and is otherwise fair and not excessive;

6. to review and approve compensation arrangements relating to dismissal or removal of members of the Board who are executive directors and senior management members for misconduct to ensure that such arrangements are determined in accordance with relevant contractual terms and that any compensation payment is otherwise reasonable and appropriate;

7. to ensure that no member of the Board or the senior management members or any of his/her associates is involved in deciding his own individual remuneration;

8. to determine the participation of members of the Board who are executive directors, senior management members, and other employees of the Company in any discretionary employee share or other share-based incentive schemes operated by the Company;

9. to determine targets for any Company-wide performance-related payments for members of the Board who are executive directors and senior management members and individual incentives for members of the Board who are executive directors and senior management members;

10. to determine the provision of benefits and settlement of other provisions under the terms of the service agreements or otherwise of members of the Board who are executive directors and senior management members where these are stated as being at the discretion of the Board;

11. to operate and administer the Company's share option schemes or other incentive schemes (if any) as may be from time to time adopted by the Company; and

12. to review and monitor the training record and continuous professional development of the Directors and senior management of the Company.

In fulfilling its functions, the Remuneration Committee has been provided with sufficient resources by the Company to seek independent professional advice to perform its responsibilities.

The written terms of reference of the Remuneration Committee are of no less exacting terms than those set out in the CG Code and available on the websites of the Stock Exchange and the Company.

During the Reporting Period, the Remuneration Committee held four meetings on March 22, 2019, June 28, 2019, August 28, 2019 and November 29, 2019 to cover the following aspects:

(a) to determine the remuneration policy and structure of Directors and senior management and evaluate and make adjustment to the remuneration of the Directors and senior management; and

(b) to consider and discuss matters concerning the implementation of the Share Option Schemes and RSA Scheme.

The attendance of the individual committee members at the Remuneration Committee meeting mentioned above is set out below:

Name of Committee Member	Committee meetings attended/eligible to attend
Mr. Guo Hongxin *(chairman)*	4/4
Ms. Wang Ye	4/4
Mr. Dai Zumian	4/4

Remuneration of Directors and Senior Management

The Company has established a formal and transparent procedure for formulating policies on the remuneration of Directors and senior management of the Group. Details of the remuneration of each of the Directors for the year ended December 31, 2019 are set out in note 8 to the financial statements in this annual report.

The biographies of the senior management are disclosed in the section headed "Directors and Senior Management" in this annual report. Remuneration paid to the senior management members (excluding the Directors) for the year ended December 31, 2019 is within the range below:

Range of remuneration	Number of Persons
Between HK$500,000 and HK$2,000,000 (equivalent to approximately US$64,000 and US$257,000)	2
Between HK$2,000,000 and HK$4,000,000 (equivalent to approximately US$257,000 and US$514,000)	1
Between HK$10,000,000 and HK$11,000,000 (equivalent to approximately US$1,284,000 and US$1,412,000)	1

Audit Committee

The Audit Committee currently comprises three members, namely, Mr. Dai Zumian (chairman of the Audit Committee), Mr. Pan Jiuan and Mr. Guo Hongxin, all being independent non-executive Directors. The principal duties of the Audit Committee are (i) to review and monitor the Company's financial reporting system, risk management, and internal control systems, (ii) to maintain the relations with the external auditor of the Company, and (iii) to review the financial information of the Company. The Audit Committee has been provided with resources required for it to discharge its function properly.

The written terms of reference of the Audit Committee are of no less exacting terms than those set out in the CG Code and available on the websites of the Stock Exchange and the Company.

During the Reporting Period, the Audit Committee held three meetings on March 22, 2019, June 28, 2019 and August 28, 2019. The specific agenda of the Audit Committee covered the following aspects:

(a) to consider and review the financial statement for the year ended December 31, 2018 and for the six-month period ended June 30, 2019; and

(b) to review audit planning, the financial reporting system, compliance procedures, internal audit function, risk management and internal control system and procedures and re-appointment of external auditor.

The requirements for Environment, Social and Governance Reporting were duly noted by the Audit Committee.

The attendance record of each committee member of the said Audit Committee meeting held by the Company is set out in the table below:

Name of Director	Committee meetings attended/eligible to attend
Mr. Dai Zumian *(chairman)*	3/3
Mr. Guo Hongxin	3/3
Mr. Pan Jiuan	3/3

The Audit Committee met the external auditors once on November 20, 2019 without the presence of the executive Directors.

Sanctions Risk Control Committee

The Sanctions Risk Control Committee is headed by Dr. Zhang Fangliang (chairman), Ms. Wang Ye, Mr. Meng Jiange, Mr. Eric Wang, and Mr. Shawn Wu as members.

The principal duties of the Sanctions Risk Control Committee include:

1. to effectively monitor the activities that may be subject to economic sanctions;

2. to provide guidance on the compliance with the relevant policies and procedures in relation to economic sanctions;

3. to provide guidance on the compliance with contractual covenants including those made in connection with the Global Offering and Listing; and

4. to ensure the establishment of effective policies in relation to economic sanctions.

During the Reporting Period, the Sanctions Risk Control Committee held four meetings on March 22, 2019, July 5, 2019, August 9, 2019 and November 1, 2019 to cover the following aspects:

(a) to discuss items regarding any sanctions related risks on the Group's commercial or other business activities;

(b) to review the activities that may be subject to economic sanctions;

(c) to review relevant policies and procedures in relation to economic sanctions;

(d) to review guidance on the compliance with contractual covenants;

(e) to review the use of proceeds from the global offering; and

(f) to review internal control policies and procedures with respect to the sanction risks.

The attendance record of each committee member of the Sanctions Risk and Control Committee meeting held by the Company is set out in the table below:

Name of Committee Member	Committee meetings attended/eligible to attend
Dr. Zhang Fangliang	4/4
Ms. Wang Ye	4/4
Mr. Meng Jiange	4/4
Mr. Eric Wang	4/4
Mr. Shawn Wu	4/4

The Sanctions Risk Control Committee has reviewed the sales of the Group to the Sanctioned Countries (as defined and disclosed in the Prospectus) for the year ended December 31, 2019 and the relevant legal opinions from the Company's legal adviser as to international sanctions laws to monitor the Group's exposure to risks of sanctions violations.

DIRECTORS' AND AUDITORS' RESPONSIBILITIES FOR FINANCIAL REPORTING IN RESPECT OF THE CONSOLIDATED FINANCIAL STATEMENTS

The Directors have acknowledged their responsibilities for preparing the consolidated financial statements of the Company for the year ended December 31, 2019, which give a true and fair view of the affairs of the Company and the Group and of the Group's results and cash flows.

The management has provided the Board such explanation and information as are necessary to enable the Board to carry out an informed assessment of the Company's financial statements, which are put to the Board for approval. The Company provides all members of the Board with monthly updates on the Company's performance, positions, and prospects.

The Directors have not been aware of any material uncertainties relating to events or conditions that may cast significant doubt upon the Group's ability to continue as a going concern.

The statement by the independent auditors of the Company regarding their reporting responsibilities for the audit of the consolidated financial statements of the Company is set out in the independent auditors' report on pages 140 to 144 in this annual report.

RISK MANAGEMENT AND INTERNAL CONTROL

The Board acknowledges that it is the responsibility of the Board for maintaining an adequate risk management and internal control systems to safeguard shareholders' investments and the Company's assets and reviewing the effectiveness of such systems on an annual basis. Such systems are designed to manage rather than eliminate the risks of failure to achieve business objectives, and each only provides reasonable and not absolute assurance against material mistreatment or loss.

The Group's internal audit department plays an important role in monitoring the internal governance of the Company. The major duties of internal audit department are to regulate and review the internal control and compliance related matters of the Company and conduct comprehensive audits of all branches and subsidiaries of the Company on a regular basis. The Group's internal audit department performs regular evaluation on the effectiveness of risk control measures taken by each operating department and issues an appraisal report which shall be submitted to our Audit Committee for approval.

The Audit Committee has received an internal control report prepared by the internal audit department during the Year and has considered that the internal control system of the Group remains effective and no material issue is required to be brought to the Board's attention. The Board considers the risk management and internal control systems effective after review.

The Company has established a risk management process, pursuant to which each operating department is required to identify any significant risks associated with their work and corporate strategies of the Company. Based on the assessment of the identified risks in terms of their likelihood and potential impact, the Company prioritises and pairs each risk with a mitigation plan. Furthermore, any emergencies are required to be reported, evaluated and managed in time to mitigate the impact.

The Group has established a three-tier risk control corporate structure in implementing our internal control and risk management policies and procedures. First, the Board and the senior management oversee and manage the overall risks associated with our business operations. Second, the Audit Committee provides the Directors with an independent review of the effectiveness of the financial reporting process, internal controls, and risk management system of the Group. Third, the Group's internal audit department supervises the implementation of our risk management policy at the corporate level and organises an annual audit progress for regularly evaluating the effectiveness of the risk management and internal control measures taken by each operating department and issues an appraisal report which shall be submitted to the Audit Committee for approval.

The Board is responsible for the management of inside information. Without the approval of the Board, the Company prohibits any inside information from being disclosed to the public.

AUDITORS' REMUNERATION

For the audit of the Group's consolidated financial statements for the year ended December 31, 2019, the total remuneration paid or payable to the Company's external auditors, Ernst & Young, for audit and audit related services amounted to US$520,000.

COMPANY SECRETARY

Ms. Wong Wai Ling was appointed as the company secretary of the Company with effect from August 24, 2015. She has over 10 years of experience in providing company secretarial services in Hong Kong. Ms. Wong is a vice president of SWCS Corporate Services Group (Hong Kong) Limited and is responsible for assisting listed companies in professional company secretarial work. Ms. Wong is an associate of The Hong Kong Institute of Chartered Secretaries and The Institute of Chartered Secretaries and Administrators in the United Kingdom. Ms. Wong's primary corporate contact person at the Company is Mr. Meng Jiange, the secretary of the Board.

Ms. Wong has undertaken not less than 15 hours of relevant professional training in compliance with Rule 3.29 of the Listing Rules for the year ended December 31, 2019.

COMMUNICATION WITH SHAREHOLDERS AND INVESTOR RELATIONS

The Company considers that effective communication with shareholders is essential for enhancing investor relations and the understanding of the Group's business, performance, and strategies. The Company also recognises the importance of the timely and non-selective disclosure of its information, which will enable shareholders and investors to make informed investment decisions.

The annual general meeting of the Company provides an opportunity for shareholders to communicate directly with the Directors. The chairman of the Company and chairmen of the Board Committees, or in their absence, their duly appointed delegates will attend the annual general meeting to answer shareholders' questions. The external auditors of the Company will also attend the annual general meeting to answer questions about the conduct of the audit, the preparation and contents of the auditors' report, accounting policies, and auditors independence.

To promote effective communication, the Company adopts a shareholders' communication policy that aims at establishing a two-way relationship and communication between the Company and the Shareholders and maintains a website at www.genscript.com, where up-to-date information on the Company's business operations and developments, financial information, corporate governance practices, and other information are available for public access.

SHAREHOLDERS' RIGHTS

To safeguard shareholders' interests and rights, a separate resolution is proposed for each issue at general meetings, including the election of individual Directors.

All resolutions put forward at general meetings will be voted on by poll pursuant to the Listing Rules, and poll results will be posted on the websites of the Company and the Stock Exchange in a timely manner after each general meeting.

CONVENING EXTRAORDINARY GENERAL MEETINGS AND PUTTING FORWARD PROPOSALS

In accordance with the Articles, extraordinary general meetings shall also be convened on the requisition of one or more Shareholders' holdings, at the date of deposit of the requisition, not less than one tenth of the paid up capital of the Company having the right of voting at general meetings.

Such requisition shall be made in writing to the Board or the secretary for the purpose of requiring an extraordinary general meeting to be called by the Board for the transaction of any business specified in such requisition. Such meeting shall be held within two months after the deposit of such requisition. If within 21 days of such deposit, the Board fails to proceed to convene such meeting, the requisitionist(s) himself (themselves) may do so in the same manner and all reasonable expenses incurred by the requisitionist(s) as a result of the failure of the Board shall be reimbursed to the requisitionist(s) by the Company.

With regards to proposing a person for election as a director, the procedures are available on the website of the Company.

Shareholders who intend to put forward their inquiries about the Company to the Board could email their inquiries to our Investor Relations Department at the email address: investorrelations@genscript.com. The Company will not normally deal with verbal or anonymous inquires.

CHANGE IN CONSTITUTIONAL DOCUMENTS

The Articles of the Company were adopted by the Company on December 7, 2015 and became effective on the Listing Date. There is no significant change in the Company's constitutional documents during the Reporting Period.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

ABOUT THIS REPORT

Overview

This report is the fourth Environment, Social and Governance (hereinafter referred to as "**ESG**") Report published by GenScript Biotech Corporation (hereinafter referred to as "**GenScript**", "**the Company**", or "**we**"), which discloses information on our responsible governance, service responsibility, quality optimization, innovation and research, team building and employee development, workplace health and safety, environmental protection, animal care and community feedback. The reporting year of this report is in alignment with our fiscal year.

Basis for compiling the report

This report is compiled in accordance with the Environmental, Social and Governance Reporting Guide (hereinafter referred to as "**Guide**") published by Hong Kong Stock Exchange Limited. Information is intended to disclose material environmental, social and governance issues, for the relevant parties and shareholders. The content of this report is determined by a set of established procedures, including identifying and prioritizing the stakeholders, identifying and prioritizing environmental, social and governance issues, collecting relevant metrics and verifying the reported quantitative metrics.

Reporting scope and boundary

The content and metrics reported in this document cover GenScript Biotech Corporation and its subsidiaries. The data contained within this report covers January 1 through December 31, 2019, unless otherwise noted, the currency involved in the report is in USD and intensity data is calculated based on the revenue disclosed in GenScript's annual report.

Source of data and assurance of reliability

The data and case studies reported in this document are prepared based on our internal statistical reports, internal policy documents and other internal documents. The Board hereby confirms that there are no false or misleading statements made in this report. The Board takes full responsibility for the authenticity, accuracy and completeness of this report.

Board approval

Upon review by management, this report was approved by the Board on March 27th, 2020.

I. SUSTAINABLE DEVELOPMENT WITH COMMITMENT

1.1 About Us

GenScript Biotech Corporation (stock code: HK01548) is a global biotech company established in 2002. Our businesses encompass four major categories based on its leading gene synthesis technology, including: (i) life science services and products, (ii) biologics development services, (iii) industrial synthetic biology products, and (iv) cell therapy. Headquartered in Nanjing, GenScript has an established global presence across Greater China, North America, the EU and Asia Pacific. Today, over 100 countries from over 100,000 customers and regions around the world have used GenScript's premium, convenient, and reliable products and services.

Adhering to the corporate mission of "Making People and Nature Healthier through Biotechnology", GenScript has been undertaking responsibility-featured operation over the last 17 years in keeping sustainable development with the core faith of entrepreneurial innovation, constant change, humanistic orientation and win-wins. Internally, we focus on continuous management reform while optimizing business processes and procedures, with an aim to closely integrating business operations with social responsibility. Externally, we are committed to improving value in strategic collaboration with business partners for a healthy biotechnology ecosystem where our contribution to the development of biotechnology and biopharmaceutical industry is achieved and win-win results among all industry players are accomplished accordingly.

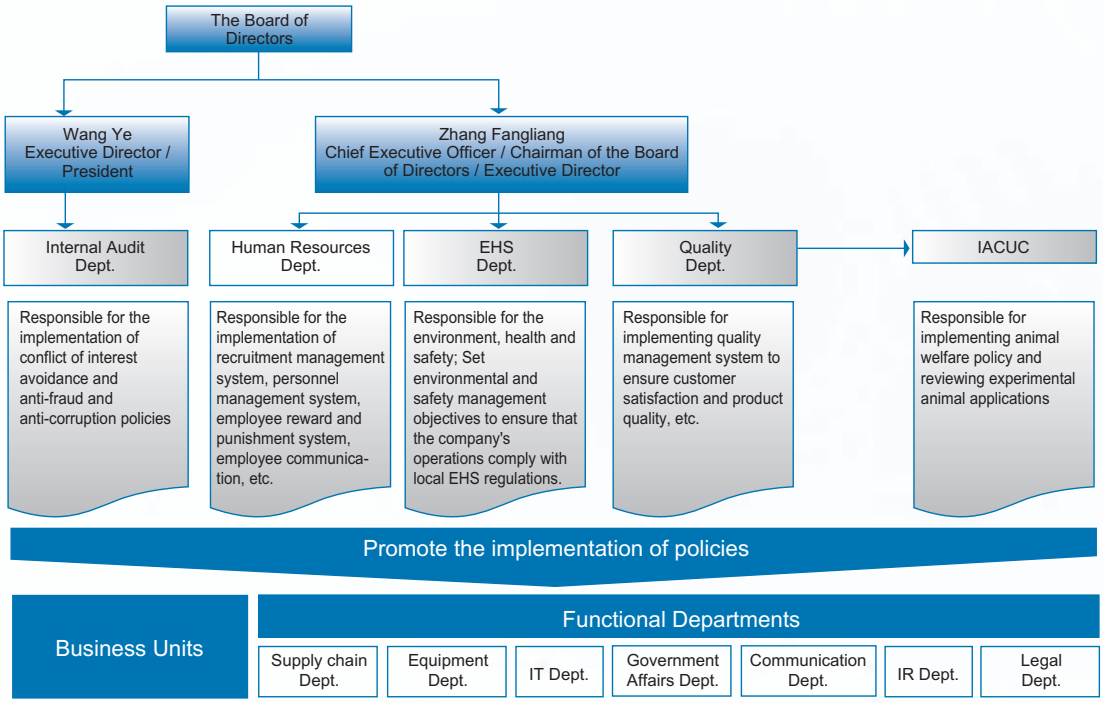
During the reporting period, we have sped up our global presence by gradually adapting our organizational structure, technological competitive advantages, management standards, and talent budget and talent pools to be in line with global benchmark companies and advanced management. Furthermore, we have expanded the visionary corporate responsibility profoundly and extensively. GenScript will always strive to become the most trustworthy biotech company.

Corporate Core Values

Our core values	• Customer level: Customer first • Company level: Innovation, pursuit of excellence and win-win cooperation • Staff level: Integrity and introspection
Our mission	Make people and nature healthier through biotechnology
Our vision	To become the most trustworthy biotech company
Our spirit	Dare to win with courage, commitment and endeavor

1.2 ESG Management

A sound ESG management system serves as the assurance of competitive corporate responsibility. The Company has been strengthening the integration of ESG responsibility philosophy and business strategy for a better ESG responsibility management system. The ESG management system led by the Board of Directors is responsible for reviewing the alignment of ESG strategic position with corporate development orientation. The ESG Working Committee, led by CEO Dr. Zhang Fangliang and President Ms. Wang Ye as the core backing of ESG governance system, is responsible for turning the corporate ESG strategy into a workable scheme; the ESG working group composed of the Internal Audit Department, Human Resources Department, EHS Department and Quality Department, together with experts of Institutional Animal Care and Use Committee (IACUC) as the major scheme player will specifically adopt reliable measures to ensure the effective implementation of the scheme and facilitate other functional departments and business units to work on it and report to the management regularly.

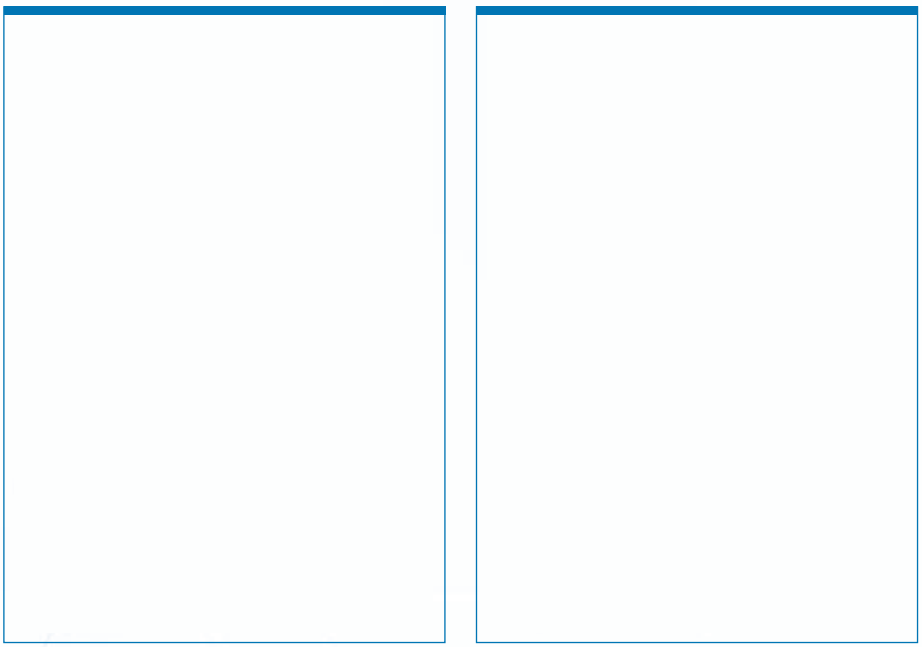


GenScript ESG Management Structure

Attaching great importance to the corporate management system and comprehensive risk management and controls, GenScript has established a three-tier framework for corporation risk control: i) implement internal controls, ii) implement risk management policies and procedures and iii) regularly audit the effectiveness of related systems. To fully harness the value of risk management, we intend to implant risk management into corporate management activities, requiring each operational department to identify the major risks pertaining to their own duties and the corporate strategy. Furthermore, after assessing the possibility and potential impact of the identified risks and prioritizing the risks, we have developed risk mitigation plans to ensure better capacities to cope with the complicated and fluctuating business environment.

1.3 Honesty and Compliance

With compliance and honesty as basic requirements, GenScript strictly abides with the *Company Law of the People's Republic of China*, the *Criminal Law of the People's Republic of China*, the *Anti-Unfair Competition Law of the People's Republic of China*, the *Basic Norms of Enterprises Internal Control*, the *Interim Provisions on the Prohibition of Commercial Bribery*, the *Foreign Corrupt Practices Act* and relevant laws and regulations. During the reporting period, GenScript edited the "Business Conduct Guidelines" both in Chinese and in English for the operations as a global enterprise, which specify the basic ethical standards of employees and corporate compliance criteria. The Guidelines help employees fully understand the code of conduct to be observed in business activities and guide them to abide by the common business ethics and conduct standards in global businesses so as to enhance GenScript's business credibility. In addition, all employees, managers and directors of GenScript have signed the personal commitment letters for the Guidelines during the reporting period. While strengthening internal integrity and compliance management, we also subject all stakeholders to integrity and compliance by requiring our suppliers to sign the "Integrity Transaction Agreement".



GenScript Business Conduct Guidelines in Chinese and English

Encouraging employees to make real-name or anonymous reports of any illegal behaviors or violations of the "Business Conduct Guidelines", GenScript establishes a 24-hour reporting hotline and email address for business ethics and anti-fraud where the Internal Audit Department receives, investigates and reports all tip-offs and hence puts forward solutions under the supervision of the Board of Directors, the Board of Supervisors and the Audit Committee. It is requested to keep the informant's information strictly confidential during the investigation, and any retaliation or discrimination against the informant is forbidden. The informants will be rewarded and the violator will be punished and criticized in a circulated notice in strict compliance with the relevant provisions of the "Employee Reward and Punishment Policy" and the "Interest Conflict Avoidance and Anti-Fraud Policy".

Along with institutional improvements, we also emphasize capabilities of employees in business ethics. During the reporting period, GenScript organizes a series of compulsory training and examinations for the "Business Conduct Guidelines" as well as management training courses for "Captain" and "Colonel". In addition, internal control related events are organized to help employees fully recognize their responsibilities in professional ethics behavior and anti-fraud in business, including internal control training, excellent models presentation training, and on-line campaigns of WeChat official account such as "Understand Internal Control in One Picture" and "Online Prize-giving Quiz". No corruption lawsuit was filed in the Company during the reporting period.

Business ethics training

- 7 training sessions of the "Business Conduct Guidelines" for those rankings above managers had been organized in May and June 2019;
- 5 management training courses for "Captain" and "Colonel" of management personnel had been organized with the "Business Conduct Guidelines" arranged as a required course in the second half of 2019;
- 4 training sessions of the "Business Conduct Guidelines" for all employees had been organized in March 2019;
- 3 training sessions of the "Business Conduct Guidelines" for all employees in subsidiaries had been organized in March 2019;
- 2 training sessions of the "Business Conduct Guidelines" for new employees had been organized in each month of 2019;
- The course of the "Business Conduct Guidelines" was launched on the new E-learning system and the examination for all employees was organized in December 2019.

Screenshots of the "Understand Internal Control in One Picture" activity

1.4 Responsibility Identification

The Company attaches great importance to communication with stakeholders, facilitating the formulation and implementation of ESG strategy open to the engagement and supervision of all stakeholders including suppliers, customers, media, academia, regulators and investors. We also actively establish multi-channel communication and contact with stakeholders under a two-way, transparent and regular feedback mechanism, understand the issues they are concerned with and regularly review the effectiveness of actions for the purpose of constantly improving communication channels and comprehensively understanding the opinions of stakeholders.

To fully understand the feedback of each stakeholder on the response and disclosure of our ESG issues, we perform an ESG materiality assessment in the following two phases:

Identify potential significant issues

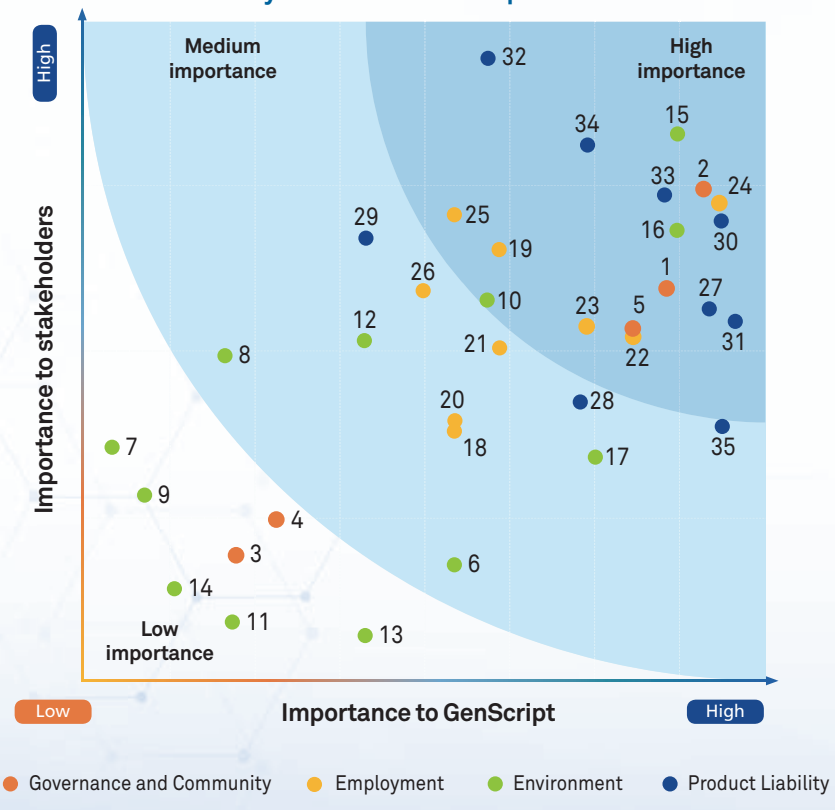
Through media analysis, peer benchmark analysis and review of other relevant documents, we identify potential significant issues that can reflect the impact of the Company's business on the economy, environment and society, or affect the assessment and decision-making of the Company by stakeholders.

Prioritize potential significant issues

Through interviews with stakeholders, we understand the priorities of stakeholders, develop a materiality matrix and identify significant issues accordingly.

Based on the ESG issues in 2018, the Company identified 17 ESG issues of high importance located in the upper right of the matrix below, 11 ESG issues of medium importance and 7 ESG issues of low importance through the above assessment process. All ESG issues of GenScript are listed in the table below with issues of high importance highlighted. These issues of high importance will be revealed in detail in this report as highlighted concerns of all stakeholders and GenScript.

Materiality Matrix of GenScript's ESG Issues



No.	Classification	Environmental, Social and Governance Issues	No.	Classification	Environmental, Social and Governance Issues
1	Governance and Community	**Engagement of the Board of Directors in ESG**	18	Employment	Working hours and holidays
2		**Operational risk management**	**19**		**Compensation & benefits**
3		Assessing and considering suppliers' performance of social and environmental responsibility	20		Fair recruitment and reward mechanism
4		Supporting community development	21		Non-discrimination
5		**Anti-corruption**	**22**		**Compliance with labor laws and regulations**
6	Environment	Domestic waste	**23**		**Employee care and retention**
7		Packaging materials	**24**		**Health and safety**
8		Energy	**25**		**Training and Development**
9		Reducing carbon footprint	26		Prohibition of child labor and forced labor
10		**Exhaust emissions**	**27**	Product liability	**Technology innovation**
11		Water	28		Maintaining customer health and safety
12		Sewage	29		Labeling with clear and true product information
13		Avoiding impacts on the ecological environment	**30**		**Respecting intellectual property rights**
14		Helping suppliers reduce environmental impacts	**31**		**Compliance with product liability and service regulations**
15		**Hazardous waste**	**32**		**Product query, after-sales service and feedback mechanism**
16		**Compliance with environmental regulations**	**33**		**Protecting customer privacy**
17		Safeguarding laboratory animal welfare	**34**		**Enhancing product and service quality**
			35		Protecting biosecurity

II. SINCERE SERVICE AND ASSURED QUALITY

Adhering to the vision of becoming the most trustworthy biotech company, GenScript aims at improving the quality of products and services and enhancing patients' quality of life with the core value of putting customers first. During the reporting period, we optimized the customer feedback and response procedures, and updated survey indicators of customer satisfaction to further understand customer demands and enhance the customer experience. We have optimized purchasing from the source, strengthened the quality control of suppliers, constantly improved the quality system in production and strengthened the quality training for employees. In addition, we have taken a series of measures in information security to respect and protect customers' privacy information.

2.1 Customer First

In response to the development of product customization and customer diversification, we have increased the investment in human resources for customer feedback processing and used the data platform to analyze customer feedback in order to improve our service efficiency. In addition, we maintain customer satisfaction survey to understand customer satisfaction towards GenScript from all aspects and take targeted measures for all feedback by always putting customer's demands first. Meanwhile, through scientifically and responsibly promoting biopharmaceutical products, the Company pays attention to the legal compliance of product labels and advertising slogans during marketing and strictly abides by state laws and regulations to ensure that authentic and accurate information is promptly received by regulatory authorities, customers, patients and others involved.

Customer Feedback Management

GenScript always values communication and customer service and strives to build an effective customer communication mechanism into one of the Company's core competencies. During the reporting period, we continued to implement the "Customer Feedback Management Measures" and adopted a modular online customer relationship management system as well as JIRA (a project and event tracker) to manage customer feedback and improve the efficiency of collecting customer feedback. Furthermore, we formed a special team to handle the Company's external and internal complaints by means of monthly collection and analysis of customer feedback. In addition, we provided valuable views to the R&D team and guided the continuous improvement of the production team, improving the efficiency of complaint handling.

In 2019, we increased human resources input for complaint handling and optimized the feedback and handling procedures for complaints. The time spent on complaint investigation and handling decreased from an average of 9.5 days in 2018 to an average of 7 days in 2019. During the reporting period, we received 2,172 complaints from customers and responded to 100% of complaints, among which 773 complaints are confirmed as true problems, that is, the liability in GenScript. The increase in the number of complaints in 2019 was mainly due to the diversified business growth, annual orders growth and optimization of our customer feedback channels which enable more customers to voice their feedback in a timely and easy manner.

Apart from customer feedback management, we combine BI data platform (a Business Intelligence data platform) to present the analysis report of customer complaints online, conduct component analysis, difficulty analysis and root cause analysis of customer complaints, thereby optimizing business processes through digital technologies. With fast and accurate customer complaints analysis based on big data, the BI data platform transforms the entire customer service to digital intelligent operation, facilitating GenScript to provide more scientific and comprehensive services for customers and effectively handle complaints.

Customer service based on big data intelligence

According to the statistical analysis of the GenScript BI system in the first quarter of 2019, at least 7 complaints were concerned with human errors in selecting restriction sites of enzyme for gene orders placed by technical support personnel. In such context, we optimized the gene order system based on the analysis results of BI data platform and developed the automatic self-examination function of restriction sites of enzyme in the second quarter of 2019. When an error occurs, the system automatically reminds the technical support personnel to correct it so as to avoid such human errors.

Customer Satisfaction Survey

During the reporting period, we used the Likert scale to collect customer satisfaction data for GenScript. The score for overall satisfaction was 88.74 in 2019 (88.18 in 2018), in which the score for customer service was 91.4, showing a rising trend year by year. As GenScript expands its global presence, GenScript pays more attention to overseas customers. We provide differentiated products and services based on requirements from the market and customers and continue to explore all possible methods to improve satisfaction of diversified customers.

In 2019, GenScript added a new indicator of customer loyalty, NPS (Net Promoter Score), to the customer satisfaction survey system to objectively measure the likelihood that customers will recommend GenScript's products and services to others. According to a total of 1329 customer questionnaires collected, the NPS reached 58%, far above the average of 7-20% among companies. This revealed that GenScript has a number of loyal customers who desire to recommend our products and services to others.

By ongoing optimization of customer satisfaction survey methods and indicators, we aim to further understand customer feedback on our services and products, optimize the products and service processes, and develop improvement plans so as to achieve sustainable business success and constantly meet customer needs.

Small Demand Means Room For Further Improvement

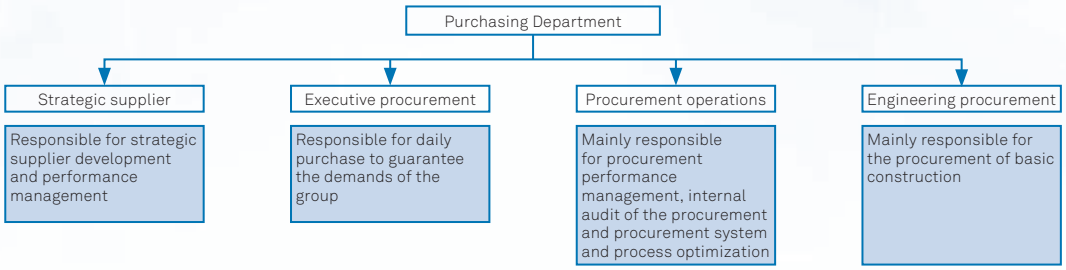
GenScript received customer feedback in 2018: the interior space design of the packaging box needed to be optimized for better product storage. As a result, GenScript set up a special project team in the same year to develop new product packaging.

In 2019, GenScript launched the packaging of book-type boxes with magnetic closure. The new packaging is solid, efficient, environmentally friendly, compatible, recyclable and reusable. It also saves production packaging materials and unpacking time and improves delivery efficiency and the customer experience. As shown in the customer satisfaction survey reports, satisfaction with new packaging reached 90.7% for three consecutive months. Then GenScript prepared a modification plan following customer suggestions to further optimize the customer experience.

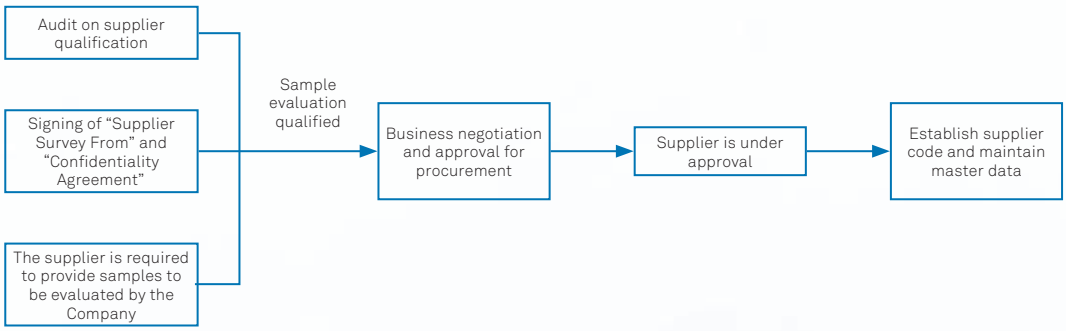
2.2 Responsible Purchasing

GenScript has always been cautious and strict in purchasing, the first step for quality control. In 2019, we internally optimized the purchasing organizational structure to reduce supply risks in a more streamlined and systematic way and guarantee the Company's operations; we externally raised the qualification standards of suppliers and a new professional supplier audit team under Quality Department conducted on-site audits, assuring product quality at the source.

In 2019, we optimized the purchasing organizational structure by subdividing functions such as strategy procurement, executive procurement, procurement operations and engineering procurement so as to form a more professional purchasing team for higher purchasing efficiency and efficient and consistent purchasing processes. In terms of policies and systems, while continually complying with the purchasing and supplier management policies, we analyzed and improved the supplier quality management procedures. Quality Department led the development and amendment of such procedure documents as "Supplier Quality Management Procedures" and "Supplier Quality Audit Specification", ensuring the standard and consistent operation of the supplier management system. Purchasing Department also further defined and optimized the supplier onboarding review procedure so as to strictly control the qualification and quality of new suppliers.



Structure Optimization of Purchasing Department



Supplier Review Process

A professional supplier audit team established by Quality Department of GenScript is responsible for the review of suppliers for critical materials. During the reporting period, the supplier audit team has completed 49 supplier on-site audits covering 47 suppliers, an increase of 176% compared to that in 2018. Additionally, a total of more than 300 non-conformities of suppliers were discovered and proposed, and suppliers actively gave response and took corrective action. Business units conducted more than 30 on-site audits in 2019, covering multiple dimensions from hospitals to material supply. This enhanced the cooperation between the Company and suppliers and provided utmost guarantee for the product quality of GenScript.

The countermeasures taken by GenScript against non-conformities in 2019 include:

Assistance for suppliers	• For GenScript's strategic suppliers, the audit team provides assistance and improvement strategies related to the quality system, helping suppliers steadily improve production quality management and significantly enhance the quality of materials supplied.
Restriction on/ replacement of suppliers	• For suppliers with poor quality management, the audit team, Purchasing Department and Production Department jointly restrict their qualification or replace them with premium suppliers. From 2019 to now, 10 suppliers have been restricted or replaced to minimize material risks.

2.3 Strict Quality Control

While offering high-quality services and catering to customers' demands for products, GenScript strictly aligns all business lines with laws and regulations such as the *Product Quality Law of the People's Republic of China*. With the quality policy of "stability, innovation, promptness, professionalism and continuous improvement" in mind, GenScript always strives for perfection.

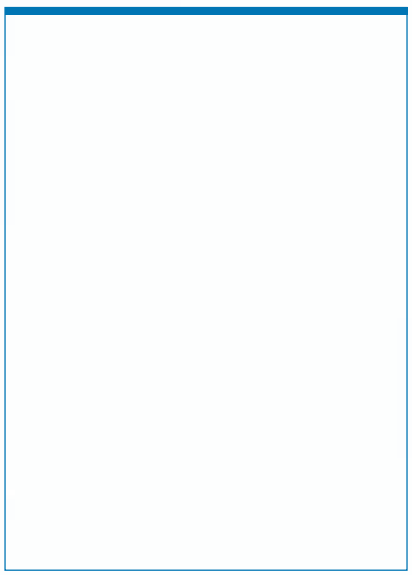
Strengthen Quality Standardization

During the reporting period, leaders of 14 business lines and key technical personnel analyzed the whole process of business lines and used the failure mode and effect analysis (FEMA). In response to the identified risks, we quickly took measures to further standardize the quality specifications of our internal business lines and provide customers with products of higher quality and standards.

About operations	• Reasons: product quality problems as a result of manual operations or handover • Countermeasures: Each department effectively reduces or controls the impact of risks through reading and learning SOPs, staff training and examinations.
About processes	• Reason: Incomplete process design and lack of corresponding functional departments or personnel • Countermeasures: Each department readjusts the process nodes and appoint functional personnel that ensure the effectiveness of the quality system.
About technology	• Reasons: Quality issues caused by technical bottlenecks • Countermeasures: R&D Department sets up special projects for improvement in technical capabilities while Production Department sets up monitoring points and review mechanisms for key processes.
About experimental environment	• Reason: Unclear production site planning with the risk of confusion. • Countermeasures: Reasonable division of the experimental area and intensified control of manual operations
About equipment	• Reason: Risks of reporting errors caused by inaccurate measurement of equipment • Countermeasures: Classify equipment according to impacts of processes and reduce the possibility of inaccuracy through regular inspections, maintenance, measurement and confirmation.
About materials	• Reason: Risks of non-conforming materials • Countermeasures: Control material quality by well established supplier management and classification based incoming inspection rules.

Risks and Countermeasures of Whole Process of Business Lines

GenScript launched the certification project of Medical Device Quality Management System (ISO 13485:2016) in 2018, established ISO13485 quality management system for the oligo business line in 2019 and obtained the SGS certification, effectively ensuring the stability of the final products. In March 2019, GenScript invited external senior ISO13485 trainers to provide quality management system training for employees in production, R&D, quality, and back office. In all, 32 employees finished the assessment and obtained the internal auditor certificate of ISO13485 quality management system.



SCG authentication certificate

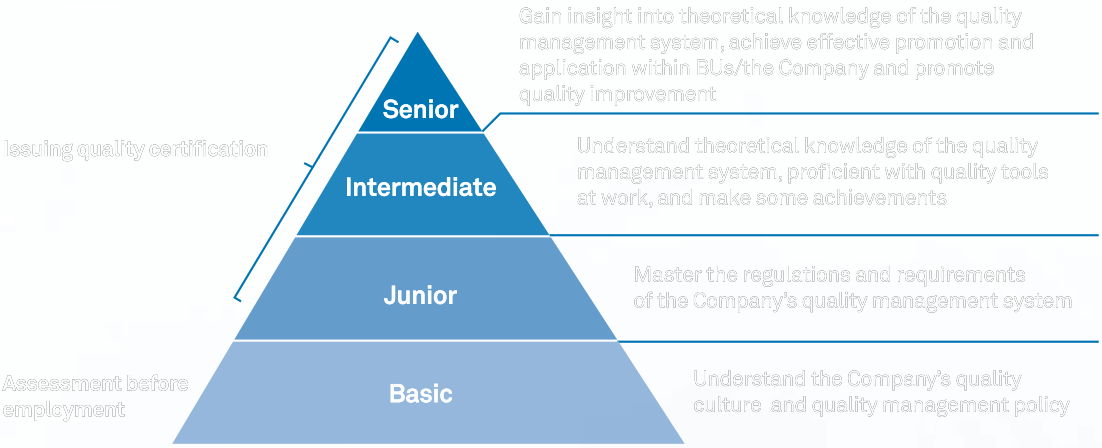
ISO 13485 internal training and certification

As of December 31, 2019, GenScript has not recalled any products due to product quality and safety issues.

Strengthen Quality Training for Staff

In 2019, we rolled out an internal quality certification system where employees were classified into QA & QC and non-quality practitioners. Quality certifications include basic, junior, intermediate, and senior levels. Training courses and assessment standards vary with certification levels.

Structure of Quality Certification System



Quality Certification System

QA & QC: QA & QC shall meet corresponding requirements strictly based on ranks and quality certification level.

Non-quality practitioners: Non-quality practitioners shall pass the basic course study and assessment before employment; supervisor-level employees must finish the junior course study and assessment; managers and above must finish the intermediate course study and assessment.

2.4 Privacy Protection

Aware of the importance of cyber security and privacy protection to customers and itself, GenScript revised and implemented the "Information Security Management Policy" in 2019 to strengthen and upgrade the network environment in terms of hardware and policies. This improved the Company's information security management system, reduced the security threats caused by human or natural factors to the confidentiality, integrity, and availability of the Company's information, promoted effective information security protection, and facilitated the continuous, stable, and healthy development of the Company's business. During the reporting period, there were no confirmed information leakage, theft or loss of customer data.

During the reporting period, the following upgrades to the network environment in terms of hardware and strategy were made:

- Hardware equipment: We improved the server configuration and upgraded the group network to a 10 Gigabit backbone network which provides more abundant bandwidth and processing capabilities. We also launched multiple sets of redundant storage for business data migration and built a new data center in the Netherlands. All these measures ensured the stability of customer data storage.

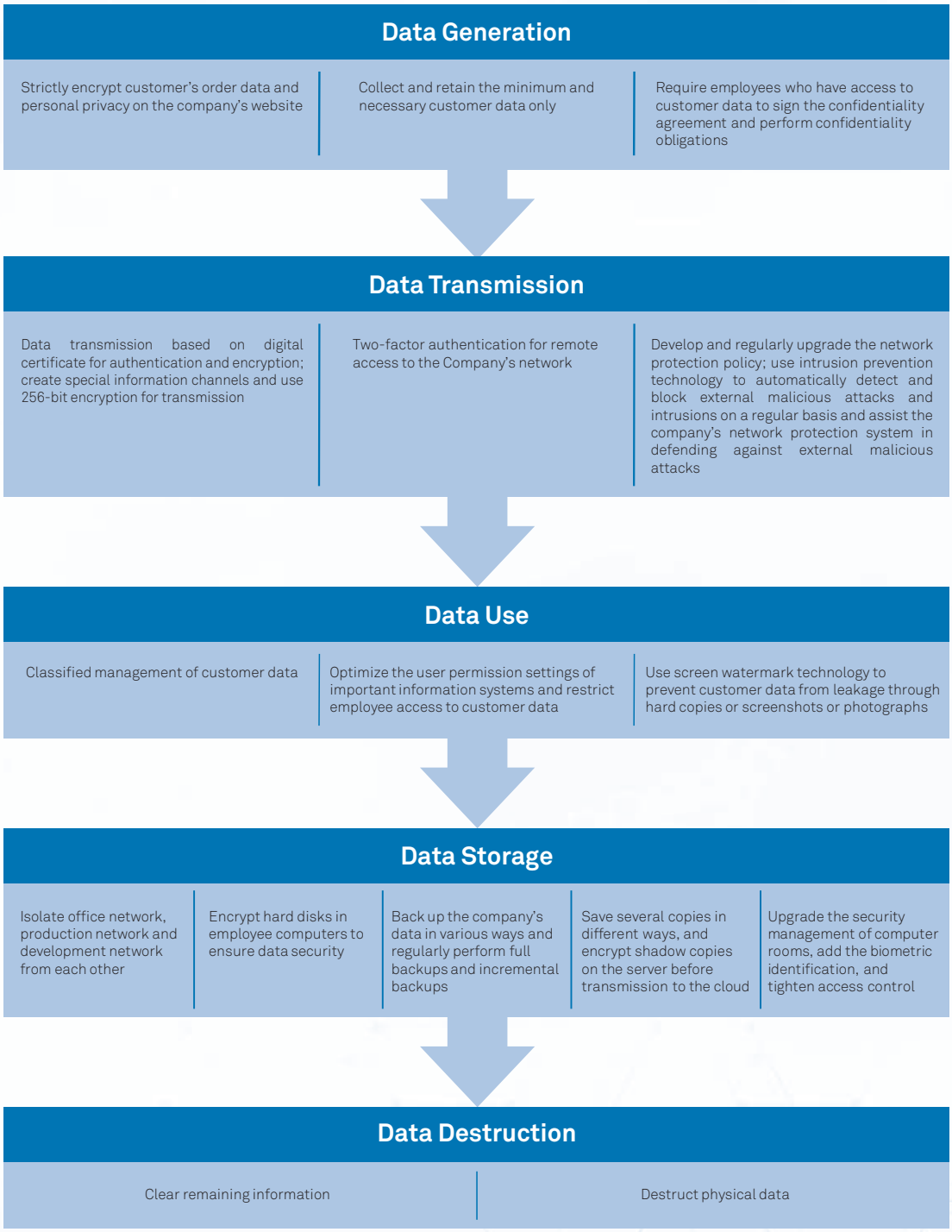
- Network and policy: We have established new networks in Europe and China branch, upgraded the dedicated lines for international interconnection, and improved the performance and bandwidth of networks connecting China, Europe and US branches. Data transmission is based on digital certificate for authentication and encryption to ensure timely and stable transmission of customer data.

- Network security audit by a third party: We engaged a professional third party for security audit of the Company's IT infrastructure to tighten the security of the GenScript's IT infrastructure and ensured the security of the Company's internal information and customer data.

- Tightening of internal permissions: We sorted out and checked user permissions to access important information systems and followed the principle of "minimum permissions" for optimization to prevent the leakage or theft of internal information.

User Privacy Protection

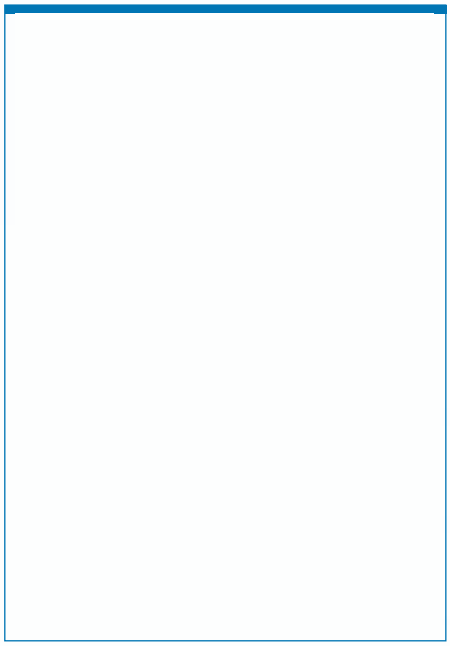
In 2019, to further strengthen the control and protection of customer privacy, we issued the "Customer Data Privacy Management Measures". Based on the customer data use process, GenScript took measures and utilized technology to protect customer data from the source in every step from the generation of customer data, background data transmission, use of customer data, storage of customer data, and destruction of user data.



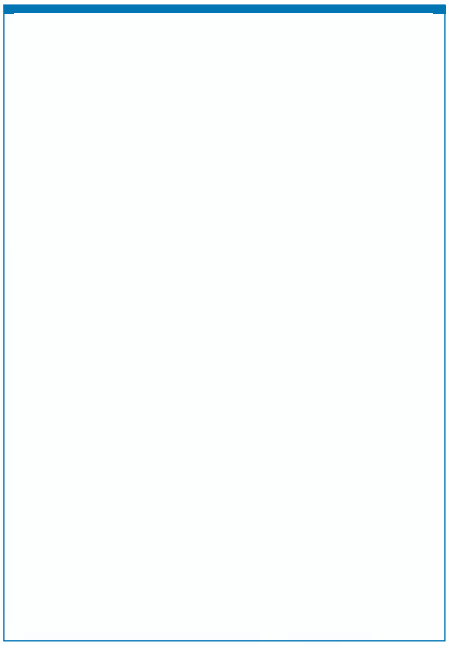
GenScript's Customer Data Protection Measures

III. VALUE INNOVATION WITH DARING SPIRIT

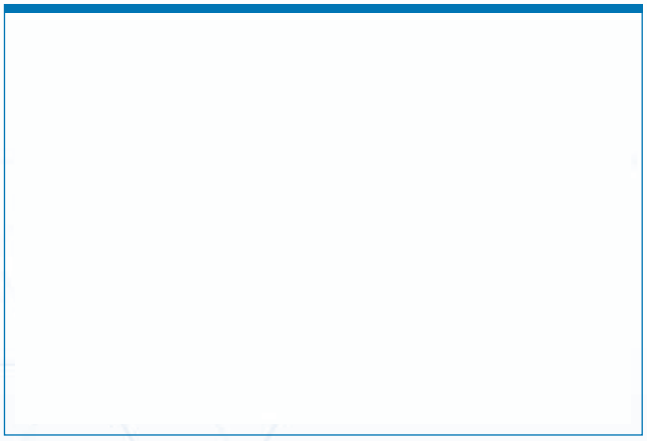
The spirit of courage, commitment and endeavor has been the driving force for GenScript Biotech Corporation to expand its presence. The Company has been practicing the philosophy of "Making People and Nature Healthier through Biotechnology" and blazing new trails in the daring spirit. During the reporting period, GenScript was recognized and highly praised for its brilliance in market performance, R&D innovation as well as quality level.



GenScript was awarded "Top 10 Innovative Brands in China"



GenScript won the award of Top APAC Pharmaceutical Innovator



Nanjing Legend Biotech won "Innovation Breakthrough Award of China Cell Therapy Enterprises"

3.1 Dedication to R&D

After 17 years of efforts and dedication, GenScript has gradually gained a wealth of R&D experience and formed a strong team in bio-pharmaceutical R&D. In 2019, we gave full play to our strong innovation and R&D advantages and cooperated with a number of enterprises. Globally, we carried out international business cooperation to empower more new drug developers, committed to the health of patients; domestically, we increased our R&D budget and introduced sophisticated R&Ds equipment, invigorating our R&D efforts. In the future, GenScript will further actively cooperate with partners to build an innovation ecosystem in the biotechnology and healthcare sectors.

GenScript Biotech Corp. and ABL Bio Builds A Partnership in Bispecific Antibody Development

In November 2019, we entered into a partnership agreement with ABL Bio, a Korean biotechnology company specialized in developing therapeutic drugs for immune tumors and neurodegenerative diseases. GenScript authorized ABL Bio to use a single domain antibody targeting tumors (sdAb), a monoclonal antibody (mAb) and GenScript Single Domain Antibody Fused to Monoclonal Ab (SMAB) platform, a bispecific antibody platform, to develop multiple bi-specific antibody molecules. Meanwhile, ABL Bio appointed GenScript as the exclusive supplier of CDMO services for preclinical pharmaceutical research of bi-specific antibody molecules. The partnership shows that GenScript's biologics R&D services have been increasingly recognized by internationally-known companies. Through cooperation with well-positioned enterprises like ABL Bio, we will further our dedication and innovation and bring good news to more patients diagnosed with immune tumors and neurodegenerative diseases.

GenScript Brings in Berkeley Lights Optofluidic Single Cell Platform

In November 2019, our pharmaceutical CDMO company cooperated with Berkeley Lights, Inc. (BLI), a pioneer and leader in the field of digital cell biology, to bring in its most advanced optofluidic single-cell platform and apply it to the antibody drug development platform. This enabled GenScript to be the first domestic biopharmaceutical CDMO company in China that has an antibody discovery platform with a comprehensive presence in hybridoma technology, the fully human antibody library platform, and the single B cell high-throughput sorting platform. This cooperation reflects GenScript's strong R&D force, greatly promotes GenScript's overall services in the field of antibody drug discovery, and enriches our technical reserves, thus allowing us to better contribute to global biopharmaceutics development.

GenScript and Merck Built A Strategic Partnership in Cell and Gene Therapy

In March 2019, GenScript built a comprehensive strategic partnership with Merck, a leading global technology company in the field of cell and gene therapy, for the fact that GenScript has GMP facilities designed and built in accordance with GMP requirements in the US, Europe and China and a proven process and quality research platform. The long-term strategic partnership between the two companies will lead to a win-win situation and promote the industrialization of the cellular immunity and gene therapy.

While engaging in innovation and R&D, GenScript also improves its hardware strength to lay the foundation for further innovation and R&D. The plasmid & virus facility put into operation in December 2019 has 4 production lines respectively which support simultaneous process development of more than 20 projects. The overall design, layout and quality management system of facilities comply with international GMP standards. Covering a total area of about 5,000m^2, the facility is currently the largest plasmid & virus facility in China. In addition, GenScript Biologics R&D Production Center was officially put into production in July 2019.

GenScript Builds the Largest Plasmid & Virus Facility in China

In December 2019, GenScript virus facility was officially put into production. As of the reporting period, the facility has been the largest virus facility in China that meets the clinical sample production requirements. This GMP facility is used for the production of clinical virus vectors and helps customers rapidly proceed from preclinical research to clinical research.

Biologics R&D and Production Center

Nanjing Biologics R&D and Production Center was completed in June 2019 and officially put into production in July. It covers a building area of about 9,300 m^2. Its facilities cover antibody drug discovery, biological analysis, cell line and process development, GMP production and other capabilities. The GMP production facilities have been designed and built in compliance with GMP requirements of the US, EU and China and can satisfy the production requirements of preclinical and clinical phase I samples. The production center supports preclinical research and clinical trial phases and the whole supply chain system from enterprise R&D, purchasing to production. The center will provide more efficient and flexible R&D and production services for partners at home and abroad and accelerate new drug R&D and marketing.

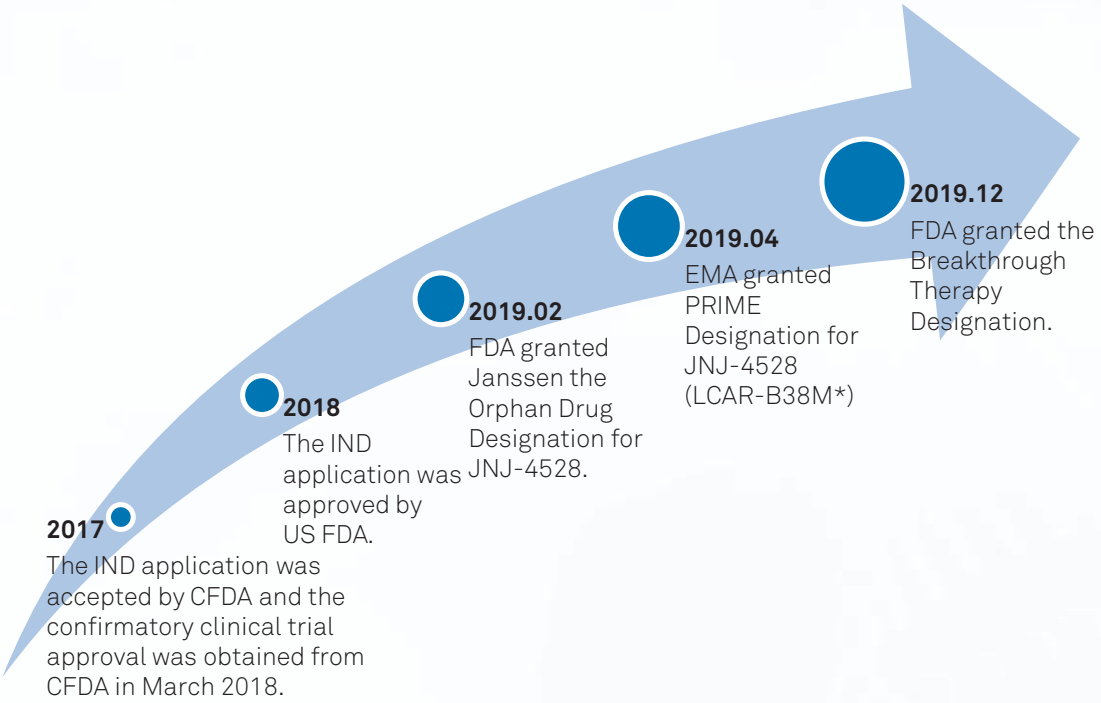
3.2 Value Innovation

R&D cooperation and growing hardware strength enable GenScript to assume more social responsibilities and realize value innovation. In such context, our R&D products are providing more opportunities for patients to prolong lives and for partners to inspire research strategies..

Johnson & Johnson and Nanjing Legend Biotech (a subsidiary of GenScript) have been collaborating on the development of LCAR-B38M/JNJ-4528, a BCMA CAR-T cell therapy discovered by Legend. In December 2019, at the 61st American Society of Hematology (ASH) annual conference, results of the CARTITUDE-1 Phase Ib trial were presented for the first time. In 29 patients with relapsed or refractory (RR) multiple myeloma (MM) enrolled in the US, the objective response rate (ORR) was 100% with a median follow-up of 6 months. As of November 5, 2019, 27 of 29 patients remained progression-free.

At the ASH annual conference, data from long-term follow-up of the LEGEND-2 trial in China was also updated. In 57 patients with RRMM treated in the Second Affiliated Hospital of Xi'an Jiaotong University, the ORR was 88% with a median follow-up of 25 months, the median progression-free survival (PFS) was 19.9 months, and the median overall survival was 36.1 months, showing a long-lasting response. In 17 patients with R/RMM treated in Jiangsu Provincial Hospital, Shanghai Ruijin Hospital and Shanghai Changzheng Hospital, the ORR was 88% with a median follow-up of 26 months, and the median progression-free survival (PFS) was 18 months.

This CAR-T cell therapy has been granted the Breakthrough Therapy Designation by the US Food and Drug Administration (FDA), which includes all fast track program features as well as more intensive FDA interaction and an organizational commitment to expedite the development and review.



Overview of International Awards for Investigational BCMA CAR-T Cell Therapy

* *LCAR-B38M refers to the product candidate being studied in China, and JNJ-68284528 (JNJ-4528) refers to the product candidate being studied in the rest of the world. Both represent the same CAR-T cell therapy.*

During the reporting period, GenScript worked together with the National Translational Medicine Center (Shanghai) and Ruijin Hospital on transfusion of CAR-T cell preparations for the first case enrolled in Phase II clinical trial in March 2019. In Phase II clinical trial, the treatment process and options were optimized and standardized, bringing hope to more patients suffering from multiple myeloma.

The Power of Biotechnology, The Power for Lives
– Dialogue with Mr. Xu from Technical Operation Department of Legend

"In the MMY2002 CAR-T project, the most exciting milestone for the staff of Technical Operation Department is the completion, transportation and transfusion of the first clinical drug."

As a member of Technical Operation Department, Mr. Xu participated in the entire process from patient apheresis, medicine manufacturing, medicine release, medicine transportation and transfusion. Each and every effort made Mr. Xu feel the responsibility and mission as a pharmaceutical member: "In a traditional pharmaceutical company, a factory serves to complete the production of orders, while Quality Department ensures the safety and efficacy of drugs provided for patients. But a factory never knows the specific patients that its products are used for."

In Mr. Xu's eyes, the CAR-T product was a targeted product. "During apheresis, you see the patient on the bed and the blood continuously filling the blood bag on the blood component separator, which is like collecting hope for the cure of the patient". When the patient's blood sample arrived at the factory, the staff felt a greater sense of mission in treating and saving people. When the production test was completed and the quality supervisor signed the release statement, the patient's hope lies in that small blood cryopreservation bag.

On the day of transfusion, what was delivered by the carrier was more hope of healing and living than medical products for patients. "At that moment, I know that hope was finally delivered to end users. Our mission is to repeat this process again and again to bring hope to patients."



Transportation of Phase II CAR-T Clinical Drug

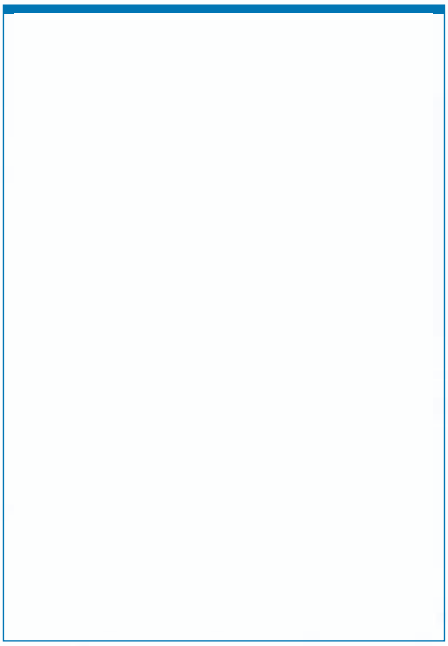
3.3 Protection of Achievements

As a technology innovation-oriented corporation, GenScript attaches great importance to the protection and compliance of its own products and intellectual property rights. During the reporting period, GenScript developed and released the "Trade Secret Management Policy" for the purposes of standardizing the management of the Company's trade secrets and preventing the Company's interests from being harmed. With the efforts of Process and Operation Management Department, GenScript developed and implemented the "Technical Information Management Measures" for the purposes of protecting the Company's core technology, maintaining the Company's development and interests and standardizing the technical information management of all departments.

Patents of GenScript in 2019

Patents granted in 2019: 27
Cumulative patents granted: 100
Total patent applications in 2019: 91
Cumulative patent applications: 305

GenScript's "Intellectual Property Management System" was reviewed and approved by a professional third party in 2019. The scope of review covers intellectual property management of trademarks, copyrights, patents and trade secrets. The approval of the system demonstrates the continuous and effective operation of the Company's intellectual property management system which enables the Company to earn customer trust and further develop business. By complying with standards, GenScript continuously motivates employee innovation and build customer trust.



Certificate of intellectual property management system

Every employee of GenScript should be fully aware of the importance of legal compliance and intellectual property. During the reporting period, we ran a series of special training programs on basic knowledge, introduction to intellectual property policy and process, patent law case practice and also organized patent invalidity lectures for R&D personnel. This has enabled R&D personnel to gain insight into the development trend of the biopharmaceutical field, further improved employees' awareness of intellectual property rights, and improved R&D efficiency and enthusiasm.

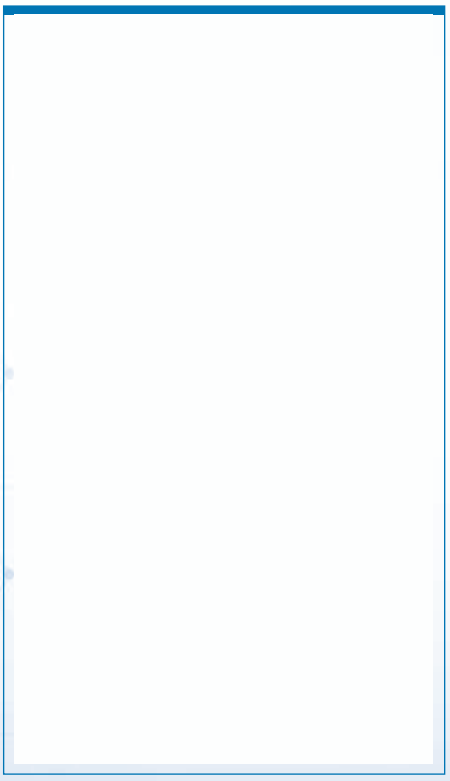
IV. REGARDING COHESION WITH INGENUITY PERSONNEL

We regard employee development as a fundamental value and practice people-oriented modern management. GenScript safeguards and protects the rights and interests of employees in accordance with the law and actively creates a good environment that brings out the best in employees. To inspire employee potential and help employees fulfill themselves, we continuously improve the employee growth and development system and organize diversified and humanized employee care events so that the Company and employees work on shared cause, destiny and interests.

4.1 Talent Management

In 2019, to align with the global strategic presence of the Company, enhance HR professional support, and effectively support business development, the Company further optimized the current three-pillar model of Human Resources Department by refining the scope of responsibility of human resource center of excellence (HR COE), human resource business partner (HRBP) and human resource shared service center (HR SSC), laying a solid management foundation for the establishment of a well-structured talent team with sufficient members and innovation enthusiasm in the Company.

During the reporting period, GenScript was granted the Top Human Resource Management Award in 2019 by 51job based on the efficient, powerful and systematic talent management model. As GenScript sets a typical model in improving and innovating in the negotiation and coordination mechanism of labor relations and safeguarding the basic rights and interests of employees in accordance with the law, GenScript was also granted the title of “Nanjing Model Enterprise of Harmonious Labor Relations” in 2019.



Talent Team Building

Talent is essential to the Company's rapid development. Since its establishment, GenScript has attracted extensive visionaries from all over the world who contribute not only outstanding skills and advanced technology but also a diverse cultural atmosphere. To further strengthen the talent pool, GenScript built a talent team in 2019 by effectively combining internal referral, internal competition and external recruitment and sketched the talent map covering 20 target companies, 25 domestic laboratories and 40 overseas laboratories to retain and trace the Company's talents, accumulating abundant talent resources.

For external recruitment, we actively explore recruitment channels, and increase the introduction of more overseas talents and special personnel for key posts through the WeChat official account, recruitment management system and recruitment platform, which provides timely and effective personnel backing for business growth; we enhance campus recruitment and start to recruit undergraduates and junior college graduates from universities in the northeast and northwest regions. As of December 31, 2019, the Company launched campus recruitment in more than 50 universities and signed internship and employment base agreements with 7 colleges and universities, contributing to effective cooperation and interaction between the Company and universities.

Introduction of High-Level Overseas Talents

As an innovative biotech corporation, GenScript actively implements the talent strategy in alignment with business development and overall development planning and attaches great importance to the introduction and training of overseas returnees. We encourage talents to devote themselves to scientific research, promote the transformation of achievements, and make new and greater contributions to the development of the Company.

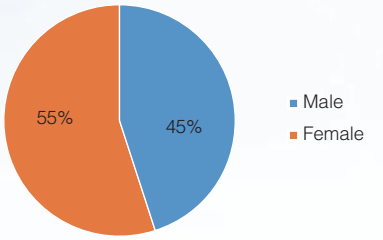

证 书

经研究，确定 南京金斯瑞生物科技有限公司 引进 [redacted]
团队（核心成员：[redacted]），入选 2019 年江苏省
"双创团队"，特发此证。

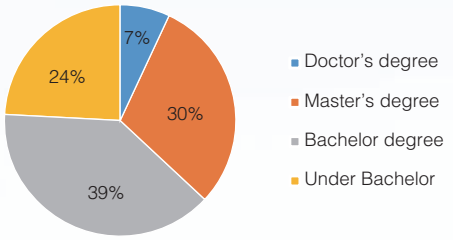
Certificate
Innovation and Entrepreneurship Team

During the reporting period, Dr. Yin Liusong from GenScript was selected as a high-level overseas returnee of the Ministry of Human Resources and Social Security of the People's Republic of China and the only one selected as a high-level overseas returnee in Nanjing in the reporting period. The innovation team with Dr. Yin Liusong, Dr. Wang Weiming and Dr. Liu Yong as the core members was unanimously recognized by the review experts for excellent comprehensive strength and innovative R&D projects and was selected as the "Innovation and Entrepreneurship Team" of Jiangsu Province, demonstrating GenScript's strong innovation strength and talent advantages.

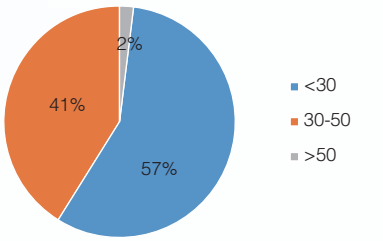
As of December 31, 2019, GenScript had a workforce of 3,738, of which 3,553 were regular employees and 185 were part-time employees. The following is GenScript's employment by type:



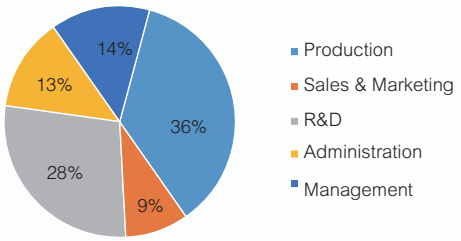
By Gender



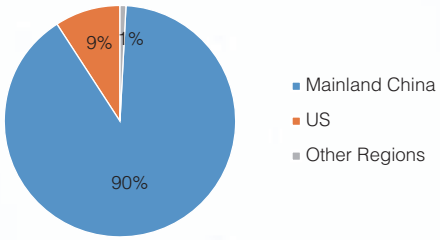
By Academic Qualification



By Age



By Function



By Region

Employee turnover rate		Male	Female	Total
By age	**<30**	2.2%	4.1%	6.3%
	30-50	1.7%	1.6%	3.3%
	>50	0	0	0
By region	**Mainland China**	3.5%	5.3%	8.8%
	US	0.4%	0.4%	0.8%
	Other regions	0	0	0
Total		3.9%	5.7%	9.6%

Protection of Employee Rights and Interests

Fully aware of the importance of protecting employees' rights and interests, GenScript has established and improved the employee management system and SOP in accordance with the *Labor Law of the People's Republic of China,* the *Labor Contract Law of the People's Republic of China,* the *Employment Promotion Law of the People's Republic of China,* the *Special Provisions on the Labor Protection of Female Employees, the Minors Protection Law of the People's Republic of China, the Labor Union Law of the People's Republic of China* and the *US Fair Labor Standards Act* (FLSA) and other labor protection laws and regulations. During the reporting period, we consulted with all relevant departments on the revision of the Employee Manual, and initiated revisions based on the results of the consultations so as to guide employees to understand and comply with the Company's rules and regulations and protect the rights and interests of employees. Moreover, we protected the compensation and benefits of employees at home and abroad in accordance with the "Compensation and Benefit Management Policy" and purchased global business travel insurance, so that employees were free from worries and devoted themselves to business development.

GenScript adheres to the principle of legal employment and recruitment. According to its "Recruitment and Employment Management Policy", GenScript strictly forbids any discrimination, harassment, slander and intimidation to any individual based on employee's race, color, gender, age, country, disability, or marital status. GenScript does not employ anyone under the age of 16 by any means, and never allows forced labor by virtue of violence, threats and illegal restrictions on personal freedom. During the reporting period, the signing rate of GenScript's labor contracts reached 100% and no cases of child labor or forced labor were found.

4.2 Motivation to Growth

Employee Promotion

The demands for top talents are expanding with the robust increase in the Company's brand influence. GenScript conducts talents review every year to examine the rationality of organization and post arrangements as well as support for business development. In 2019, GenScript improved the "Promotion Management Policy" and its supporting management measures, which clearly defined the promotion requirements and promotion measures of employees. We set talent selection criteria from two dimensions: performance contribution and potential, which provided the basis for the vertical promotion and development and horizontal assignment of the talent pipeline. We actively reviewed and identified reserve talents for key positions, formed a reserve talent pipeline, and develop a succession plan so as to ensure the sustainable development of the talent pipeline, fully unleash the potential of employees, and improve the organizational efficiency.

During the reporting period, GenScript optimized the whole process of the promotion and development system for the management (leaders), including standards, selection, training, assessment and rating, incentives, and succession of leaders and adjustments of unqualified leaders.

Optimize Promotion and Development System for the Management (Leaders)

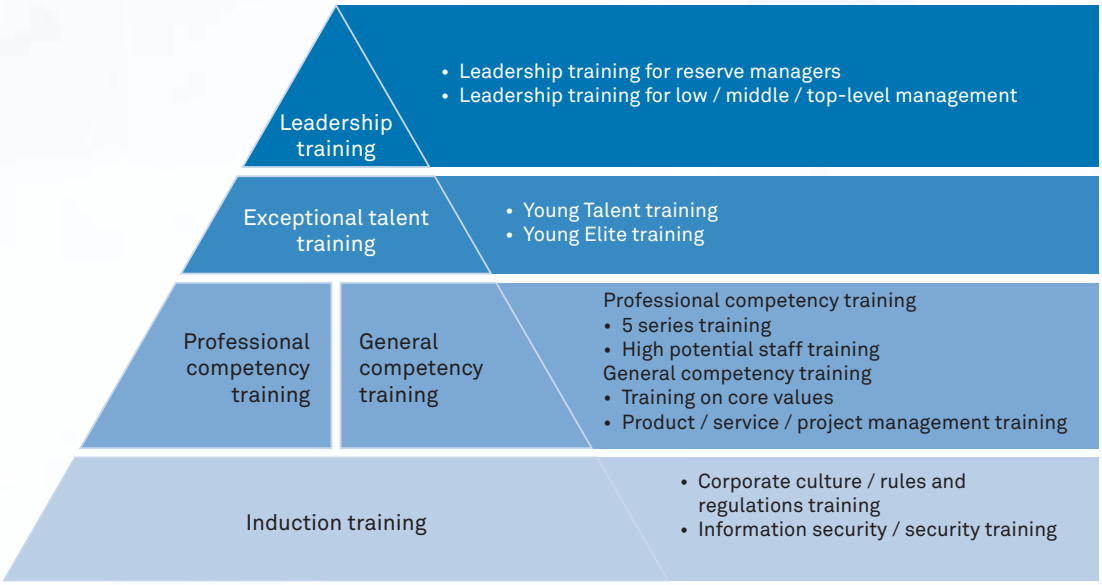
- Issue the "Leader Management Policy", the "Code of Conduct for Leaders", and the "Management Measures for Job Rotation" to further standardize the management of leaders and reserve leaders of the Company;
- Strengthen the leader pipeline building, define the selection criteria and training measures, define the qualification model of qualified leaders in terms of morals, performance contribution, ability and experience to accurately and effectively manage leaders at all levels;
- To align with corporate strategy, vigorously promote cross-departmental, cross-regional and upstream and downstream job rotation of managers at all levels, optimally allocate human resources, and maximize the potential of leaders.

Employee Motivation

To arouse the enthusiasm of employees, GenScript issued the "International Dispatch Management Policy" and "Domestic Dispatch Management Policy" during the reporting period to mobilize employees to support new regions and new businesses. GenScript also rolled out the employee recognition and reward mechanism and granted certificates or cash bonus to employees and teams who provided effective improvement suggestions for tasks beyond their duties. During the reporting period, GenScript presented a total of 19 team and individual awards which amounted to RMB6,500.

Employee Training

The Company believes that talents are one of its core competitiveness and most valuable assets. To enhance the professional knowledge, skills and competency of employees and improve work quality and performance in alignment with the corporate strategic development needs, in 2019, the Company further improved the training forms and content in accordance with the "Training Management Policy", optimized the training management and practice system with GenScript's characteristics, and continuously tracked the training feedback and evaluation results.



GenScript Training Program System

Professional Competency Training Program

- In 2019, GenScript's professional competency training focused on R&D, technology and business to improve employees' professional capabilities. We also optimized courses. We completed systematic revision of 6 courses during the reporting period. The average evaluation score for professional competency training courses was more than 95 points.

General Competency Training Program

- During the reporting period, after surveys, in alignment with corporate strategy, GenScript developed six courses, including "Process Optimization and Management", "Conflict Management", "Time Management", "Pyramid Principle", "Public Speaking Skills" and "Excel Skills at Work", which were intended to help employees solve practical problems. In 2019, general competency training consisted of 11 courses which improved employees' all-round capabilities and involved 645 trainees.

Leadership Training Program

- In 2019, we intensified efforts on the training of managers and reserve managers. We provided training for 3 ladders, 12 classes and 415 leaders and reserve leaders in total;
- Captain training (for low-level management): 2 courses was optimized. After optimization, the average evaluation score was 95.2 points (93.9 points in 2018);
- Colonel training (for middle-level management): 3 courses was optimized. After optimization, the average evaluation score was 93.5 points (86.3 points in 2018).

Highlights of Training Program Optimization

To make learning resources readily available to employees and facilitate efficient learning, in December 2019, GenScript launched a new E-learning platform which features mobility, fragmentation, diversification and personalization and supports mobile learning. Online courses for general competency training, professional competency training and leadership training enhance employees' all-around strengths.

During the reporting period, we improved the training system to fully empower employees. There were 11,251 trainees cumulatively and 100% of employees received training. On average, employees received 17.14 hours of training and managers received 21 hours of training. The training details are as follows:

	Male		Female		Total	
	Cumulative number of trainees	Average training hours	Cumulative number of trainees	Average training hours	Cumulative number of trainees	Average training hours
Production	2,193	15.67	2,542	19.19	4,735	17.62
Sales and marketing	594	14.50	825	16.62	1,419	15.73
R&D	1,246	17.90	1,871	20.41	3,117	19.40
Administration	429	6.94	589	8.57	1,018	7.90
Management	579	19.96	383	22.52	962	21.00
Total	5,041	15.86	6,210	18.18	11,251	17.14

4.3 Care and Support

GenScript attaches great importance to communication with employees, endeavors to respond to reasonable needs of employees, and helps employees solve problems in life and work. During the reporting period, the Company mainly improved the employee communication and feedback channels, optimized employee care measures, and held recreational and sports activities, extending our care to every employee.

Employee Communication and Feedback

Transparent and effective employee communication is conducive to trust and understanding among all levels of employees across the Company. Talks between new employees and senior executives, staff briefings, and luncheons with CEO offer opportunities for face-to-face communication between employees and senior executives. Our public service emails, hotlines, and consulting and complaint platform on our WeChat official account "GenScript Golden Harbor" allow employees to voice their opinions. In addition, the Company also transmitted important news and notices on benefit activities through the multimedia equipment in the hall, WeChat official account, and internal magazine *Ruiyi*, making information available to employees more efficiently and conveniently.

Staff Briefing

In April and September 2019, GenScript's supervisors from different departments and above and employees with S rating in performance review were involved in staff briefings in China and America. Before the briefings, we collected 84 anonymous questions about the Company's growth, strategic planning and employee's benefits that employees were most concerned about. All questions were answered on site by the CEO and heads of business departments, which helped employees better understand the corporate development and enhanced cohesion.

CEO Luncheon

From April to November 2019, GenScript successively invited employees with S rating, high-potential talents and newly promoted employees to attend CEO luncheons where employees shared their true feelings, corporate management problems were summarized and relevant departments were asked to follow up those problems. During the reporting period, a total of 250 employees were involved in CEO luncheons and about 60 suggestions were collected and followed up with a timely response.

Employee Care

GenScript has been improving the employee care mechanism and taken employee care measures, which enhanced employees' sense of belonging, sense of identity, and well-being.

Employee Care

Adjust the holiday benefits granting mechanism:
GenScript adjusted the benefits granting mechanism for Mid-autumn Festival and the Spring Festival and allowed employees to choose them independently, enhancing employee engagement and satisfaction.

Assist employees in applying for awards and subsidies:
GenScript developed the guideline for award and subsidy application. During the reporting period, 30 employees were admitted into the Excellent Student Program of Top Universities of the Government of Jiangning District, Nanjing; 43 employees won the High-level Science and Technology Talent Award; 73 employees successfully applied for the Jiangning Entrepreneur Talent Program.

Employee retirement ceremony:
GenScript held the first employee retirement ceremony themed "Never Say Goodbye". The retirement ceremony consisted of speech by the president, video play, employee's speech, cake cutting, and souvenir book presenting. In this way, we expressed our gratitude to employees for their efforts and enhanced employees' sense of belonging.

Women's Day event:
55% of GenScript's employees are female. To show care for female employees, GenScript held the first Women's Day event, including flower presenting by senior executives, experience sharing and a party.

Care fund:
GenScript has established the care fund for employees and their families hit by great difficulties that are unable to overcome, which is intended to promptly provide assistance to employees and relieve their worries. In 2019, GenScript spent a total of more than RMB 334,000 on the care fund.

GenScript's new canteen opened

To offer better dining for employees, GenScript's phase III canteen officially opened on October 8, 2019 with the joint efforts of many departments. The new canteen can be used for meetings, negotiations and customer reception as well as dining. Due to its diversified and human-oriented services, such as value meals on festivals, boxed meal delivery, and lottery draw campaigns in the gourmet festival, the canteen is well received by employees.

Recreational and Sports Activities

For the sake of the physical and mental health of employees, GenScript actively carried out various recreational and sports activities during the reporting period to encourage employees to live a better life in a healthier way.

GenScript "Dare to Win" Running Festival

On April 22, 2019, the second GenScript "Dare to Win" Running Festival began in Nanjing Xuanwu Lake Park. The CEO and President of the Company, managers and employees at all levels, totaling 1,700, participated in the event. All the people set off together and challenged themselves with 10 km/21 km race. They passionately pushed their limits and gained insight into the "Dare to Win" spirit.

10th GenScript Badminton Championship

Completed simultaneously with Phase III new canteen, GenScript's new badminton stadium was put into use in October 2019 and is available free of charge for all employees. In November 2019, the 10th GenScript badminton championship was held at this venue, which involved more than 150 participants and lasted two weeks. At the awards presentation ceremony, the CEO presented awards to top 4 players.

V. CHERISH ENVIRONMENT FOR HARMONY OF LIVES

While providing extensive life science research and application services, GenScript pays great attention to the impact of enterprise operation on the environment and employee's health as well. The Company follows the environment, occupational health and safety (EHS) policies and trends at home and abroad, complies with applicable laws and regulations, uses advanced EHS concepts throughout the Company's decision-making process, and takes effective control measures in production. Meanwhile, GenScript is concerned about the human-animals relationship and committed to building an eco-friendly business management and growth model.

5.1 Efficiency Improvement and Emission Reduction

GenScript always keeps in mind and embraces the social responsibility of protecting the environment and natural resources and promoting ecological civilization construction. We comply with the requirements of the *Environmental Protection Law of the People's Republic of China,* the *Law of the People's Republic of China on the Prevention and Control of Water Pollution,* the *Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution,* the *Law of the People's Republic of China on the Prevention and Control of Air Pollution,* and the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, and manage waste water, exhaust gas and solid waste in accordance with the "EHS Management Manual" formulated by the Company.

During the reporting period, GenScript employed experienced EHS management personnel for EHS Department who take full charge of the Company's EHS management, further improving EHS strategy planning and implementation. We set the annual target of pollution and emission reduction in early 2019 and have taken administrative measures and technical transformation measures.

Following the latest EHS laws and regulations, the Company revised the "EHS Laws and Regulations Compliance Management Policy". The Company and its subsidiaries shall timely collect and identify the applicable EHS laws and regulations, evaluate the variance of all activities and control measures from applicable EHS laws and regulations, develop or adjust prevention and control measures, and ensure compliance with laws and regulations so as to achieve sustainable EHS management.

Waste water

GenScript attaches great importance to effective waste water treatment and stable and up-to-standard discharge. Our waste water mainly includes domestic waste water, laboratory waste water during production and R&D, flushing water for animal rooms. Nanjing GenScript, Jiangsu GenScript and Jinan Bestzyme have all established their own waste water treatment stations. After being effectively treated up to standard, waste water is discharged to a sewage treatment plant in the specific administrative division via the municipal pipe network. After being pretreated by the internal sewage treatment facility/station via the sewage pipeline network of the specific park, the waste water of other subsidiaries is discharged to a sewage treatment plant in the specific administrative division via the municipal pipe network. At the exit of the internal sewage treatment station, we have set up an online sewage monitoring system linking to the government to monitor the real-time sewage discharge concentration and ensure stable and up-to-standard discharge. Based on online monitoring data, the concentration of major pollutants at the exit of Nanjing GenScript sewage treatment station is much lower than Level Three of the *Integrated Waste Water Discharge Standard* and the discharge standard of sewage treatment plant of the Science Park.

Waste Water	2018	2019
Sewage disposal (cubic meters)	196,899	**306,202**
Annual COD disposal (tons)	28.16	**27.32**
Annual NH-N disposal (tons)	0.9	**2.29**

1. The sewage of GenScript mainly comes from its subsidiary Jinan Bestzyme Bioengineering Co., Ltd. (Jinan Bestzyme). In 2019, as Phase II plant of Jinan Bestzyme was fully launched with refined discharge management and the production capacities of Nanjing GenScript and Jiangsu GenScript increased, the total sewage disposal increased significantly.
2. The total NH-N disposal increased because Phase II plant of Jinan Bestzyme was started.
3. COD disposal decreased because Jinan Bestzyme had optimized the sewage disposal process and improved the COD treatment capacity.

Exhaust Gas

In terms of exhaust emissions, exhaust gas is mainly generated from Jiangsu GenScript and Nanjing GenScript. GenScript's headquarters and subsidiaries control different types of exhaust emissions and take measures to further reduce emissions up to local emission standards. In Jiangsu GenScript, exhaust gas is mainly generated during the experimental R&D and emitted via the exhaust pipe after being adsorbed by activated carbon. During the reporting period, Jiangsu GenScript strictly implemented the maintenance and repair plan for pollution treatment facilities and conducted daily facility inspections to ensure the normal operation of facilities. The Company also regularly replaced activated carbon and conducted management and monitoring under the quarterly environmental testing plan so as to ensure up-to-standard emissions. During the reporting period, Nanjing GenScript installed environmental monitoring equipment and data acquisition modules on exhaust fans at plants to meet the remote monitoring requirements of the environmental protection authority. Nanjing GenScript also added a power distribution monitoring device to the exhaust gas treatment facility and connected it to the municipal power distribution regulation system to ensure the normal operation of the facility.

Denitration renovation project for boilers

In August 2019, Nanjing GenScript conducted SCR denitrification renovation for two natural gas boilers (one for use and one for backup) by installing SCR reactors. According to the test report, after the renovation, the NOx emission concentration was reduced from 86 mg/m^3 to 12 mg/m^3 for No. 1 boiler and 7 mg/m^3 for No. 2 boiler, both lower than 30 mg/m^3 and far below the emission standards.

Exhaust Gas Emission	2018	2019
Exhaust emissions (1,000 cubic meters)	614,988	**1,020,116**
Emission of smoke and dust (tons)	0.13	**0.26**
Sulfur dioxide emission (tons)	0.41	**0.10**
NOx emission (tons)	2.25	**3.08**

Exhaust gas emissions include total emissions from laboratory exhaust, animal rooms, boilers, etc.

Solid Waste

EHS Department has designated personnel collect, weigh, sort and store the solid waste generated by each department every day, has qualified third-party companies dispose of hazardous waste in accordance with regulations, and regularly reports to the hazardous waste system. GenScript organizes training on hazardous waste management every year and carries out daily inspection to strengthen the hazardous waste management. In addition, GenScript sticks to the "reduction, reuse and recycling (3R)" principle in resource utilization, reduces waste generation, and exploits opportunities for comprehensive utilization of waste.

Upgrading of Sludge Drying System

In March 2019, Jiangsu GenScript added sludge drying using the compressed air pipeline after the sludge pressing using the plate and frame filter press. This not only reduced the weekly treatment of hazardous waste sludge from 100 kg to 50 kg, but also effectively reduced the treatment cost of hazardous waste sludge.

Comprehensive Utilization of Waste Organic Reagents

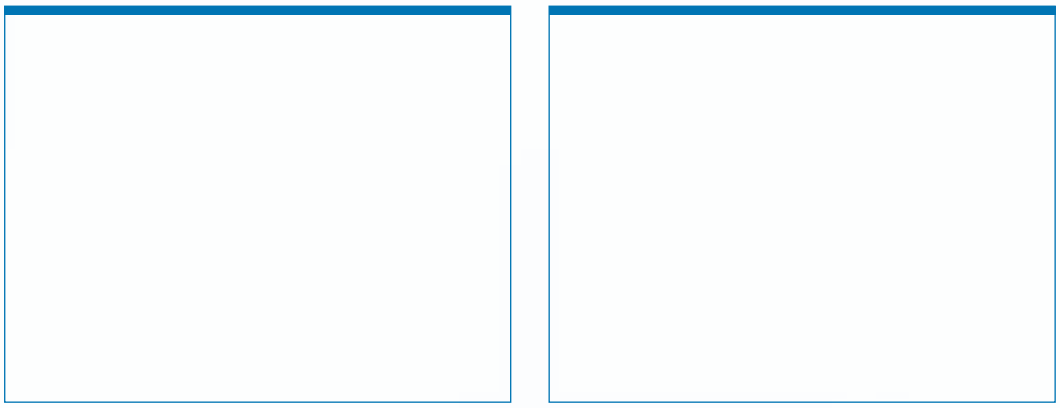
During the reporting period, we found a high DMF content in some organic waste liquid in Zhenjiang plant of Jiangsu GenScript, so we decided to improve waste liquid disposal (while the previous qualified agency used incineration for disposal, the desired disposal method is rectification and reuse). Since July 2019, approximately 70 tons of organic waste liquid has been disposed of. As a result, we increased the comprehensive recycling utilization rate of waste liquid, lowered disposal costs, and reduced the emission of pollutants like exhaust gas.

Waste Disposed	2018	2019
Domestic waste (tons)	7,996.33	**9,143.90**
Intensity of domestic waste generation (tons/USD10,000)	0.35	**0.33**
Hazardous waste (excluding medical waste) (tons)	640.21	**997.97**
Medical waste (tons)	263.93	**303.42**
Intensity of hazardous waste generation (tons/USD1,000,000)	3.91	**4.76**

1. The domestic waste mainly comes from Jinan Bestzyme. In 2019, Phase II plant of Jinan Bestzyme was fully launched, resulting in an increase in domestic waste.

2. The hazardous waste mainly comes from Jiangsu GenScript. In 2019, increase in the production capacity of Jiangsu GenScript resulted in a large amount of hazardous waste generated during production.

To motivate employees to participate in pollution and emission reduction and to ensure that employees comply with EHS management regulations and shoulder the EHS responsibility, GenScript developed the "EHS Assessment Reward and Punishment Policy" and organized appropriate publicity campaigns and training during the reporting period. The policy defines rewards for employees who are actively involved in EHS work, such as hazard identification and rectification, accident lessons sharing within departments, reporting of violations of EHS regulations, and outstanding contributions to accident rescue and disaster relief, and such employees will be appraised and publicized on a quarterly basis. The policy also defines the punishment scope and measures for violations of EHS regulations.



Presentation of EHS Assessment Reward and Certificate

5.2 Treasure Resources

Energy conservation and resource utilization are inevitable choices for enterprises to adapt to market demands, reduce costs, increase efficiency, protect the environment, and enhance competitiveness. GenScript attaches great importance to the utilization and management of energy and resources in different production steps. In terms of energy utilization, GenScript standardizes the management of 8 categories and 23 energy consumption topics, including lighting electricity, electricity for office equipment and energy consumption by construction in accordance with the "Energy Management Measures". We added time control function to some electrical equipment to reduce unnecessary power consumption. In terms of water resource utilization, benefiting from the performance of duties by the water resource regulatory authority, the Company regularly collects and analyzes water consumption data, conducts monthly inspection and meter reading of recycled water, monitors and handles abnormalities to avoid waste. By equipment transformation, we also improve the quality of recycled water and reduce water use.

Condenser renovation to reduce water use

In the facility at the site of Nanjing Legend, homemade containers were used for cooling of thermal water by collecting hot water and continuously replenishing tap water. This cooling method needs plenty of water, resulting in huge waste. In October 2019, after field investigation, Nanjing Legend developed a project transformation plan by adding a condenser with tap water as the cooling medium and increasing the heat exchange area of the condenser. According to statistics, this saved 680 tons of tap water every month for the same amount of hot water treatment.

In addition, to enhance employees' awareness of environmental protection, we organized publicity campaigns by advocating water, electricity and gas conservation and putting up bilingual posters in places where water and electrical equipment are provided. We expect all employees to fully understand the necessity and importance of resources and energy conservation in work and life.

Energy Consumption and Carbon Emissions	2018	2019
Energy consumption (MWh)	46,873.95	**55,854.09**
Energy intensity (MWh/USD 10,000)	2.03	**2.04**
Steam (tons)	/	**8,299.00**
Steam consumption intensity (tons/USD10,000)	/	**0.30**
Natural gas consumption ('000 cubic meters)	2,896.68	**2,237.14**
Natural gas natural gas consumption intensity (cubic meter/USD10,000)	125.39	**81.84**
Greenhouse gas emissions (tons CO_2-e) (Scope 1 only)	6,094.81	**4,837.13**
Greenhouse gas emissions (tons CO_2-e) (Scope 2 only)	36,958.02	**44,105.72**
GHG intensity (tons CO_2-e/USD10,000)	1.86	**1.79**

Jinan Bestzyme, a subsidiary of GenScript, started to use purchased steam for heat supply instead of natural gas in the fourth quarter of 2019.

Water Consumption Statistics	2018	2019
Water consumed ('000 cubic meters)	410.65	**440.26**
Water recycled ('000 cubic meters) (only if water recycling facilities are installed at the headquarters in Jiangning District, Nanjing)	44.31	**35.47**
Water recycling rate (%)	0.11	**0.08**
Water consumption intensity (cubic meter/USD10,000)	17.78	**16.11**

5.3 Safety in Production

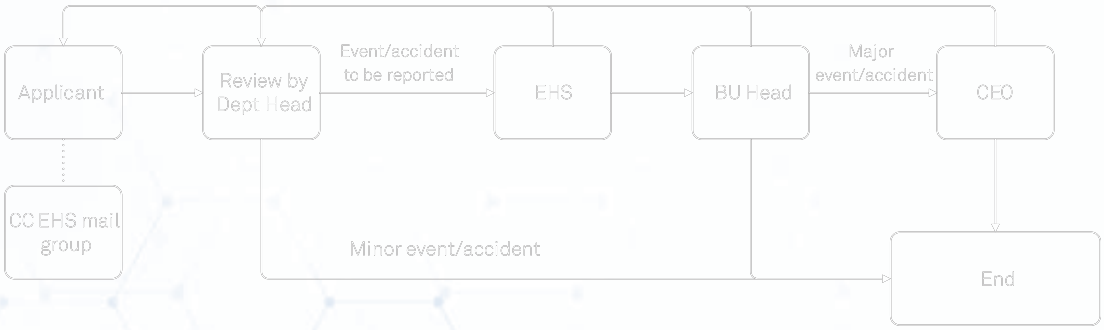
The Company gives great concern to the occupational health and safety of employees. We believe that a safe and healthy workplace is the minimum protection standard to be provided for employees. We comply with the *Production Safety Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, the *Measures for the Management of Emergency Plans for Production Safety Accidents* and other state laws and regulations. We identify and control occupational health and safety risks, improve rules, regulations and safety standards, assign persons responsible for production safety, and implement the accountability system.

During the reporting period, the Company worked on the "dual prevention systems", namely a risk classification and control system and a potential risk identification and control system. We involved employees in hazard identification, risk classification and control, and potential risk identification and control. In December, GenScript's "dual prevention systems" were verified and qualified by the Government of Jiangning District, Nanjing.

Risk classification and control: Risks identified by each department are classified into red, orange, yellow and blue from high to low. A four-color map has been drawn and posted on each floor, so as to popularize risk types, levels and preventive measures for each room/area to everyone and prevent accidents or incidents.

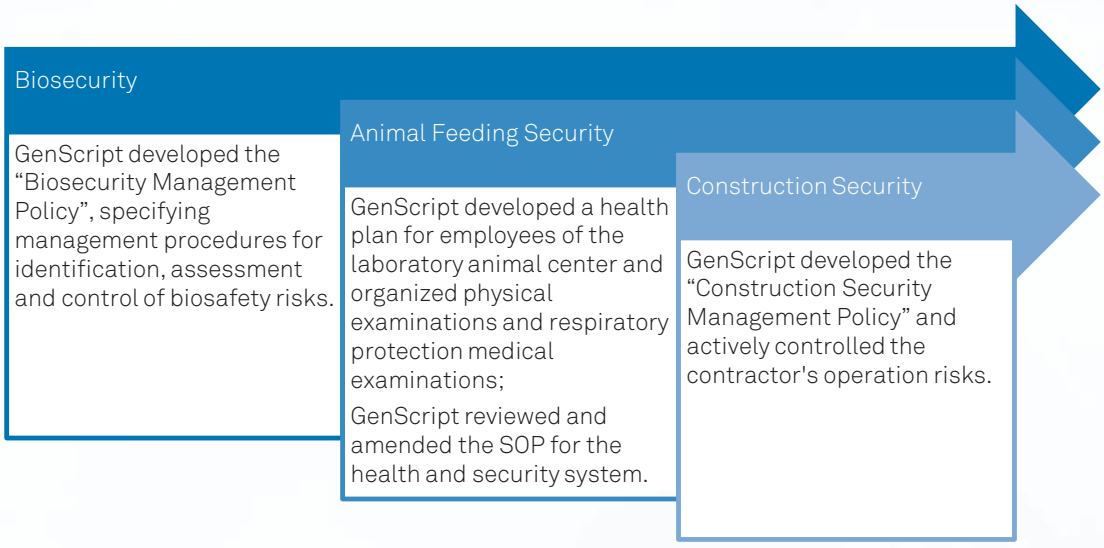
Hidden risk identification and control: EHS Department and Equipment Department are responsible for identifying, monitoring and rectifying potential safety risks in each site. The safety representative of each department should carry out safety self-inspection at least once a month within the department, record the problems discovered in self-inspection in the hidden risk list of the department. Each department should track, rectify, prevent and solve problems.

To keep track of and control adverse events more effectively, during the reporting period, we developed and issued the "EHS Adverse Event (Accident) Reporting Policy", where the reporting scope is expanded from injury-related accidents to potential hazards, events and accidents in environment, health and safety; events are divided into minor, to be reported and major levels; reporting, investigation, correction and prevention requirements for different levels of events are defined.



Adverse Event (Accident) Reporting and Handling Flow Chart

The Company has optimized occupational health and safety management and improved the biosecurity and animal feeding security internally as well as the safety management policy for third parties. In this way, employees get familiar with necessary prevention and control measures in health and safety during operations and avoid health and safety accidents.



While strengthening health and safety management, the Company and its subsidiaries have also implemented health and safety operation practices and adopted engineering and labor protection measures pertaining to the occupational health and safety of employees. For health and safety risks, engineering rectification and control measures are preferred for mass prevention. For residual exposure risks, we implement labor protection and organize occupational health examinations for employees exposed to occupational hazards. We adjust and improve labor protection measures for employees according to their operations and occupational hazards identified and monitored. The following is a list of typical engineering protection projects:

No.	Protection System	Project Items	Project Location
1	Power supply and distribution system and electrical control system	Power safety assessment and rectification project	Nanjing GenScript Biotechnology Co., Ltd.
2	Ventilation system and power supply and distribution system	Explosion-proof class upgrade project for the hazardous chemicals warehouse	
3	Alarm system	Installation of alarm bell for combustible gas leakage detector at production site	
4	Ventilation system and alarm system	Ventilation renovation project for separate rooms of Oligo Dept. labs	
5	Power supply and distribution system	Power safety assessment and rectification project	Jiangsu GenScript Biotechnology Co., Ltd.
6	Monitoring system and alarm system	Installation of walkie-talkie for building elevators	
7	Electrical control system	Facility renovation project	Nanjing Legend Biotechnology Co., Ltd.
8	Ventilation system and alarm system	Renovation project of areas exposed to carbon dioxide leakage and liquid nitrogen leakage	

GenScript attaches great importance to the culture of safety and safety awareness. We organize publicity, training and drills on occupational health and safety to help employees build strong awareness of health and safety operations. During the reporting period, GenScript organized EHS training for the management and enhanced the health and safety awareness of leaders, which supported the dual prevention systems. In addition, we organized hazard identification and risk assessment training, which improved employees' ability to identify hazards and to respond to an emergency while keeping employees, partners and visitors safe. During the reporting period, GenScript's health and safety training covered 2,800 trainees cumulatively.

EHS Alert briefing

- During the reporting period, the Company summarized and analyzed accidents and provided a EHS Alert briefing in an OA announcement, which facilitated all employees to learn lessons from the cases, keep safety precautions in mind, eliminate similar risks and avoid similar accidents.

Chemical leakage drill

- On July 5, 2019, EHS Department, the warehouse and departments that use chemicals, jointly organized a 30-minute chemical leakage drill by simulating chemical leakage resulting from overturning chemicals during warehouse-out, summarized the strengths and weaknesses in the drill, proposed appropriate suggestions, and provided another training on the special chemical emergency plan.

Training on health and safety

- During the reporting period, EHS Department organized several training sessions on "how to use tight protective masks and gas masks", "junior lifeguards" and "occupational hazard protection", targeting at the safety representative of each department who then provided training for employees involved within the department.

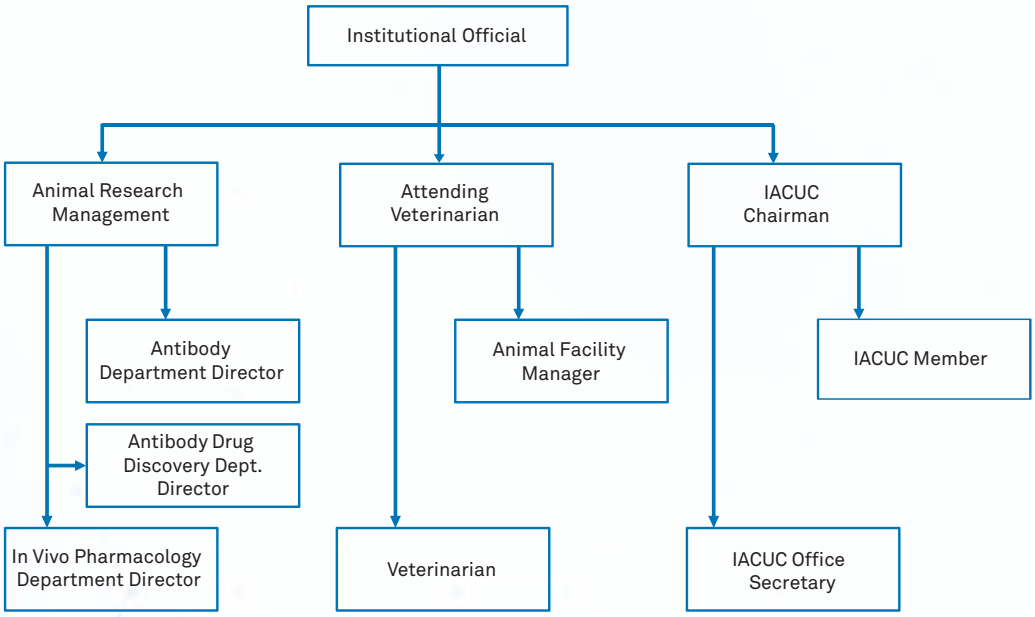
The number of accidents at work at GenScript has declined in the past three years, as shown in the table below. During the reporting period, there were no deaths resulting from work-related injuries.

Safety Statistics	**2017**	**2018**	**2019**
Number of accidents at work	4	3	**3**
Number of days lost due to work-related injuries	232.0	316.5	**136.0**

5.4 Moral Experiments

GenScript will inevitably use laboratory animals such as mice and rabbits in drug experiments. Animal welfare is a profound issue in environmental ethics. GenScript strictly abides by the *Regulations on the Administration of Laboratory Animals* and the *Measures for the Administration of Laboratory Animal Licenses (Trial)*. GenScript vigorously responds to the animal welfare requirements expected in the international scope and protects the rights and interests of laboratory animals. We promise that all laboratory animals will be raised and used safely and humanely. Our approach is to optimize experiments and lessen and replace laboratory animals.

GenScript's Institutional Animal Care and Use Committee (IACUC) is responsible for auditing and monitoring the ethics of the Company's animal experiment program as well as managing the process from ordering, transportation, quarantine, breeding, experimental research and animal corpse disposal of laboratory animals in GenScript's Laboratory Animal Center. During the reporting period, based on the Company's business strategy planning, IACUC has adjusted the organizational structure. The updated organizational structure of IACUC is as follows:



IACUC Organizational Structure

GenScript's animal housing facilities in Nanjing headquarters are accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) and the Office of Laboratory Animal Welfare of the National Institutes of Health of the United States (OLAW). In 2019, GenScript's animal facilities were qualified in AAALAC's third on-site review and granted "Full Accreditation" in August 2019.

AAALAC "Full Accreditation"

During the reporting period, GenScript spared no efforts to improve the animal feeding environment and took a number of measures to offer comprehensive welfare in the diet, housing and recreation of animals.

Laboratory rat room: increased automation

During the reporting period, the Company provided three additional automatic devices in the rat room: automatic cage washer, automatic bottling apparatus and automatic bedding adding machine, which increased automation of the rat room and kept the room clean and comfortable for animals.

Laboratory rabbit room: intensive diet care and adequate social housing cages

During the reporting period, the Company provided modified imported alfalfa hay in the laboratory rabbit room, which increased nutrient content of feed. In early April, the Company put 24 newly purchased group housing cages into use for time-bound social housing, which met the social needs of laboratory rabbits.

We provided internal and external training to enable employees of Laboratory Animal Center to better understand animal welfare and biological characteristics and build up the management capacity of the Laboratory Animal Center. The following is a list of some internal and external training:

Internal Training

- Training on animal welfare
- Training on rules and regulations for the Animal Center
- Training on animal room management
- Emergency training and emergency plan training and drill for laboratory animals
- Introduction to common diseases of laboratory animals and veterinary treatment specifications

External Training and Meeting

- Advanced seminar on design and management of laboratory animal facilities
- Publicity and training on Jiangsu laboratory animal management rules
- AAALAC certified expert training
- Sino-British 6th International Forum on Laboratory Animal Welfare and Ethics
- Jiangsu special coaching and training meeting on licensed laboratory animal facility operation specifications

VI. SELFLESS DEDICATION TO INDUSTRY EXPANSION

As a biopharmaceutical enterprise with a strong sense of social responsibility, GenScript is committed to advancing the industry and serving the community. While participating in industry exchanges, GenScript gives full play to its advantages in community education and fulfills corporate responsibility. During the reporting period, we donated US$145,000 for medical research projects, US$20,000 for environmental protection and US$7,000 for other public charity, totaling US$172,000.

6.1 New Vigor to the Industry

GenScript always keeps a sharp mind and possesses innovation awareness and capability in the pharmaceutical industry. GenScript keeps its own cutting-edge strength, pursues excellence and leads the industry amid transformation, upgrading and quality-oriented development of China's pharmaceutical industry. As the pharmaceutical industry flourishes, GenScript shows its unique creativity in products and technologies with its own characteristics and injects new vigor into the pharmaceutical industry in China and beyond.

GenScript is awarded the title of "Outstanding Enterprises in Pharmaceutical Industry" at 70th Anniversary of the People's Republic of China

In October 2019, during the outstanding enterprises selection event at the 70th anniversary of the People's Republic of China themed "Seven Decades of Glories and Efforts for New Era" jointly held by 20 Chinese pharmaceutical industry associations (societies), the awards presentation ceremony was held in Yanqi Lake, Beijing. After assessment of nearly 500 pharmaceutical enterprises in contribution, innovation and influence by an expert review group composed of 20 association leaders, senior experts and economists, GenScript stood out and won the title of "Outstanding Enterprises in Pharmaceutical Industry" in recognition of its outstanding dedication and leading position in the pharmaceutical industry.

GenScript has been propelling the pharmaceutical industry by unceasingly exploring, seeking cooperation, and carrying out ongoing industry exchanges. In May 2019, the Center for Food and Drug Inspection (CFDI) held a talk involving Chinese manufacturers of CAR-T products under clinical trials, and Technical Operation Department of Legend Biotech was the first among invited enterprises to report to CFDI, which was well received.

By the end of 2019, GenScript's CAR-T cell therapy has made remarkable achievements in both research results and clinical application. As a member of China's biological industry, GenScript has continuously enhanced international exchanges, shared achievements, offered innovative solutions to patients, and made breakthroughs in innovation.

2nd Synthetic Biology World Forum in 2019

In September 2019, the 2nd Synthetic Biology World Forum jointly sponsored by GenScript, Nanjing Tech University and Nanjing University of Science & Technology was held in Nanjing. Aiming at cutting-edge synthetic biology theories and technologies, latest research progress, and transformation of research results, the forum facilitated the exchange and cooperation between experts, scholars and researchers at home and abroad, promoted the transformation and application of high-tech achievements in synthetic biology, and injected impetus into Nanjing innovation-driven "121" strategy.

1st Double Helix Symposium in 2019

In September 2019, GenScript held the 1st Double Helix Symposium in downtown San Francisco. More than 150 scientists, industry leaders and industry partners were present, exchanged views on DNA, RNA and protein technology, application, concepts and ideas, and discussed research data and results.

3rd Biologics Innovation & Frontier Technology China Summit in 2019

In June 2019, as the co-organizer of the 3rd Biologics Innovation &Frontier Technology China Summit (BIFT), GenScript, together with Merck China, held a forum on gene and cell therapy quality control and production themed "Merck-GenScript Joint Novel Therapeutic Solutions", where industry experts discussed cutting-edge technology and jointly supported the development of cell therapy in China.

Press Conference of Publication on PNAS, An International Comprehensive Authoritative Academic Journal

On April 16, 2019, a press conference sponsored by Nanjing Legend was held. Ruijin Hospital, Changzheng Hospital, Jiangsu Province Hospital, Jiao Hong (Director of the National Medical Products Administration) and academician Chen Saijuan were invited, shared clinical trial data of LCAR-B38M for multiple myeloma, and published the academic paper. According to the paper, if used in combination with other existing therapies, CAR-T would increase the chance of cure in the future, which marked an important milestone of CAR-T treatment for multiple myeloma.

4th World Precision Medicine (China) Summit

On November 30, 2019, the 4th World Precision Medicine (China) Summit is held in Shanghai. Dr. Fan Xiaohu, CSO of Legend Biotech, gave a speech as a guest speaker and shared his insight and experience. He later received a letter of appreciation from the organizing committee.

6.2 Contribution to Society

Bearing the commitment to giving back to the community, GenScript is actively engaged in campaigns, such as educational cooperation, to support the development of the local community. In the future, GenScript will continue to play a part in the community development by using its expertise and resources for the purpose of common development.

As an important player and supporter in global synthetic biology, GenScript has sponsored the International Genetic Engineering Machine Competition (iGEM) for 11 years since 2009. Support for educational programs is a way GenScript duly fulfills corporate social responsibility. GenScript not only encourages contestants to overcome difficulties and bravely pursue biological excellence, but also promotes applied research and the cultivation of industry talents, building underlying strength for the development of China's biopharmaceutical industry.

2019 iGEM Giant Jamboree

iGEM encourages global teenagers to frame biological solutions to the survival issues facing mankind in an engineering way of thinking, and encourage teenagers to communicate beyond race and boundaries so as to build a better planet by virtue of scientific progress.

On May 19, 2019, as an official partner of iGEM, GenScript sponsored the 3rd iGEM Conference (Nanjing) held on the campus of China Pharmaceutical University, where we communicated with students specialized in synthesis biology from Nanjing and neighboring areas.

As we value talent development and support, we have been creating a favorable environment for scientific research and attracting and cooperating with excellent R&D talents. The involvement of excellent R&D talents will promise us more opportunities to discover new products and help us achieve our corporate vision.

GenScript was rated as Nanjing Postdoctoral Innovation Practice Base in 2019

In 2018, GenScript was approved to establish a national postdoctoral research center. In 2019, three employees were qualified for general funding from China Postdoctoral Science Foundation, among which one received a first-class grant and two received a second-class grant. Based on the research center program, the Company has worked on "industry-university-research cooperation", fostered high-tech professionals, and tackled key technological challenges. Giving play to the leading and exemplary role of the program in ongoing innovation, the Company improves its management and operation, strives for breakthroughs, and cultivates high-level inter-disciplinary talents with strong innovation abilities and extensive experience so as to develop a powerful talent pool for business growth.

APPENDIX I. LIST OF AWARDS AND CERTIFICATIONS FOR 2019

This section lists the awards and certifications granted to GenScript during the reporting period.

	Awards and Certifications	Winners
1	Pilot Industrial Enterprises of Intellectual Property Utilization	Nanjing GenScript Biotech Co., Ltd
2	Jiangsu Province Accredited Enterprise Technology Center with Excellent Rating	
3	2019 Jiangsu Province Key R&D Program (Social Development) General Funding Project	Nanjing Bestzyme Bio-Engineering Co., Ltd.
4	Nanjing Postdoctoral Innovation Practice Base	Nanjing Legend Biotech Co., Ltd.
5	Jiangsu Pharmaceutical Science and Technology Award: First Prize of Pharmaceutical Science and Technology Progress Award	
6	National Leader in Medicine and Health Industry	Jiangsu GenScript Biotechnology Co., Ltd.
7	China's Top 100 Digital Services & Service Outsourcing Enterprises	
8	Jiangsu Province Enterprise Technology Center	
9	Jiangsu Province Specialized, Refined, Featured and Novel Products	
10	Jiangsu Province Service Industry Key Projects	
11	Funding Program of Ministry of Human Resources and Social Security for High-level Returnees	Yin Liusong from BDBU
12	2019 Jiangsu Innovation and Entrepreneurship Team/Talent/Ph.D. Holder	Yin Liusong, Wang Weiming, and Liu Yong from BDBU Li Hong from RSBU 9 Ph.D. holders
13	General Project Funding from China Postdoctoral Science Foundation	Fang Zhuo from BDBU, Sun Liwei from CPBU, Fan Long from RSBU

APPENDIX II. LIST OF DISCLOSURE LEGAL REGULATIONS

This section lists laws and regulations applicable to the Company in the order of ESG indicators in accordance with "compliance with relevant laws and regulations that have a significant impact on the issuer" contained in the "General Disclosure" of HKEX ESG Reporting Guide.

Classifications	Laws and Regulations
Environmental protection	*Environmental Protection Law of the People's Republic of China* *Water Law of the People's Republic of China* *Law of the People's Republic of China on Prevention and Control of Water Pollution* *Rules for the Implementation of the Law of the People's Republic of China on Prevention and Control of Water Pollution* *Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution* *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* *Atmospheric Pollution Prevention and Control Law of the People's Republic of China* *Law of the People's Republic of China on Environmental Impact Assessment* *Cleaner Production Promotion Law of the People's Republic of China*
Animal welfare	*Regulations on the Administration of Laboratory Animals* *Measures for the Administration of Laboratory Animal Licenses (Trial)*
Labor	*Labor Law of the People's Republic of China* *Labor Contract Law of the People's Republic of China* *Law of the People's Republic of China on Mediation and Arbitration of Labor Disputes* *Law of the People's Republic of China on the Protection of Rights and Interests of Women* *Special Rules on the Labor Protection of Female Employees* *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* *Social Insurance Law of the People's Republic of China* *Employment Promotion Law of the People's Republic of China* *Trade Union Law of the People's Republic of China* *Law of the People's Republic of China on the Protection of Disabled Persons* *Regulations on Unemployment Insurance* *Regulation on Work-Related Injury Insurance* *Regulation on Public Holidays for National Annual Festivals and Memorial Days* *Provisions on Prohibition of Child Labor*
Product liability and service	*Law of the People's Republic of China on Product Quality* *Advertisement Law of the People's Republic of China* *Contract Law of the People's Republic of China* *Regulations on Responsibility for Quality of Industrial Products* *Provisions on Prohibition of Infringement of Trade Secrets*

Classifications	Laws and Regulations
Anti-commercial bribery law	*Law of the People's Republic of China Against Unfair Competition* *Criminal Law of the People's Republic of China*
Antitrust, company	*Anti-monopoly Law of the People's Republic of China* *Company Law of the People's Republic of China*
Information security	*Cybersecurity Law of the People's Republic of China* *Regulation of the People's Republic of China on the Administration of Human Genetic Resources* *Law of the People's Republic of China on the Protection of Consumer Rights and Interests* *Tort Liability Law of the People's Republic of China*
Intellectual property	*Patent Law of the People's Republic of China* *Guidelines for Patent Examination* *Trademark Law of the People's Republic of China* *Copyright Law of the People's Republic of China*

APPENDIX III. INDEX OF HKEX ESG REPORTING GUIDE

Indicator	Description	Indexes
A. Environmental		
A1 Emissions		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	5.1 Efficiency Improvement and Emission Reduction
A1.1	The types of emissions and respective emission data.	5.1 Efficiency Improvement and Emission Reduction
A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.2 Treasure Resources
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.1 Efficiency Improvement and Emission Reduction
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.1 Efficiency Improvement and Emission Reduction
A1.5	Description of measures to mitigate emissions and results achieved.	5.1 Efficiency Improvement and Emission Reduction
A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiates and results achieved.	5.1 Efficiency Improvement and Emission Reduction
A2 Usage of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	5.2 Treasure Resources
A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	5.2 Treasure Resources
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	5.2 Treasure Resources
A2.3	Description of energy use efficiency initiatives and results achieved.	5.2 Treasure Resources
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	5.2 Treasure Resources
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Not applicable. Due to nature of business and characteristics of the Company, packaging materials are not an important issue and not disclosed.
A3 Environment and Natural Resources		
General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources.	V. Cherish Environment for Harmony of Lives
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	V. Cherish Environment for Harmony of Lives

Indicator	Description	Indexes
B. Social		
B1 Employment		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	4.1 Talent Management
B1.1	Total workforce by gender, employment type, age group and geographical region.	4.1 Talent Management
B1.2	Employment turnover rate by gender, age group and geographical region.	4.1 Talent Management
B2 Health and Safety		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	5.3 Safety in Production
B2.1	Number and rate of work-related fatalities.	5.3 Safety in Production
B2.2	Lost days due to work injury.	5.3 Safety in Production
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	5.3 Safety in Production
B3 Development and training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	4.2 Motivation to Growth
B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	4.2 Motivation to Growth
B3.2	The average training hours completed per employee by gender and employee category.	4.2 Motivation to Growth
B4 Labor Standards		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.	4.1 Talent Management
B4.1	Description of measures to review employment practices to avoid child and forced labor.	4.1 Talent Management
B4.2	Description of steps taken to eliminate such practices when discovered.	4.1 Talent Management
B5 Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	2.2 Responsible Purchasing
B5.1	Number of suppliers by geographical region.	2.2 Responsible Purchasing (Suppliers classified by region are confidential to the company and are not disclosed)
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	2.2 Responsible Purchasing

Indicator	Description	Indexes
B6 Product Responsibility		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress.	2.1 Customer First 2.3 Strict Quality Control 2.4 Privacy Protection 3.3 Protection of Achievements
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.3 Strict Quality Control
B6.2	Number of products and service related complaints received and how they are dealt with.	2.1 Customer First
B6.3	Description of practices relating to observing and protecting intellectual property rights.	3.3 Protection of Achievements
B6.4	Description of the quality assurance process and recall procedures.	2.3 Strict Quality Control
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	2.4 Privacy Protection
B7 Anti-corruption		
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer.	1.3 Honesty and Compliance
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	1.3 Honesty and Compliance
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	1.3 Honesty and Compliance
B8 Community		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	VI Selfless Dedication to Industry Expansion
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	VI Selfless Dedication to Industry Expansion
B8.2	Resources contributed (e.g. money or time) to the focus area.	VI Selfless Dedication to Industry Expansion

INDEPENDENT AUDITOR'S REPORT

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To the shareholders of Genscript Biotech Corporation
(Incorporated in the Cayman Islands with limited liability)

OPINION

We have audited the consolidated financial statements of Genscript Biotech Corporation (the "**Company**") and its subsidiaries (the "**Group**") set out on pages 145 to 152, which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2019, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("**HKFRSs**") issued by the Hong Kong Institute of Certified Public Accountants ("**HKICPA**") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with Hong Kong Standards on Auditing ("**HKSAs**") issued by the HKICPA. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the HKICPA's *Code of Ethics for Professional Accountants* (the "**Code**"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matter	How our audit addressed the key audit matter
Revenue recognition – Life science services and products	
Revenue of life science services and products amounted to US$170,160,000 was recognized in 2019, which represents 62% of the total revenue. Revenue recognition has been identified as a risk, particularly in respect of the occurrence and accuracy of a significant volume of transactions and the timing of revenue recognition for sales of goods and rendering of services with deliveries occurring on or around year-end. Due to the significant volume of transactions, minor errors could, in aggregate, have a material impact on the financial statements. The Group's disclosure about accounting policies of revenue recognition is included in Note 2.4 summary of significant accounting policies and about revenue breakdown in Note 5 revenue, other income and gains of the financial statements.	We performed the review on management's assessment of revenue recognition under HKFRS 15. We carried out testing relating to internal controls. On a sample basis, we examined deliveries during the year to documentation to assess whether the revenue recognition criteria were met for control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. We performed sales cut-off test to check to the goods delivery note and client acceptance note for sales of goods and check to the service report download record for rendering of services. We performed monthly analysis to observe the sales trend and identify whether there are any unusual sales. We performed testing on journal entries to test for any management override of internal controls related to revenue recognition.

Key audit matter	How our audit addressed the key audit matter
Revenue recognition – License and collaboration arrangement	
On 21 December 2017, the Group and Janssen Biotech, Inc. ("**Janssen**"), entered into a collaboration and license agreement ("**the agreement**") in the development, manufacture and commercialization of a chimeric antigen receptor (CAR) T-cell drug. Revenue of License and collaboration arrangement amounted to US$57,261,000 was recognized in 2019, which represents 21% of the total revenue. There are significant management judgments and estimations involved in identification of deliverables, allocation of total consideration to each deliverable and assessing the respective recognition criteria. The revenue recognition for the collaboration and license agreement may have a material impact on the financial statements. The Group's disclosure about accounting policies of revenue recognition is included in Note 2.4 summary of significant accounting policies and about revenue breakdown in Note 5 revenue, other income and gains of the financial statements.	We performed the review on management's assessment of revenue recognition under HKFRS 15, including management's judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model to the agreement. We reviewed management's accounting treatment, including management's identification of deliverables within the agreement and evaluated management's judgement about whether the identified deliverables represent separate units of accounting under HKFRS 15. We reviewed the management's estimation of the variable consideration amount included in the total consideration. We reviewed allocation of total consideration to each deliverable and key assumption used in the allocation method and respective recognition criteria for each deliverable. On a sample basis, we examined deliveries during the year to documentation to assess whether the revenue recognition criteria were met for control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

OTHER INFORMATION INCLUDED IN THE ANNUAL REPORT

The directors of the Company are responsible for the other information. The other information comprises the information included in the Annual Report, other than the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE DIRECTORS FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine 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, the directors of the Company are 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 the directors of the Company either intend to liquidate the Group or to cease operations or have no realistic alternative but to do so.

The directors of the Company are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Our report is made solely to you, as a body, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs 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 HKSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- 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.

- 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.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

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

- 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.

- 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 the Audit Committee 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 the Audit Committee 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 the Audit Committee, 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 auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is SIU FUNG TERENCE HO.

Ernst & Young
Certified Public Accountants
Hong Kong
27 March 2020

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

Year ended 31 December 2019

	Notes	2019 US$'000	2018 US$'000
REVENUE	5	**273,354**	231,017
Cost of sales		**(93,064)**	(72,478)
Gross profit		**180,290**	158,539
Other income and gains	5	**21,185**	18,941
Selling and distribution expenses		**(70,358)**	(38,771)
Administrative expenses		**(55,256)**	(40,582)
Impairment losses on financial assets, net		**(1,851)**	(977)
Research and development expenses		**(186,022)**	(74,076)
Other expenses		**(589)**	(121)
Finance costs	7	**(781)**	(52)
Share of losses of associates	18	**(308)**	(201)
(LOSS)/PROFIT BEFORE TAX	6	**(113,690)**	22,700
Income tax expense	10	**(3,826)**	(1,941)
(LOSS)/PROFIT FOR THE YEAR		**(117,516)**	20,759
Attributable to:			
Owners of the parent		**(96,912)**	21,216
Non-controlling interests		**(20,604)**	(457)
		(117,516)	20,759
(LOSS)/EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT	12		
Basic		**(US5.23 cents)**	US1.18 cents
Diluted		**(US5.23 cents)**	US1.15 cents

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 December 2019

	2019 US$'000	2018 US$'000
(LOSS)/PROFIT FOR THE YEAR	**(117,516)**	20,759
OTHER COMPREHENSIVE LOSS		
Other comprehensive loss that may be reclassified to profit or loss in subsequent periods:		
Exchange differences:		
Exchange differences on translation of foreign operations	**(4,703)**	(13,498)
Net other comprehensive loss that may be reclassified to profit or loss in subsequent periods	**(4,703)**	(13,498)
Other comprehensive income/(loss) that will not be reclassified to profit or loss in subsequent periods:		
Equity investments designated at fair value through other comprehensive income/(loss):		
Changes in fair value	**61**	(11)
Net other comprehensive income/(loss) that will not be reclassified to profit or loss in subsequent periods	**61**	(11)
OTHER COMPREHENSIVE LOSS FOR THE YEAR, NET OF TAX	**(4,642)**	(13,509)
TOTAL COMPREHENSIVE (LOSS)/INCOME FOR THE YEAR	**(122,158)**	7,250
Attributable to:		
Owners of the parent	**(101,394)**	8,471
Non-controlling interests	**(20,764)**	(1,221)
	(122,158)	7,250

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

31 December 2019

	Notes	2019 US$'000	2018 US$'000
NON-CURRENT ASSETS			
Property, plant and equipment	13	**235,986**	158,013
Advance payments for property, plant and equipment		**8,585**	4,037
Investment properties	14	**7,442**	–
Right-of-use assets	15	**29,642**	–
Prepaid land lease payments	15	**–**	17,414
Goodwill	16	**15,245**	15,287
Other intangible assets	17	**25,482**	19,642
Investments in associates	18	**2,615**	2,924
Financial assets at fair value through profit or loss	19	**4,667**	3,405
Equity investments designated at fair value through other comprehensive income	20	**–**	4,949
Deferred tax assets	30	**5,701**	11,842
Total non-current assets		**335,365**	237,513
CURRENT ASSETS			
Inventories	21	**19,855**	12,429
Trade and notes receivables	22	**73,067**	67,843
Prepayments, other receivables and other assets	23	**31,621**	21,889
Financial assets at fair value through profit or loss	19	**25,434**	70,056
Loans to an associate	18	**2,007**	–
Pledged short-term deposits	24	**972**	12,688
Time deposits	24	**148,693**	–
Cash and cash equivalents	24	**252,397**	494,558
Total current assets		**554,046**	679,463
CURRENT LIABILITIES			
Trade and bills payables	25	**17,627**	11,187
Other payables and accruals	26	**125,035**	73,944
Interest-bearing bank borrowings	27	**17,008**	10,502
Lease liabilities	15	**1,769**	–
Tax payable		**2,846**	16,766
Contract liabilities	28	**60,130**	41,018
Government grants	29	**90**	98
Total current liabilities		**224,505**	153,515
NET CURRENT ASSETS		**329,541**	525,948
TOTAL ASSETS LESS CURRENT LIABILITIES		**664,906**	763,461

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

31 December 2019

	Notes	2019 US$'000	2018 US$'000
NON-CURRENT LIABILITIES			
Interest-bearing bank loans	27	**1,748**	–
Lease liabilities	15	**3,608**	–
Contract liabilities	28	**277,827**	262,127
Deferred tax liabilities	30	**5,582**	4,017
Government grants	29	**3,843**	4,018
Total non-current liabilities		**292,608**	270,162
Net assets		**372,298**	493,299
EQUITY			
Equity attributable to owners of the parent			
Share capital	31	**1,879**	1,836
Treasury shares		**(7,774)**	–
Reserves	34	**388,699**	476,828
		382,804	478,664
Non-controlling interests		**(10,506)**	14,635
Total equity		**372,298**	493,299

Zhang Fangliang
Director

Wang Ye
Director

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2019

	Attributable to owners of the parent											
	Share capital US$'000 (Note 31)	Treasury shares US$'000	Share premium* US$'000	Merger reserve* US$'000	Share option reserve* US$'000 (Note 32 &Note33)	Statutory surplus reserves* US$'000	Fair value reserve of financial assets at fair value through other comprehensive income* US$'000	Retained earnings* US$'000	Exchange fluctuation reserve* US$'000	Total US$'000	Non-controlling interests US$'000	Total equity US$'000
At 31 December 2018 (Audited)	1,836	–	364,100	(20,883)	18,955	14,359	(11)	112,554	(12,246)	478,664	14,635	493,299
Effect of adoption of HKFRS 16 (Note 2.2)	–	–	–	–	–	–	–	(112)	–	(112)	–	(112)
At 1 January 2019 (Restated)	1,836	–	364,100	(20,883)	18,955	14,359	(11)	112,442	(12,246)	478,552	14,635	493,187
Loss for the year	–	–	–	–	–	–	–	(96,912)	–	(96,912)	(20,604)	(117,516)
Other comprehensive loss for the period:												
Change in fair value of equity investments designated at fair value through other comprehensive income, net of tax	–	–	–	–	–	–	61	–	–	61	–	61
Disposal of equity investments designated at fair value through other comprehensive income, net of tax	–	–	–	–	–	–	(50)	50	–	–	–	–
Exchange differences on translation of foreign operations	–	–	–	–	–	–	–	–	(4,543)	(4,543)	(160)	(4,703)
Total comprehensive loss for the year	–	–	–	–	–	–	11	(96,862)	(4,543)	(101,394)	(20,764)	(122,158)
Purchases of minority interests of the subsidiary	–	–	(1,588)	–	–	–	–	–	–	(1,588)	(4,377)	(5,965)
Acquisition of equity by minority shareholders	–	–	383	–	–	–	–	–	–	383	–	383
Equity-settled share option arrangements	–	–	–	–	10,782	–	–	–	–	10,782	–	10,782
Shares repurchased	–	(7,774)	–	–	–	–	–	–	–	(7,774)	–	(7,774)
Exercise of share options	43	–	5,886	–	(2,086)	–	–	–	–	3,843	–	3,843
At 31 December 2019	1,879	(7,774)	368,781	(20,883)	27,651	14,359	–	15,580	(16,789)	382,804	(10,506)	372,298

* These reserve accounts comprise the consolidated reserves of US$388,699,000 (for the year ended 31 December 2018: US$476,828,000) in the consolidated statement of financial position.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2019

	Attributable to owners of the parent										
	Share capital US$'000	Share premium* US$'000	Merger reserve* US$'000	Share option reserve* US$'000	Statutory surplus reserves* US$'000	Fair value reserve of financial assets at fair value through other comprehen-sive income* US$'000	Retained earnings* US$'000	Exchange fluctuation reserve* US$'000	Total US$'000	Non-controlling interests US$'000	Total equity US$'000
At 1 January 2018	1,734	120,770	(20,883)	10,936	11,536	–	94,161	488	218,742	10,677	229,419
Profit for the year	–	–	–	–	–	–	21,216	–	21,216	(457)	20,759
Other comprehensive loss for the year:											
Change in fair value of equity investments designated at fair value through other comprehensive income, net of tax	–	–	–	–	–	(11)	–	–	(11)	–	(11)
Exchange differences on translation of foreign operations	–	–	–	–	–	–	–	(12,734)	(12,734)	(764)	(13,498)
Total comprehensive income for the year	–	–	–	–	–	(11)	21,216	(12,734)	8,471	(1,221)	7,250
Purchases of minority interests of the subsidiary	–	(297)	–	–	–	–	–	–	(297)	4,221	3,924
Acquisition of equity by minority shareholders	–	399	–	–	–	–	–	–	399	–	399
Equity-settled share option arrangements	–	–	–	8,852	–	–	–	–	8,852	–	8,852
Exercise of share options	33	3,479	–	(833)	–	–	–	–	2,679	–	2,679
Share repurchased	(6)	(11,469)	–	–	–	–	–	–	(11,475)	–	(11,475)
Acquisition of a subsidiary	–	–	–	–	–	–	–	–	–	958	958
Transfer from retained profits	–	–	–	–	2,823	–	(2,823)	–	–	–	–
Issue of shares under the share placing option	75	251,218	–	–	–	–	–	–	251,293	–	251,293
At 31 December 2018	1,836	364,100	(20,883)	18,955	14,359	(11)	112,554	(12,246)	478,664	14,635	493,299

* These reserve accounts comprise the consolidated reserves of US$476,828,000 (for the year ended 31 December 2017: US$216,075,000) in the consolidated statement of financial position.

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 December 2019

	Notes	2019 US$'000	2018 US$'000
CASH FLOWS FROM OPERATING ACTIVITIES			
(Loss)/Profit before tax		**(113,690)**	22,700
Adjustments for:			
Provision for the impairment of trade receivables and other receivables	6	**1,851**	977
Write-down of inventories to net realisable value	21	**992**	388
Depreciation of property, plant and equipment	13	**17,361**	11,122
Depreciation of investment properties	14	**102**	–
Depreciation of right-of-use assets	15	**1,376**	–
Amortisation of prepaid land lease payments	15	**–**	230
Amortisation of other intangible assets	17	**1,803**	1,582
Loss on disposal of items of property, plant and equipment	6	**153**	18
Interest income	5	**(8,350)**	(10,004)
Share of losses of associates	18	**308**	201
Fair value gains on financial assets at fair value through profit or loss	5	**(1,041)**	(1,295)
Finance costs	7	**781**	52
Foreign currency exchange gain, net	5	**(3,623)**	(3,959)
Equity-settled share option expenses		**10,782**	8,852
		(91,195)	30,864
(Increase)/Decrease in trade and notes receivables		**(14,041)**	211,809
Increase in prepayments, other receivables and other assets		**(5,578)**	(6,101)
Increase in inventories		**(8,418)**	(5,402)
Decrease in government grants		**(111)**	(320)
Increase in trade and bills payables		**15,928**	2,957
Increase/(Decrease) in other payables and accruals		**38,540**	2,830
Increase in contract liabilities		**41,792**	68,993
Cash (used in)/generated from operations		**(23,083)**	305,630
Interest received		**12,691**	4,017
Interest paid for finance rental lease payment		**(312)**	–
Interest paid		**(422)**	(49)
Income taxes paid		**(18,829)**	(1,939)
Net cash flows (used in)/from operating activities		**(29,955)**	307,659

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 December 2019

	Notes	2019 US$'000	2018 US$'000
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchases of items of property, plant and equipment		**(110,371)**	(70,839)
Purchases of equity investments designated at fair value through other comprehensive income		**–**	(4,960)
Redemption of equity investments designated at fair value through other comprehensive income		**5,010**	–
Purchases of financial assets at fair value through profit or loss		**(1,183,563)**	(70,036)
Maturity of financial assets at fair value through profit or loss		**1,226,398**	–
Purchases of time deposits		**(148,693)**	–
Purchases of prepaid land lease payments		**(6,824)**	(8,104)
Proceeds from disposal of items of property, plant and equipment		**364**	–
Purchases of intangible assets		**(1,341)**	(666)
Receipt of government grants		**–**	1,594
Receipt of investment income		**678**	830
Purchases of shareholdings in subsidiaries		**–**	(27,595)
Purchases of investments in associates		**–**	(1,890)
Changes in pledged short-term deposits		**11,716**	(12,296)
Loans to an associate		**(2,007)**	–
Net cash flows used in investing activities		**(208,633)**	(193,962)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issue of shares		**–**	251,293
Purchases of non-controlling interest		**(5,965)**	(297)
Acquisition of equity by non-controlling interest		**383**	4,620
Exercise of share options		**3,735**	2,679
Proceeds from bank loans		**27,248**	10,502
Repayment of bank loans		**(18,993)**	–
Shares repurchased		**(7,774)**	(11,475)
Principal portion of lease payments	35	**(1,412)**	–
Net cash flows (used in)/from financing activities		**(2,778)**	257,322
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		**(241,366)**	371,019
Net foreign exchange differences		**(795)**	(318)
Cash and cash equivalents at beginning of year	24	**494,558**	123,857
CASH AND CASH EQUIVALENTS AT END OF YEAR	24	**252,397**	494,558
ANALYSIS OF BALANCES OF CASH AND CASH EQUIVALENTS			
Cash and bank balances		**240,380**	106,884
Non-pledged time deposits with original maturity of less than three months when acquired		**12,017**	387,674
Cash and cash equivalents as stated in the statement of financial position	24	**252,397**	494,558
Cash and cash equivalents as stated in the statement of cash flows		**252,397**	494,558

1. CORPORATE INFORMATION

Genscript Biotech Corporation (the "**Company**") was incorporated on 21 May 2015 as an exempted company in the Cayman Islands with limited liability under the Companies Law of the Cayman Islands. The registered office address of the Company is PO Box 10240, Harbour Place, 103 South Church Street, George Town, Grant Cayman KY1-1002, Cayman Islands.

The Company is an investment holding company. The Company's subsidiaries are principally engaged in the manufacture and sale of life sciences research products and services. The products and services mainly include life life science services and products, biologics development services, industrial synthetic biology products and cell therapy. The shares of the Company were listed on the Main Board of the Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") on 30 December 2015.

In the opinion of the Directors, the ultimate holding company of the Company is Genscript Corporation ("**GS Corp**"), which was incorporated in the United States of America.

Information about subsidiaries

Particulars of the Company's principal subsidiaries are as follows:

Company	Place and date of incorporation/registration and place of business	Issued ordinary shares/ paid-up capital	Percentage of equity interest attributable to the Company		Principal activities
			Direct %	Indirect %	
Genscript (Hong Kong) Limited ("**GS HK**")	Hong Kong 8 January 2009	HK$155,000	–	100	Sale of life sciences research products and services
Nanjing Jinsirui Biotechnology Co., Ltd. ("**Nanjing Jinsirui**") – wholly foreign-owned enterprise	Mainland China 12 March 2009	US$88,020,000	–	100	Manufacture and sale of life sciences research products and services
Genscript USA Incorporated ("**GS USA**")	United States of America 26 March 2009	US$1,000	100	–	Manufacture and sale of life sciences research products and services
Jinsikang Technology (Nanjing) Co., Ltd. ("**Nanjing Jinsikang**") – limited Liability Company	Mainland China 30 April 2009	RMB132,550,600	–	100	Manufacture and sale of life sciences research products and services
Genscript Japan Inc. ("**GS JP**")	Japan 7 July 2011	JPY8,300,000	–	100	Sale of life sciences research products and services

1. CORPORATE INFORMATION (continued)

Information about subsidiaries (continued)

Company	Place and date of incorporation/registration and place of business	Issued ordinary shares/ paid-up capital	Percentage of equity interest attributable to the Company		Principal activities
			Direct %	Indirect %	
Nanjing Bestzyme Bioengineering Co., Ltd. ("**Nanjing Bestzyme**") – cooperative joint venture enterprise	Mainland China 6 June 2013	US$ 42,469,005	–	94.62	Manufacture and sale of life sciences research products and services
Nanjing Legend Biotechnology Co., Ltd. ("**Legend Nanjing**") – wholly foreign-owned enterprise	Mainland China 17 November 2014	US$22,500,000	–	84.84	Manufacture and sale of life sciences research products and services
Shanghai Bestzyme Biological Co., Ltd. ("**Shanghai Bestzyme**") – limited liability company	Mainland China 11 December 2018	RMB 3,000,000	–	100	Manufacture and sale of life sciences research products and services
Jinan Bestzyme Biological Co., Ltd. ("**Jinan Bestzyme**") – limited liability company	Mainland China 19 August 2009	RMB45,436,341	–	78.09	Manufacture and sale of life sciences research products and services
Jiangsu Genscript Biotech Co., Ltd ("**Jiangsu Jinsirui**") – wholly foreign-owned enterprise	Mainland China 31 August 2016	RMB393,624,500	–	100	Manufacture and sale of life sciences research products and services
Legend Biotech USA Incorporated ("**Legend USA**")	United States of America 31 August 2017	–	–	84.84	Manufacture and sale of life sciences research products and services
Legend Biotech Ireland Limited. ("**Legend Ireland**")	Ireland 13 November 2017	–	–	84.84	Manufacture and sale of life sciences research products and services

1. CORPORATE INFORMATION (continued)

Information about subsidiaries (continued)

Company	Place and date of incorporation/registration and place of business	Issued ordinary shares/ paid-up capital	Percentage of equity interest attributable to the Company		Principal activities
			Direct	Indirect	
			%	%	
GenScript Biotech (Netherlands) B.V. ("**GS EU**")	Netherlands 6 December 2017	–	–	100	Manufacture and sale of life sciences research products and services
CustomArray, Inc ("**CustomArray**")	United States of America 1 January 2018	US$957,800	–	100	Manufacture and sale of life sciences research products and services
Anhui Pushen Biotechnology Co., Ltd. ("**Pushen**") – limited liability company	Mainland China 31 July 2018	RMB5,294,200	–	62.22	Manufacture and sale of life sciences research products and services

The above table lists the subsidiaries of the Company which, in the opinion of the directors, principally affected the results for the reporting period or formed a substantial portion of the net assets of the Company and its subsidiaries (the "**Group**"). To give details of other subsidiaries would, in the opinion of the directors, result in particulars of excessive length.

2.1 BASIS OF PREPARATION

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards ("**HKFRSs**") (which include all Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards ("**HKASs**") and Interpretations) issued by the Hong Kong Institute of Certified Public Accountants ("**HKICPA**"), accounting principles generally accepted in Hong Kong and the disclosure requirements of the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention, except for wealth management products and equity investments which have been measured at fair value. These financial statements are presented in United States dollars ("**US$**") and all values are rounded to the nearest thousand except when otherwise indicated.

Basis of consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries (collectively referred to as the "**Group**") for the year ended 31 December 2019. A subsidiary is an entity (including a structured entity), directly or indirectly, controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e., existing rights that give the Group the current ability to direct the relevant activities of the investee).

The financial statements of the subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Profit or loss and each component of other comprehensive income are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described above. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises (i) the assets (including goodwill) and liabilities of the subsidiary, (ii) the carrying amount of any non-controlling interest and (iii) the cumulative translation differences recorded in equity; and recognises (i) the fair value of the consideration received, (ii) the fair value of any investment retained and (iii) any resulting surplus or deficit in profit or loss. The Group's share of components previously recognised in other comprehensive income is reclassified to profit or loss or retained profits, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The Group has adopted the following new and revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 9	*Prepayment Features with Negative Compensation*
HKFRS 16	*Leases*
Amendments to HKAS 19	*Plan Amendment, Curtailment or Settlement*
Amendments to HKAS 28	*Long-term Interests in Associates and Joint Ventures*
HK(IFRIC)-Int 23	*Uncertainty over Income Tax Treatments*
Annual Improvements 2015-2017 Cycle	Amendments to HKFRS 3 and HKFRS 11, HKAS 12 and HKAS 23

Except for the amendments to HKFRS 9, HKAS 19 and HKAS 28, and Annual Improvements to HKFRSs 2015-2017 Cycle, which are not relevant to the preparation of the Group's financial statements, the nature and the impact of the new and revised HKFRSs are described below:

(a) Adoption of HKFRS 16

HKFRS 16 replaces HKAS 17 Leases, HK(IFRIC)-Int 4 Determining whether an Arrangement contains a Lease, HK(SIC)-Int 15 Operating Leases – Incentives and HK(SIC)-Int 27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model to recognise and measure right-of-use assets and lease liabilities, except for certain recognition exemptions. Lessor accounting under HKFRS 16 is substantially unchanged from HKAS 17. Lessors continue to classify leases as either operating or finance leases using similar principles as in HKAS 17. HKFRS 16 did not have any financial impact on leases where the Group is the lessor.

The Group has adopted HKFRS 16 using the modified retrospective method with the date of initial application of 1 January 2019. Under this method, the standard has been applied retrospectively with the cumulative effect of initial adoption recognised as an adjustment to the opening balance of retained profits at 1 January 2019, and the comparative information for 2018 was not restated and continued to be reported under HKAS 17 and related interpretations.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

(a) Adoption of HKFRS 16 (continued)

New definition of a lease

Under HKFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. Control is conveyed where the customer has both the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset. The Group elected to use the transition practical expedient allowing the standard to be applied only to contracts that were previously identified as leases applying HKAS 17 and HK(IFRIC)-Int 4 at the date of initial application. Contracts that were not identified as leases under HKAS 17 and HK(IFRIC)-Int 4 were not reassessed. Therefore, the definition of a lease under HKFRS 16 has been applied only to contracts entered into or changed on or after 1 January 2019.

As a lessee – Leases previously classified as operating leases

Nature of the effect of adoption of HKFRS 16

The Group has lease contracts for land and buildings. As a lessee, the Group previously classified leases as either finance leases or operating leases based on the assessment of whether the lease transferred substantially all the rewards and risks of ownership of assets to the Group. Under HKFRS 16, the Group applies a single approach to recognise and measure right-of-use assets and lease liabilities for all leases, except for two elective exemptions for leases of low-value assets (elected on a lease-by-lease basis) and leases with a lease term of 12 months or less ("**short-term leases**") (elected by class of underlying asset). Instead of recognising rental expenses under operating leases on a straight-line basis over the lease term commencing from 1 January 2019, the Group recognises depreciation (and impairment, if any) of the right-of-use assets and interest accrued on the outstanding lease liabilities (as finance costs).

Impacts on transition

Lease liabilities at 1 January 2019 were recognised based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at 1 January 2019 and included in interest-bearing bank and other borrowings. The right-of-use assets were recognised based on the carrying amount as if the standard had always been applied, except for the incremental borrowing rate where the Group applied the incremental borrowing rate at 1 January 2019, adjusted by the amount of any prepaid or accrued lease payments relating to the lease recognised in the statement of financial position immediately before 1 January 2019.

All these assets were assessed for any impairment based on HKAS 36 on that date. The Group elected to present the right-of-use assets separately in the statement of financial position.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

(a) Adoption of HKFRS 16 (continued)

As a lessee – Leases previously classified as operating leases (continued)

Impacts on transition (continued)

The Group has used the following elective practical expedients when applying HKFRS 16 at 1 January 2019:

- Applying the short-term lease exemptions to leases with a lease term that ends within 12 months from the date of initial application ;
- Using hindsight in determining the lease term where the contract contains options to extend/terminate the Lease.

Financial impact at 1 January 2019

The impacts arising from the adoption of HKFRS 16 as at 1 January 2019 are as follows:

	Increase/ (decrease) US$'000
Assets	
Increase in right-of-use assets	23,628
Decrease in prepaid land lease payments	(17,414)
Decrease in prepayments, other receivables and other assets	(392)
Increase in total assets	5,822
Liabilities	
Increase in lease liabilities	5,934
Increase in total liabilities	5,934
Decrease in retained earnings	(112)

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

(a) Adoption of HKFRS 16 (continued)

Financial impact at 1 January 2019 (continued)

The lease liabilities as at 1 January 2019 reconciled to the operating lease commitments as at 31 December 2018 are as follows:

	US$'000
Operating lease commitments as at 31 December 2018	**6,564**
Weighted average incremental borrowing rates as at 1 January 2019	3.66%
Discounted operating lease commitments as at 1 January 2019	5,934
Lease liabilities as at 1 January 2019	5,934

(b) HK(IFRIC)-Int 23 addresses the accounting for income taxes (current and deferred) when tax treatments involve uncertainty that affects the application of HKAS 12 (often referred to as "uncertain tax positions"). The interpretation does not apply to taxes or levies outside the scope of HKAS 12, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The interpretation specifically addresses (i) whether an entity considers uncertain tax treatments separately; (ii) the assumptions an entity makes about the examination of tax treatments by taxation authorities; (iii) how an entity determines taxable profits or tax losses, tax bases, unused tax losses, unused tax credits and tax rates; and (iv) how an entity considers changes in facts and circumstances. Upon adoption of the interpretation, the Group considered whether it has any uncertain tax positions arising from the transfer pricing on its intergroup sales. Based on the Group's tax compliance and transfer pricing study, the Group determined that it is probable that its transfer pricing policy will be accepted by the tax authorities. Accordingly, the interpretation did not have any impact on the financial position or performance of the Group.

2.3 ISSUED BUT NOT YET EFFECTIVE HONG KONG FINANCIAL REPORTING STANDARDS

The Group has not applied the following new and revised HKFRSs, that have been issued but are not yet effective, in these financial statements.

Amendments to HKFRS 3	*Definition of a Business*[1]
Amendments to HKFRS 9 HKAS 39 and HKFRS 7	*Interest Rate Benchmark Reform*[1]
Amendments to HKFRS 10 and HKAS 28 (2011)	*Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*[3]
HKFRS 17	*Insurance Contracts*[2]
Amendments to HKAS 1 and HKAS 8	*Definition of Material*[1]

1 Effective for annual periods beginning on or after 1 January 2020
2 Effective for annual periods beginning on or after 1 January 2021
3 No mandatory effective date yet determined but available for adoption

Further information about those HKFRSs that are expected to be applicable to the Group is described below.

Amendments to HKFRS 3 clarify and provide additional guidance on the definition of a business. The amendments clarify that for an integrated set of activities and assets to be considered a business, it must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output. A business can exist without including all of the inputs and processes needed to create outputs. The amendments remove the assessment of whether market participants are capable of acquiring the business and continue to produce outputs. Instead, the focus is on whether acquired inputs and acquired substantive processes together significantly contribute to the ability to create outputs. The amendments have also narrowed the definition of outputs to focus on goods or services provided to customers, investment income or other income from ordinary activities. Furthermore, the amendments provide guidance to assess whether an acquired process is substantive and introduce an optional fair value concentration test to permit a simplified assessment of whether an acquired set of activities and assets is not a business. The Group expects to adopt the amendments prospectively from 1 January 2020. Since the amendments apply prospectively to transactions or other events that occur on or after the date of first application, the Group will not be affected by these amendments on the date of transition.

2.3 ISSUED BUT NOT YET EFFECTIVE HONG KONG FINANCIAL REPORTING STANDARDS (continued)

Amendments to HKFRS 9, HKAS 39 and HKFRS 7 address the effects of interbank offered rate reform on financial reporting. The amendments provide temporary reliefs which enable hedge accounting to continue during the period of uncertainty before the replacement of an existing interest rate benchmark. In addition, the amendments require companies to provide additional information to investors about their hedging relationships which are directly affected by these uncertainties. The amendments are effective for annual periods beginning on or after 1 January 2020. Early application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKFRS 10 and HKAS 28 (2011) address an inconsistency between the requirements in HKFRS 10 and in HKAS 28 (2011) in dealing with the sale or contribution of assets between an investor and its associate or joint venture. The amendments require a full recognition of a gain or loss when the sale or contribution of assets between an investor and its associate or joint venture constitutes a business. For a transaction involving assets that do not constitute a business, a gain or loss resulting from the transaction is recognised in the investor's profit or loss only to the extent of the unrelated investor's interest in that associate or joint venture. The amendments are to be applied prospectively. The previous mandatory effective date of amendments to HKFRS 10 and HKAS 28 (2011) was removed by the HKICPA in January 2016 and a new mandatory effective date will be determined after the completion of a broader review of accounting for associates and joint ventures. However, the amendments are available for adoption now.

Amendments to HKAS 1 and HKAS 8 provide a new definition of material. The new definition states that information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. The amendments clarify that materiality will depend on the nature or magnitude of information. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. The Group expects to adopt the amendments prospectively from 1 January 2020. The amendments are not expected to have any significant impact on the Group's financial statements.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Investments in associates

An associate is an entity in which the Group has a long-term interest of generally not less than 20% of the equity voting rights and over which it is in a position to exercise significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

The Group's investments in associates are stated in the consolidated statement of financial position at the Group's share of net assets under the equity method of accounting, less any impairment losses. Adjustments are made to bring into line any dissimilar accounting policies that may exist.

The Group's share of the post-acquisition results and other comprehensive income of associates and joint ventures is included in the consolidated statement of profit or loss and consolidated other comprehensive income, respectively. In addition, when there has been a change recognised directly in the equity of the associate or joint venture, the Group recognises its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and its associates are eliminated to the extent of the Group's investments in the associates, except where unrealised losses provide evidence of an impairment of the assets transferred. Goodwill arising from the acquisition of associates is included as part of the Group's investments in associates.

When an investment in an associate is classified as held for sale, it is accounted for in accordance with HKFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The consideration transferred is measured at the acquisition date fair value which is the sum of the acquisition date fair values of assets transferred by the Group, liabilities assumed by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree that are present ownership interests and entitle their holders to a proportionate share of net assets in the event of liquidation at fair value or at the proportionate share of the acquiree's identifiable net assets. All other components of non-controlling interests are measured at fair value. Acquisition-related costs are expensed as incurred.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts of the acquiree.

If the business combination is achieved in stages, the previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognised in profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Business combinations and goodwill (continued)

Any contingent consideration to be transferred by the acquirer is recognised at fair value at the acquisition date. Contingent consideration classified as an asset or liability is measured at fair value with changes in fair value recognised in profit or loss. Contingent consideration that is classified as equity is not remeasured and subsequent settlement is accounted for within equity.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred, the amount recognised for non-controlling interests and any fair value of the Group's previously held equity interests in the acquiree over the identifiable net assets acquired and liabilities assumed. If the sum of this consideration and other items is lower than the fair value of the net assets acquired, the difference is, after reassessment, recognised in profit or loss as a gain on bargain purchase.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is tested for impairment annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired. The Group performs its annual impairment test of goodwill as at 31 December. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the Group are assigned to those units or groups of units.

Impairment is determined by assessing the recoverable amount of the cash-generating unit (group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash-generating unit (group of cash-generating units) is less than the carrying amount, an impairment loss is recognised. An impairment loss recognised for goodwill is not reversed in a subsequent period.

Where goodwill has been allocated to a cash-generating unit (or group of cash-generating units) and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on the disposal. Goodwill disposed of in these circumstances is measured based on the relative value of the operation disposed of and the portion of the cash-generating unit retained.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Fair value measurement

The Group measures its investment properties, derivative financial instruments and equity investments at fair value at the end of each reporting period. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 – based on quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly

Level 3 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment of non-financial assets

Where an indication of impairment exists, or when annual impairment testing for an asset is required (other than inventories, contract assets, deferred tax, financial assets, investment properties and non-current assets/a disposal group classified as held for sale), the asset's recoverable amount is estimated. An asset's recoverable amount is the higher of the asset's or cash-generating unit's value in use and its fair value less costs of disposal, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss is recognised only if the carrying amount of an asset exceeds its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. An impairment loss is charged to the statement of profit or loss in the period in which it arises in those expense categories consistent with the function of the impaired asset.

An assessment is made at the end of each reporting period as to whether there is an indication that previously recognised impairment losses may no longer exist or may have decreased. If such an indication exists, the recoverable amount is estimated. A previously recognised impairment loss of an asset other than goodwill is reversed only if there has been a change in the estimates used to determine the recoverable amount of that asset, but not to an amount higher than the carrying amount that would have been determined (net of any depreciation/amortisation) had no impairment loss been recognised for the asset in prior years. A reversal of such an impairment loss is credited to the statement of profit or loss in the period in which it arises.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Related parties

A party is considered to be related to the Group if:

(a) the party is a person or a close member of that person's family and that person

(i) has control or joint control over the Group;

(ii) has significant influence over the Group; or

(iii) is a member of the key management personnel of the Group or of a parent of the Group;

or

(b) the party is an entity where any of the following conditions applies:

(i) the entity and the Group are members of the same group;

(ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);

(iii) the entity and the Group are joint ventures of the same third party;

(iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;

(v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;

(vi) the entity is controlled or jointly controlled by a person identified in (a);

(vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and

(viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group or to the parent of the Group.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property, plant and equipment and depreciation

Property, plant and equipment, other than construction in progress, are stated at cost (or valuation) less accumulated depreciation and any impairment losses. The cost of an item of property, plant and equipment comprises its purchase price and any directly attributable costs of bringing the asset to its working condition and location for its intended use.

Expenditure incurred after items of property, plant and equipment have been put into operation, such as repairs and maintenance, is normally charged to the statement of profit or loss in the period in which it is incurred. In situations where the recognition criteria are satisfied, the expenditure for a major inspection is capitalised in the carrying amount of the asset as a replacement. Where significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognises such parts as individual assets with specific useful lives and depreciates them accordingly.

Depreciation is calculated on the straight-line basis to write off the cost of each item of property, plant and equipment over its estimated useful life. The principal annual rates used for this purpose are as follows:

Freehold land	Not depreciated
Buildings	2% to 5%
Machinery and equipment	20% to 33$^{1}/_{3}$%
Motor vehicles	10%
Computer and office equipment	20% to 33$^{1}/_{3}$%

Where parts of an item of property, plant and equipment have different useful lives, the cost of that item is allocated on a reasonable basis among the parts and each part is depreciated separately. Useful lives and the depreciation method are reviewed, and adjusted if appropriate, at least at each financial year end.

An item of property, plant and equipment including any significant part initially recognised is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss on disposal or retirement recognised in the statement of profit or loss in the year the asset is derecognised is the difference between the net sales proceeds and the carrying amount of the relevant asset.

Construction in progress represents equipment under installation, which is stated at cost less any impairment losses, and is not depreciated. Cost comprises the direct costs of construction and capitalised borrowing costs on related borrowed funds during the period of construction. Construction in progress is reclassified to the appropriate category of property, plant and equipment when completed and ready for use.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Investment properties

Investment properties are interests in buildings held to earn rental income, rather than for use in the production or supply of goods or services or for administrative purposes; or for sale in the ordinary course of business. Such properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and accumulated impairment losses (if any). Depreciation is calculated using a straight-line method to allocate the depreciable amounts over the estimated useful lives of 22 years.

The residual values and useful lives of investment properties are reviewed, and adjusted as appropriate, at each financial year end. The effects of any revision are included in the statement of profit or loss when the changes arise.

Intangible assets (other than goodwill)

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is the fair value at the date of acquisition. The useful lives of intangible assets are assessed to be either finite or indefinite. Intangible assets with finite lives are subsequently amortised over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at each financial year end.

Intangible assets are amortised on the straight-line basis over the following useful economic lives:

Software	2 to 10 years
Patents and licenses	5 to 10 years
Customer relationship	10 years

Research and development costs

All research costs are charged to the statement of profit or loss as incurred.

Expenditure incurred on projects to develop new products is capitalised and deferred only when the Group can demonstrate the technical feasibility of completing the intangible asset so that it will be available for use or sale, its intention to complete and its ability to use or sell the asset, how the asset will generate future economic benefits, the availability of resources to complete the project and the ability to measure reliably the expenditure during the development. Product development expenditure which does not meet these criteria is expensed when incurred.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases (applicable from 1 January 2019)

The Group assesses at contract inception whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognises lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

(a) Right-of-use assets

Right-of-use assets are recognised at the commencement date of the lease (that is the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and any impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease terms and the estimated useful lives of the assets as follows:

Leasehold land	50 years
Buildings and rooms	2 to 10 years

If ownership of the leased asset transfers to the Group by the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases (applicable from 1 January 2019) (continued)

Group as a lessee (continued)

(b) Lease liabilities

Lease liabilities are recognised at the commencement date of the lease at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for termination of a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as an expense in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in lease payments (e.g., a change to future lease payments resulting from a change in an index or rate) or a change in assessment of an option to purchase the underlying asset.

(c) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (that is those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the recognition exemption for leases of low-value assets to leases of office equipment and laptop computers that are considered to be of low value.

Lease payments on short-term leases and leases of low-value assets are recognised as an expense on a straight-line basis over the lease term.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases (applicable from 1 January 2019) (continued)

Group as a lessor

When the Group acts as a lessor, it classifies at lease inception (or when there is a lease modification) each of its leases as either an operating lease or a finance lease.

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.

Leases (applicable before 1 January 2019)

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Where the Group is the lessee, rentals payable under operating leases net of any incentives received from the lessor are charged to the statement of profit or loss on the straight-line basis over the lease terms.

Prepaid land lease payments under operating leases are initially stated at cost and subsequently recognised on the straight-line basis over the lease terms.

Investments and other financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortised cost, fair value through other comprehensive income, and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient of not adjusting the effect of a significant financing component, the Group initially measures a financial asset at its fair value, plus in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under HKFRS 15 in accordance with the policies set out for "Revenue recognition" below.

In order for a financial asset to be classified and measured at amortised cost or fair value through other comprehensive income, it needs to give rise to cash flows that are solely payments of principal and interest ("**SPPI**") on the principal amount outstanding. Financial assets with cash flows that are not SPPI are classified and measured at fair value through profit or loss, irrespective of the business model.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Investments and other financial assets (continued)

Initial recognition and measurement (continued)

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both. Financial assets classified and measured at amortised cost are held within a business model with the objective to hold financial assets in order to collect contractual cash flows, while financial assets classified and measured at fair value through other comprehensive income are held within a business model with the objective of both holding to collect contractual cash flows and selling. Financial assets which are not held within the aforementioned business models are classified and measured at fair value through profit or loss.

All regular way purchases and sales of financial assets are recognised on the trade date, that is, the date that the Group commits to purchase or sell the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the marketplace.

Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows:

Financial assets at amortised cost (debt instruments)

Financial assets at amortised cost are subsequently measured using the effective interest method and are subject to impairment. Gains and losses are recognised in the statement of profit or loss when the asset is derecognised, modified or impaired.

Financial assets at fair value through other comprehensive income (debt instruments)

For debt investments at fair value through other comprehensive income, interest income, foreign exchange revaluation and impairment losses or reversals are recognised in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in other comprehensive income. Upon derecognition, the cumulative fair value change recognised in other comprehensive income is recycled to the statement of profit or loss.

Financial assets designated at fair value through other comprehensive income (equity investments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity investments designated at fair value through other comprehensive income when they meet the definition of equity under HKAS 32 Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Investments and other financial assets (continued)

Financial assets designated at fair value through other comprehensive income (equity investments) (continued)

Gains and losses on these financial assets are never recycled to the statement of profit or loss. Dividends are recognised as other income in the statement of profit or loss when the right of payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in other comprehensive income. Equity investments designated at fair value through other comprehensive income are not subject to impairment assessment.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognised in the statement of profit or loss.

This category includes derivative instruments and equity investments which the Group had not irrevocably elected to classify at fair value through other comprehensive income. Dividends on equity investments classified as financial assets at fair value through profit or loss are also recognised as other income in the statement of profit or loss when the right of payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognised in the statement of profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognised (i.e., removed from the Group's consolidated statement of financial position) when:

- the rights to receive cash flows from the asset have expired; or

- the Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risk and rewards of ownership of the asset. When it has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the Group continues to recognise the transferred asset to the extent of the Group's continuing involvement. In that case, the Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

Impairment of financial assets

The Group recognises an allowance for expected credit losses ("**ECLs**") for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment of financial assets (continued)

General approach

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12 months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and considers reasonable and supportable information that is available without undue cost or effort, including historical and forward-looking information.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Debt investments at fair value through other comprehensive income and financial assets at amortised cost are subject to impairment under the general approach and they are classified within the following stages for measurement of ECLs except for trade receivables and contract assets which apply the simplified approach as detailed below.

Stage 1 – Financial instruments for which credit risk has not increased significantly since initial recognition and for which the loss allowance is measured at an amount equal to 12-month ECLs

Stage 2 – Financial instruments for which credit risk has increased significantly since initial recognition but that are not credit-impaired financial assets and for which the loss allowance is measured at an amount equal to lifetime ECLs

Stage 3 – Financial assets that are credit-impaired at the reporting date (but that are not purchased or originated credit-impaired) and for which the loss allowance is measured at an amount equal to lifetime ECLs.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment of financial assets (continued)

Simplified approach

For trade receivables and contract assets that do not contain a significant financing component or when the Group applies the practical expedient of not adjusting the effect of a significant financing component, the Group applies the simplified approach in calculating ECLs. Under the simplified approach, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as loans and borrowings.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, amounts due to the ultimate holding company and related parties and interest-bearing bank borrowings.

Subsequent measurement

The subsequent measurement of loans and borrowings is as follows:

Financial liabilities at amortised cost (loans and borrowings)

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost, using the effective interest rate method unless the effect of discounting would be immaterial, in which case they are stated at cost. Gains and losses are recognised in the statement of profit or loss when the liabilities are derecognised as well as through the effective interest rate amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortisation is included in finance costs in the statement of profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Derecognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled, or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognised in the statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined on the first-in, first-out basis and, in the case of work in progress and finished goods, comprises direct materials, direct labour and an appropriate proportion of overheads. Net realisable value is based on estimated selling prices less any estimated costs to be incurred to completion and disposal.

Cash and cash equivalents

For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash on hand and demand deposits, and short term highly liquid investments that are readily convertible into known amounts of cash, are subject to an insignificant risk of changes in value, and have a short maturity of generally within three months when acquired, less bank overdrafts which are repayable on demand and form an integral part of the Group's cash management.

For the purpose of the consolidated statement of financial position, cash and cash equivalents comprise cash on hand and at banks, including term deposits, and assets similar in nature to cash, which are not restricted as to use.

Provisions

A provision is recognised when a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation.

When the effect of discounting is material, the amount recognised for a provision is the present value at the end of the reporting period of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in finance costs in the statement of profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Income tax

Income tax comprises current and deferred tax. Income tax relating to items recognised outside profit or loss is recognised outside profit or loss, either in other comprehensive income or directly in equity.

Current tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period, taking into consideration interpretations and practices prevailing in the countries in which the Group operates.

Deferred tax is provided, using the liability method, on all temporary differences at the end of the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- where the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and

- in respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, and the carryforward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, the carryforward of unused tax credits and unused tax losses can be utilised, except:

- when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and

- in respect of deductible temporary differences associated with investments in subsidiaries, deferred tax assets are only recognised to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at the end of each reporting period and are recognised to the extent that it has become probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be recovered.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Income tax (continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the end of the reporting period.

Deferred tax assets and deferred tax liabilities are offset if and only if the Group has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Government grants

Government grants are recognised at their fair value where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. When the grant relates to an expense item, it is recognised as income on a systematic basis over the periods that the costs, which it is intended to compensate, are expensed.

Where the grant relates to an asset, the fair value is credited to a deferred income account and is released to the statement of profit or loss over the expected useful life of the relevant asset by equal annual instalments or deducted from the carrying amount of the asset and released to the statement of profit or loss by way of a reduced depreciation charge.

Revenue recognition

Revenue from contracts with customers

Revenue from contracts with customers is recognised when control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

When the consideration in a contract includes a variable amount, the amount of consideration is estimated to which the Group will be entitled in exchange for transferring the goods or services to the customer. The variable consideration is estimated at contract inception and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognised will not occur when the associated uncertainty with the variable consideration is subsequently resolved.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

When the contract contains a financing component which provides the customer with a significant benefit of financing the transfer of goods or services to the customer for more than one year, revenue is measured at the present value of the amount receivable, discounted using the discount rate that would be reflected in a separate financing transaction between the Group and the customer at contract inception. When the contract contains a financing component which provides the Group with a significant financial benefit for more than one year, revenue recognised under the contract includes the interest expense accreted on the contract liability under the effective interest method. For a contract where the period between the payment by the customer and the transfer of the promised goods or services is one year or less, the transaction price is not adjusted for the effects of a significant financing component, using the practical expedient in HKFRS 15.

(a) License and collaboration revenue

The Group enters into a license and collaboration agreement for research, development, manufacturing and commercialization services with one customer. The terms of these arrangements typically include: non-refundable upfront fees, milestone payments for development and regulatory application and royalties on net sales of licensed products. Milestone payment is a form of variable consideration which is included in the transaction price to the extent that it is highly probable that a significant reversal of accumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. The contracts generally do not include a significant financing component.

As part of the accounting for this arrangement, the Group must use significant judgement to determine: (a) the performance obligations; and (b) the method to estimate variable consideration.

At contract inception, the Group assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct.

The Group uses judgement to determine whether milestones or other variable consideration, except for royalties, should be included in the transaction price. The transaction price is allocated to each performance obligation on a relative stand-alone selling price basis, for which the Group recognizes revenue as or when the performance obligations under the contract are satisfied. If a milestone or other variable consideration relates specifically to the Group's efforts to satisfy a single performance obligation or to a specific outcome from satisfying the performance obligation, the Group generally allocates that milestone amount entirely to that performance obligation once it is probable that a significant revenue reversal would not occur.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

(a) License and collaboration revenue (continued)

The Group recognizes revenue only when it satisfies a performance obligation by transferring control of the promised goods or services. The transfer of control can occur over time or at a point in time. A performance obligation is satisfied over time if it meets one of the following criteria.

- The counterparty simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs.
- The Group's performance creates or enhances an asset that the counterparty controls as the asset is created or enhanced.
- The Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

The portion of the transaction price that is allocated to performance obligations satisfied at a point in time is recognized as revenue when control of the goods or services is transferred to the counterparty. If the performance obligation is satisfied over time, the portion of the transaction price allocated to that performance obligation is recognized as revenue as the performance obligation is satisfied. The Group adopts an appropriate method of measuring progress for the purpose of recognizing revenue. The Group evaluates the measure of progress at the end of each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

Upfront fees

Upfront payment is allocated to the performance obligations based on the Group's best estimate of their relative stand-alone selling prices.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

(a) License and collaboration revenue (continued)

Milestone payments

At the inception of each arrangement that includes milestone payments, the Group evaluates whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Group, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The Group evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgement involved in determining whether it is probable that a significant reversal of cumulative revenue would not occur. At the end of each subsequent reporting period, the Group re-evaluates the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. The milestone payments were allocated to the performance obligations based on the Group's best estimate of their relative stand-alone selling prices, unless the criteria under IFRS15.85 are met where the milestone payments are allocated entirely to the performance obligations to which the milestone payments are specifically related.

Licenses of intellectual property

In assessing whether a license is distinct from the other promises, the Group considers factors such as the research, development, manufacturing and commercialisation capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, the Group considers whether the counterparty can benefit from a license for its intended purpose without the receipt of the remaining promise(s) by considering whether the value of the license is dependent on the unsatisfied promise(s), whether there are other vendors that could provide the remaining promise(s), and whether it is separately identifiable from the remaining promise(s). The Group evaluates the nature of a promise to grant a license in order to determine whether the promise is satisfied over time or at a point in time. The Group has evaluated that the licenses are separate performance obligations which represent a right to use the Group's license as it exists at the point in time that the license is granted. Revenue from licenses is recognised when the control of the right to use of the license is transferred to the customer.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue recognition (continued)

Revenue from contracts with customers (continued)

(a) License and collaboration revenue (continued)

Steering committee services

In assessing whether the preparation and participation in a Joint Steering Committee which leads to the commercialisation of new drug ("**JSC service**") is a promised service in the arrangement, the Group has concluded that the services are capable of being distinct from the intellectual property licenses and distinct within the context of the contract based on a careful evaluation of the specific facts and circumstances. The performance obligation is satisfied over time as services are rendered. Revenue from JSC service is recognised on straight-line basis over the period when the JSC service is provided.

(b) Rendering of services

The Group renders research and development services to customers by delivering research reports. Revenue is recognised at the point in time when the research report is delivered and accepted by the customers.

(c) Sale of goods

Revenue from the sale of goods is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods.

Revenue from other sources

Rental income is recognised on a time proportion basis over the lease terms.

Other income

Interest income is recognised on an accrual basis using the effective interest method by applying the rate that exactly discounts the estimated future cash receipts over the expected life of the financial instrument or a shorter period, when appropriate, to the net carrying amount of the financial asset.

Dividend income is recognised when the shareholders' right to receive payment has been established, it is probable that the economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Contract assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Group performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognised for the earned consideration that is conditional. Contract assets are subject to impairment assessment, details of which are included in the accounting policies for impairment of financial assets.

Contract liabilities

A contract liability is recognised when a payment is received or a payment is due (whichever is earlier) from a customer before the Group transfers the related goods or services. Contract liabilities are recognised as revenue when the Group performs under the contract (i.e., transfers control of the related goods or services to the customer).

Share-based payments

The Company operates a share option scheme and a restricted stock units scheme for the purpose of providing incentives and rewards to eligible participants who contribute to the success of the Group's operations. Employees (including directors) of the Group receive remuneration in the form of share-based payments, whereby employees render services as consideration for equity instruments ("**equity-settled transactions**").

The cost of equity-settled transactions with employees is measured by reference to the fair value at the date at which they are granted. The fair value is determined by an external valuer using a binomial model, further details of which are given in note 32 and note 33 to the financial statements.

The cost of equity-settled transactions is recognised, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled in employee benefit expense. The cumulative expense recognised for equity-settled transactions at the end of each reporting period until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The charge or credit to the statement of profit or loss for a period represents the movement in the cumulative expense recognised as at the beginning and end of that period.

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of the Group's best estimate of the number of equity instruments that will ultimately vest. Market performance conditions are reflected within the grant date fair value. Any other conditions attached to an award, but without an associated service requirement, are considered to be non-vesting conditions. Non-vesting conditions are reflected in the fair value of an award and lead to an immediate expensing of an award unless there are also service and/or performance conditions.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Share-based payments (continued)

For awards that do not ultimately vest because non-market performance and/or service conditions have not been met, no expense is recognised. Where awards include a market or non-vesting condition, the transactions are treated as vesting irrespective of whether the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

Where the terms of an equity-settled award are modified, as a minimum an expense is recognised as if the terms had not been modified, if the original terms of the award are met. In addition, an expense is recognised for any modification that increases the total fair value of the share-based payments, or is otherwise beneficial to the employee as measured at the date of modification.

Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognised for the award is recognised immediately. This includes any award where non-vesting conditions within the control of either the Group or the employee are not met. However, if a new award is substituted for the cancelled award, and is designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of earnings per share.

Other employee benefits

Pension schemes

The Group participates in the national pension schemes as defined by the laws of the countries in which it has operations.

The employees of the Group's subsidiaries which operate in Mainland China are required to participate in a central pension scheme operated by the local municipal government. These subsidiaries are required to contribute 20% of their payroll costs to the central pension scheme. The contributions are charged to the statement of profit or loss as they become payable in accordance with the rules of the central pension scheme.

The non-PRC employees are covered by other defined contribution pension plans sponsored by the respective local governments.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, i.e., assets that necessarily take a substantial period of time to get ready for their intended use or sale, are capitalised as part of the cost of those assets. The capitalisation of such borrowing costs ceases when the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs capitalised. All other borrowing costs are expensed in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Dividends

Final dividends are recognised as a liability when they are approved by the shareholders in a general meeting. Proposed final dividends are disclosed in the notes to the financial statements.

Interim dividends are simultaneously proposed and declared, because the Company's memorandum and articles of association grant the directors the authority to declare interim dividends. Consequently, interim dividends are recognised immediately as a liability when they are proposed and declared.

Foreign currencies

These financial statements are presented in United States dollars, which is the Company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. Foreign currency transactions recorded by the entities in the Group are initially recorded using their respective functional currency rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency rates of exchange ruling at the end of the reporting period. Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss with the exception of monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation. These are recognised in other comprehensive income until the net investment is disposed of, at which time the cumulative amount is reclassified to the statement of profit or loss. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in other comprehensive income.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Foreign currencies (continued)

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. The gain or loss arising on translation of a non-monetary item measured at fair value is treated in line with the recognition of the gain or loss on change in fair value of the item (i.e., translation difference on the item whose fair value gain or loss is recognised in other comprehensive income or profit or loss is also recognised in other comprehensive income or profit or loss, respectively).

In determining the exchange rate on initial recognition of the related asset, expense or income on the derecognition of a non-monetary asset or non-monetary liability relating to an advance consideration, the date of initial transaction is the date on which the Group initially recognises the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of the advance consideration.

The functional currencies of certain subsidiaries established in the PRC, Japan and Europe are currencies other than the United States dollar. As at the end of the reporting period, the assets and liabilities of these entities are translated into United States dollars at the exchange rates prevailing at the end of the reporting period and their statements of profit or loss are translated into United States dollars at the weighted average exchange rates for the year.

The resulting exchange differences are recognised in other comprehensive income and accumulated in the exchange fluctuation reserve. On disposal of a foreign operation, the component of other comprehensive income relating to that particular foreign operation is recognised in the statement of profit or loss.

For the purpose of the consolidated statements of cash flows, the cash flows of the subsidiaries established in the PRC, Japan and Europe are translated into United States dollars at the exchange rates ruling at the dates of the cash flows. Frequently recurring cash flows of the companies established in the PRC, Japan and Europe which arise throughout the year are translated into United States dollars at the weighted average exchange rates for the year.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

The preparation of the Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and their accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that could require a material adjustment to the carrying amounts of the assets or liabilities affected in the future.

Judgement

In the process of applying the Group's accounting policies, management has made the following judgement, apart from those involving estimations, which has the most significant effect on the amounts recognised in the financial statements:

Revenue from contracts with customers

The Group has applied the following judgements that significantly affect the determination of the performance obligations and the method to estimate variable consideration of revenue from contracts with customers:

(i) Determining the performance of obligations of the contract

The Group identifies the performance obligations within the agreement and evaluates which performance obligations are distinct, which requires the use of judgement.

The Group has determined that both the license and JSC service are each capable of being distinct. In assessing whether an item has standalone value, the Group considers factors such as the research, manufacturing, and commercialisation capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace, which indicates that the customer can benefit from both license and service on their own. The Group also determined that the promises to transfer the license and to provide JSC service are distinct within the context of the contract. The license is separately identifiable in the contract and will be granted at contract inception. The license is not an input that will be integrated with the service which represents a combined output. The preparation and attendance of the various steering committees is to assist in conducting clinical trials and obtaining regulatory approval of the technology, but does not modify the technology itself. In addition, the license and JSC service are not highly interdependent or highly interrelated, because the delivery of the license is not dependent on the service to be provided in the future, accordingly, it is not interdependent or interrelated with the service. Consequently, the Group has allocated a portion of the transaction price to license and JSC service based on relative standalone selling prices.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Judgement (continued)

Revenue from contracts with customers (continued)

(ii) Determining the method to estimate variable consideration

Certain contract includes milestone payments that give rise to variable consideration. In estimating the variable consideration, the Group is required to use either the expected value method or the most likely amount method based on which method better predicts the amount of consideration to which it will be entitled. The Group has determined that the most likely amount method is the appropriate method to use in estimating the variable consideration for the milestone payments as this method better predicts the amount of variable consideration to which the Group will be entitled.

Before including any amount of variable consideration in the transaction price, the Group considers whether the amount of variable consideration is constrained. The Group evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment.

Estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

Impairment of goodwill

The Group determines whether goodwill is impaired at least on an annual basis. This requires an estimation of the value in use of the cash-generating units to which the goodwill is allocated. Estimating the value in use requires the Group to make an estimate of the expected future cash flows from the cash-generating units and also to choose a suitable discount rate in order to calculate the present value of those cash flows. The carrying amount of goodwill at 31 December 2019 was US$15,245,000 (2018: US$15,287,000).

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Estimation uncertainty (continued)

Provision for expected credit losses on trade receivables

The Group uses a provision matrix to calculate ECLs for trade receivables. The provision rates are based on days past due for groupings of various customer segments that have similar loss patterns (i.e., by geography, product type, customer type and rating, and coverage by letters of credit and other forms of credit insurance).

The provision matrix is initially based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., gross domestic products) are expected to deteriorate over the next year which can lead to an increased number of defaults in the life science sector, the historical default rates are adjusted. At each reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

The assessment of the correlation among historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions may also not be representative of a customer's actual default in the future. The information about the ECLs on the Group's trade receivables is disclosed in note 22 to the financial statements.

Leases – Estimating the incremental borrowing rate

In calculating the present value of lease payments, the Group uses its incremental borrowing rate ("**IBR**") because the interest rate implicit in the lease is not readily determinable. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Group "would have to pay", which requires estimation when no observable rates are available (such as for subsidiaries that do not enter into financing transactions) or when it needs to be adjusted to reflect the terms and conditions of the lease (for example, when leases are not in the subsidiary's functional currency). The Group estimates the IBR using observable inputs (such as market interest rates) when available and is required to make certain entity-specific estimates (such as the subsidiary's stand-alone credit rating).

Deferred tax assets

Deferred tax assets are recognised for unused tax losses and deductible temporary differences to the extent that it is probable that taxable profit will be available against which the losses and deductible temporary differences can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of future taxable profits together with future tax planning strategies. The outcome of their actual utilisation may be different. The carrying value of deferred tax assets relating to recognised deductible temporary differences at 31 December 2019 was US$5,701,000 (2018: US$11,842,000). The amount of unrecognised tax losses at 31 December 2019 was US$191,347,000 (2018: US$9,661,000). Further details are contained in note 30 to the financial statements.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Estimation uncertainty (continued)

Net realisable value of inventories

Net realisable value of inventories is the estimated selling price in the ordinary course of business less estimated selling expenses. These estimates are based on the current market condition and the historical experience of selling products of similar nature. It could change significantly as a result of changes in market conditions. Management reassesses these estimates at each reporting date. At 31 December 2019, the net carrying value of inventories was US$19,855,000 (2018: US$12,429,000).

Share-based compensation

The fair value of most share options granted by the Group is estimated using the binomial model. The use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Management estimates expected volatility based on the historical volatility of the stock of comparable companies. Expiration date is the basis for determining the expected life of an option. The risk-free interest rate is based on treasury yield curve rates with a remaining term which approximates to the expected life assumed at the date of grant. Changes in these input variables would affect the amount of expense associated with share-based compensation. The compensation expense recognised for all share-based awards is net of estimated forfeitures. The Company estimates forfeiture rates based on historical analysis of option forfeitures. If actual forfeitures vary from estimated forfeitures, adjustments to compensation expense may be required. For the year ended 31 December 2019, the equity-settled share option expense was US$10,782,000 (2018: US$8,852,000).

4. OPERATING SEGMENT INFORMATION

For management purposes, the Group is organised into business units based on their products and services and has four reportable operating segments as follows:

(a) The life science services and products segment provides comprehensive research services in five key categories, namely, gene synthesis and molecular cloning, oligonucleotide synthesis, protein production, peptide synthesis, and antibody development. These services and associated products are widely used and are fundamental to life sciences research and application, such as basic biology studies, disease and pharmaceutical research, drug discovery, agriculture, environmental studies, and the food industry. Under the life sciences research catalog products sub-segment, it provides pre-packaged, ready-to-use, and off-the-shelf products. Under the preclinical drug development services sub-segment, it provides integrated contract research services in the key category, namely, protein engineering;

(b) The biologics development services segment provides comprehensive services in five key categories, namely, antibody drug discovery, antibody drug pre-clinical development, antibody drug clinical development, plasmid and virus pre-clinical development, and plasmid & virus clinical development. These services and associated products are aimed to help biopharmaceutical and biotech companies accelerate the development of therapeutic antibodies, and gene/cell therapy products with an integrated platform from the beginning of drug discovery stage down to pre-clinical development stage and clinical development stage;

(c) The industrial synthetic biology products segment comprises the construction of non-pathogenic microbial strains and industrial enzyme development and production;

(d) The cell therapy was initially generated from the Company's proprietary antibody development platform. It discovers and develops the innovative therapies for the treatment of liquid tumor through optimised CAR structures and the development of bispecific CAR-T therapies.

Management monitors the results of the Group's operating segments separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on reportable segment profit or loss, which is a measure of segment revenue less segment cost of sales.

No analysis of the Group's assets and liabilities by operating segments is disclosed as it is not regularly provided to the chief operating decision maker for review.

4. OPERATING SEGMENT INFORMATION (continued)

Year ended 31 December 2019	Life science services and products US$'000	Biologics development services US$'000	Industrial synthetic biology products US$'000	Cell therapy US$'000	Total US$'000
Segment revenue (Note 5)					
External customers	170,399	22,450	23,106	57,399	273,354
Segment cost of sales					
External customers	59,821	15,468	17,775	–	93,064
Segment results	110,578	6,982	5,331	57,399	180,290
Other income and gains					21,185
Selling and distribution expenses					(70,358)
Administrative expenses					(55,256)
Impairment losses on financial assets, net					(1,851)
Research and development expenses					(186,022)
Other expenses					(589)
Finance costs					(781)
Share of losses of associates					(308)
Loss before tax					(113,690)

Year ended 31 December 2018	Life science services and products US$'000	Biologics development services US$'000	Industrial synthetic biology products US$'000	Cell therapy US$'000	Total US$'000
Segment revenue (Note 5)					
External customers	141,026	20,655	17,730	51,606	231,017
Segment cost of sales					
External customers	45,437	11,826	15,215	–	72,478
Segment results	95,589	8,829	2,515	51,606	158,539
Other income and gains					18,941
Selling and distribution expenses					(38,771)
Administrative expenses					(40,582)
Impairment losses on financial assets,net					(977)
Research and development expenses					(74,076)
Other expenses					(121)
Finance costs					(52)
Share of losses of associates					(201)
Profit before tax					22,700

4. OPERATING SEGMENT INFORMATION (continued)

Geographic information

(a) Revenue from external customers

	2019 US$'000	2018 US$'000
North America	**168,871**	132,681
Europe	**26,646**	18,456
China	**55,474**	48,001
Asia Pacific (excluding China and Japan)	**16,029**	12,916
Japan	**4,770**	4,437
Others	**1,564**	14,526
Total	**273,354**	231,017

The revenue information above is based on the locations of the customers.

(b) Non-current assets

	2019 US$'000	2018 US$'000
China	**208,994**	142,435
Other countries	**120,670**	83,236
Total	**329,664**	225,671

The non-current asset information above is based on the locations of assets and excludes deferred tax assets.

Information about a major customer

Revenue of approximately US$57,261,000 (2018: US$51,606,000) was derived from sales by the cell therapy segment to a single customer.

5. REVENUE, OTHER INCOME AND GAINS

An analysis of revenue is as follows:

	2019 US$'000	2018 US$'000
Revenue from contracts with customers	**272,977**	231,017
Revenue from other sources		
Gross rental income from operating leases	**377**	–
	273,354	231,017

Revenue from contracts with customers

Disaggregated revenue information

For the year ended 31 December 2019

Segment	Life science services and products US$'000	Biologics development services US$'000	Industrial synthetic biology products US$'000	Cell therapy US$'000	Total US$'000
Type of goods or services					
Rendering of services	**154,626**	**22,450**	**90**	**–**	**177,166**
Sale of products	**15,534**	**–**	**23,016**	**–**	**38,550**
License and collaboration revenue	**–**	**–**	**–**	**57,261**	**57,261**
Total revenue from contracts with customers	**170,160**	**22,450**	**23,106**	**57,261**	**272,977**
Timing of revenue recognition					
Goods transferred at a point in time	**15,534**	**–**	**23,016**	**–**	**38,550**
Services transferred at a point in time	**154,626**	**22,450**	**90**	**–**	**177,166**
Licenses transferred at a point in time	**–**	**–**	**–**	**4,523**	**4,523**
Services transferred over time	**–**	**–**	**–**	**52,738**	**52,738**
Total revenue from contracts with customers	**170,160**	**22,450**	**23,106**	**57,261**	**272,977**

5. REVENUE, OTHER INCOME AND GAINS (continued)

Revenue from contracts with customers (continued)

Disaggregated revenue information (continued)

The following table shows the amounts of revenue recognised in the current reporting period that were included in the contract liabilities at the beginning of the reporting period and recognised from performance obligations satisfied in previous periods:

	2019	2018
	US$'000	US$'000
Revenue recognised that was included in contract liabilities at the beginning of the reporting period:		
License and collaboration revenue	**41,018**	28,685
Revenue recognised from performance obligation satisfied in previous periods:		
License and collaboration revenue	**10,857**	–

The transaction prices allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) as at 31 December 2019 are as follows:

	2019
	US$'000
Within one year	**60,130**
More than one year	**277,827**
	337,957

The amounts of transaction prices allocated to the remaining performance obligations which are expected to be recognized as revenue relate to collaboration revenue, of which the performance obligations for service are to be satisfied over the collaboration period, which are estimated to be 9 years. The amounts disclosed above do not include variable consideration which is constrained.

	2019	2018
	US$'000	US$'000
Other income and gains		
Foreign currency exchange gain, net	**3,623**	3,959
Government grants	**7,966**	3,598
Bank interest income	**8,350**	10,004
Fair value gains on financial assets at fair value change through profit or loss	**1,041**	1,295
Others	**205**	85
	21,185	18,941

6. (LOSS)/PROFIT BEFORE TAX

The Group's (loss)/profit before tax is arrived at after charging/(crediting):

	Notes	2019 US$'000	2018 US$'000
Cost of inventories sold		**14,689**	6,726
Cost of services provided		**68,017**	36,148
Depreciation of property, plant and equipment	13	**17,361**	11,122
Depreciation of investment properties	14	**102**	–
Depreciation of right-of-use assets (2018: amortisation of land lease payments)	15(a)(b)	**1,376**	230
Amortisation of other intangible assets	17	**1,803**	1,582
Impairment of financial assets, net:			
Impairment of trade receivables	22	**1,851**	968
Impairment of financial assets included in prepayments, other receivables and other assets	23	**–**	9
Minimum lease payments under operating leases		**–**	1,655
Lease payments not included in the measurement of lease liabilities	15(d)	**914**	–
Auditors' remuneration		**520**	505
Employee benefit expense (excluding directors' remuneration):			
Wages and salaries		**130,457**	75,160
Pension scheme contributions (defined contribution schemes)		**10,784**	8,912
Equity-settled share option expense		**10,452**	8,652
		151,693	92,724
Research and development costs		**134,144**	57,821
Foreign currency exchange gain		**(3,623)**	(3,959)
Loss on disposal of items of property, plant and equipment		**153**	18
Write-down of inventories to net realisable value	21	**992**	388

7. FINANCE COSTS

	2019 US$'000	2018 US$'000
Interest on bank loans	**469**	52
Interest on lease liabilities	**312**	–
	781	52

8. DIRECTORS' REMUNERATION

Directors' remuneration for the year, disclosed pursuant to the Listing Rules, section 383(1)(a), (b), (c) and (f) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of Information about Benefits of Directors) Regulation, is as follows:

	2019	2018
	US$'000	US$'000
Fee	**155**	127
Other emoluments:		
Salaries, allowances and benefits in kind	**1,006**	877
Performance related bonuses	**282**	31
Equity-settled share option expense	**330**	200
Pension scheme contributions	**10**	14
	1,628	1,122
	1,783	1,249

(a) Independent non-executive directors

The fees paid to independent non-executive directors during the year were as follows:

	2019	2018
	US$'000	US$'000
Mr. Guo Hongxin	**31**	31
Mr. Dai Zumian	**31**	31
Mr. Pan Jiu'an	**31**	3
Ms. Zhang Min[1]	**–**	28
	93	93

1 Ms. Zhang Min has retired from 26 November 2018.

The equity-settled share option expense of independent non-executive directors during the year was as follows:

	2019	2018
	US$'000	US$'000
Mr. Guo Hongxin	**106**	59
Mr. Dai Zumian	**106**	59
	212	118

There were no other emoluments payable to the independent non-executive directors during the year (2018: Nil).

8. DIRECTORS' REMUNERATION (continued)

(b) Executive directors and non-executive directors

	Fees	Salaries, allowances and benefits in kind*	Performance related bonuses	Equity-settled share option expense	Pension scheme contributions	Total remuneration
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
2019						
Executive directors:						
Mr. Zhang Fangliang	–	367	116	–	5	488
Ms. Wang Ye	–	467	134	–	–	601
Mr. Meng Jiange	–	172	32	12	5	221
	–	1,006	282	12	10	1,310
Non-executive directors:						
Mr. Pan Yuexin	31	–	–	106	–	137
Ms. Wang Jiafen	31	–	–	–	–	31
	62	–	–	106	–	168
2018						
Executive directors:						
Mr. Zhang Fangliang	–	313	–	–	7	320
Ms. Wang Ye	–	429	–	–	–	429
Mr. Meng Jiange	–	135	31	23	7	196
	–	877	31	23	14	945
Non-executive directors:						
Mr. Pan Yuexin	31	–	–	59	–	90
Ms. Wang Jiafen	3	–	–	–	–	3
	34	–	–	59	–	93

* The benefits in kind include contributions made for directors' U.S. social security and medical insurance paid by the Group.

There was no arrangement under which a director waived or agreed to waive any remuneration during the year.

9. FIVE HIGHEST PAID EMPLOYEES

The five highest paid employees during the year included one director (2018: two directors), details of whose remuneration are set out in note 8 above, and one chief executive (2018: Nil). Details of the remuneration for the year of the remaining three (2018: three) highest paid employees who are neither a director nor chief executive of the Company are as follows:

	2019	2018
	US$'000	US$'000
Salaries, allowances and benefits in kind	**1,197**	917
Performance related bonuses	**903**	480
Equity-settled share option expense	**68**	297
Pension scheme contributions	**–**	48
	2,168	1,742

The number of the non-director and non-chief executive highest paid employees whose remuneration fell within the following bands is as follows:

	Number of employees	
	2019	2018
HK$2,000,001 to HK$3,000,000	**–**	1
HK$3,000,001 to HK$4,000,000	**–**	1
HK$4,000,001 to HK$5,000,000	**1**	–
HK$5,000,001 to HK$6,000,000	**1**	1
HK$6,000,001 to HK$7,000,000	**1**	–
	3	3

10. INCOME TAX

Pursuant to the rules and regulations of the Cayman Islands and the British Virgin Islands, the Group is not subject to any income tax in the Cayman Islands and the British Virgin Islands both in 2018 and 2019.

Hong Kong profits tax has been provided at the rate of 16.5% (2018: 16.5%) on the estimated assessable profits arising in Hong Kong during the year.

The subsidiaries of the Group operating in the United States of America were subject to federal tax at a rate of 21% (2018:21%) and state tax at a rate of 11.5% (2018: 9%) in New Jersey and 0% (2018: 0%) in the State of Washington during the year.

The subsidiary of the Group operating in Ireland was subject to income tax at the rate of 12.5% (2018: 12.5%) on the estimated assessable profits arising in Ireland during the year.

The subsidiary of the Group operating in Japan was subject to income tax at rates ranging from 22% to 31.5% (2018: 22%-31.5%) depending on its earnings during the year.

The subsidiary of the Group operating in the Netherlands was subject to income tax at the rate of 19% to 25% (2018: 20% to 25%) on the estimated assessable profits arising in the Netherlands during the year.

The provision for current income tax in Mainland China is based on the statutory rate of 25% (2018:25%) of the assessable profits of certain PRC subsidiaries of the Group as determined in accordance with the PRC Corporate Income Tax Law which was approved and became effective on 1 January 2008, except for certain subsidiaries of the Group in Mainland China which are granted tax concession and are taxed at preferential tax rates.

Jiangsu Jinsirui is qualified as an Advanced Technology Service Enterprise. It was subject to income tax at a preferential tax rate of 15% (2018: 15%) for the reporting period. Nanjing Bestzyme and Jinan Bestzyme are qualified as High and New Technology Enterprises. Both of them were subject to income tax at a preferential tax rate of 15% (2018: 15%) for the reporting period.

	2019	2018
	US$'000	US$'000
Current – Mainland China	**(253)**	961
Current – Elsewhere	**(3,617)**	5,318
Deferred	**7,696**	(4,338)
Total tax charge for the year	**3,826**	1,941

10. INCOME TAX (continued)

A reconciliation of the tax expense applicable to (loss)/profit before tax at the statutory rates for the countries (or jurisdictions) in which the Company and the majority of its subsidiaries are domiciled to the tax expense at the effective tax rates is as follows:

	2019	2018
	US$'000	US$'000
(Loss) /Profit before tax	**(113,690)**	22,700
At the PRC's statutory income tax rate of 25%	**(28,422)**	5,675
Effect of tax rate differences in other countries	**(1,953)**	(1,066)
Preferential income tax rates applicable to subsidiaries	**(905)**	(2,588)
Effect on opening deferred tax of increase in rates	**(124)**	–
Additional deductible allowance for research and development expenses	**(7,553)**	(4,770)
Effect of non-deductible expenses	**2,653**	2,402
Tax losses not recognised	**47,386**	2,218
Tax losses utilised from previous years	**–**	(15)
Prior year true up	**(4,634)**	294
Option income tax benefit	**(2,994)**	–
Others	**372**	(209)
Tax charge at the Group's effective rate	**3,826**	1,941

11. DIVIDENDS

	2019	2018
	US$'000	US$'000
Dividends on ordinary shares during the year	**–**	–

The Board has resolved not to declare any dividend for the year ended 31 December 2019 (For the year ended 31 December 2018: Nil)

12. (LOSS)/EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT

The calculation of the basic (loss)/earnings per share amount is based on the (loss)/profit for the year attributable to ordinary equity holders of the parent, and the weighted average number of ordinary shares of 1,853,927,485 (2018: 1,792,336,607) in issue during the year, as adjusted to reflect the rights issue during the year.

The calculation of the diluted (loss)/earnings per share amount is based on the (loss)/profit for the year attributable to ordinary equity holders of the parent. The weighted average number of ordinary shares used in the calculation is the number of ordinary shares in issue during the year, as used in the basic earnings per share calculation, and the weighted average number of ordinary shares assumed to have been issued at no consideration on the deemed exercise of all dilutive potential ordinary shares into ordinary shares.

The calculations of basic and diluted (loss)/earnings per share are based on:

	2019	2018
	US$'000	US$'000
(Loss)/Earnings		
(Loss)/Profit attributable to ordinary equity holders of the parent, used in the basic earnings per share calculation	**(96,912)**	21,216

	Number of shares	
	2019	2018
Shares		
Weighted average number of ordinary shares in issue during the period	**1,855,261,389**	1,792,336,607
Effect of shares repurchased	**(1,333,904)**	–
Weighted average number of ordinary shares in issue during the period used in the basic earnings per share calculation	**1,853,927,485**	1,792,336,607
Effect of dilution – weighted average number of ordinary shares:		
Share options	**37,078,404***	47,278,259
	1,891,005,889	1,839,614,866

* Because the diluted loss per share amount is decreased when taking share options into account, the share options had an anti-dilutive effect on the basic loss per share for the year and were ignored in the calculation of diluted loss per share. Therefore, the diluted loss per share amounts is based on the loss for the year of US$96,912,000, and the weighted average number of ordinary shares of 1,853,927,485 in issue during the year.

13. PROPERTY, PLANT AND EQUIPMENT

	Land and buildings US$'000	Machinery and equipment US$'000	Motor vehicles US$'000	Computer and office equipment US$'000	Construction in progress US$'000	Total US$'000
31 December 2019						
At 31 December 2018 and at 1 January 2019:						
Cost	76,514	62,540	583	7,842	46,072	193,551
Accumulated depreciation and impairment	(6,982)	(23,416)	(293)	(4,847)	–	(35,538)
Net carrying amount	69,532	39,124	290	2,995	46,072	158,013
At 1 January 2019, net of accumulated depreciation and impairment	69,532	39,124	290	2,995	46,072	158,013
Additions	13,576	168	37	358	91,938	106,077
Disposals	(26)	(481)	(1)	(9)	–	(517)
Depreciation provided during the year	(4,856)	(10,670)	(58)	(1,777)	–	(17,361)
Exchange realignment	(577)	(640)	(5)	(38)	(1,422)	(2,682)
Transfers to investment properties	(7,544)	–	–	–	–	(7,544)
Transfers	47,673	46,615	56	1,923	(96,267)	–
At 31 December 2019, net of accumulated depreciation and impairment	117,778	74,116	319	3,452	40,321	235,986
At 31 December 2019:						
Cost	129,433	106,953	654	9,961	40,321	287,322
Accumulated depreciation and impairment	(11,655)	(32,837)	(335)	(6,509)	–	(51,336)
Net carrying amount	117,778	74,116	319	3,452	40,321	235,986

Assets with a net book value US$4,105,000 were pledged as security for interest-bearing bank loans as set out in NOTE 27 (2018: US$11,623,000).

13. PROPERTY, PLANT AND EQUIPMENT (continued)

	Land and buildings US$'000	Machinery and equipment US$'000	Motor vehicles US$'000	Computer and office equipment US$'000	Construction in progress US$'000	Total US$'000
31 December 2018						
At 31 December 2017 and at 1 January 2018:						
Cost	34,525	37,602	568	5,782	28,720	107,197
Accumulated depreciation and impairment	(4,783)	(18,097)	(251)	(3,558)	–	(26,689)
Net carrying amount	29,742	19,505	317	2,224	28,720	80,508
At 1 January 2018, net of accumulated depreciation and impairment	29,742	19,505	317	2,224	28,720	80,508
Acquisition of subsidiaries	–	–	–	43	–	43
Additions	29,820	89	–	135	60,830	90,874
Disposals	–	(17)	–	(1)	–	(18)
Depreciation provided during the year	(2,576)	(7,096)	(57)	(1,393)	–	(11,122)
Exchange realignment	(1,388)	(766)	(13)	(81)	(24)	(2,272)
Transfers	13,934	27,409	43	2,068	(43,454)	–
At 31 December 2018, net of accumulated depreciation and impairment	69,532	39,124	290	2,995	46,072	158,013
At 31 December 2018:						
Cost	76,514	62,540	583	7,842	46,072	193,551
Accumulated depreciation and impairment	(6,982)	(23,416)	(293)	(4,847)	–	(35,538)
Net carrying amount	69,532	39,124	290	2,995	46,072	158,013

14. INVESTMENT PROPERTIES

	2019 US$'000	2018 US$'000
Carrying amount at 1 January	–	–
Transfer from owner-occupied property (Note 13)	7,544	–
Depreciation provided during the year	(102)	–
Carrying amount at 31 December	7,442	–

Investment properties are located in Japan with the use periods of 22 years.

As at 31 December 2019, investment properties with a carrying amount of approximately US$7,442,000 (2018: Nil) were pledged as collateral of the Group's bank borrowings (Note 27).

At 31 December 2019, the fair value of investment properties was estimated to be approximately US$11,779,000 (2018: Nil). The valuation was determined using the sales comparison approach. Sales prices of comparable properties in close proximity are adjusted for differences in key attributes such as property size. The most significant input into this valuation approach is price per square metre.

15. LEASES

The Group as a lessee

The Group has lease contracts for buildings and rooms. Leases of buildings and rooms generally have lease terms between 2 and 10 years. Other buildings and rooms generally have lease terms of 12 months or less and/or is individually of low value. Generally, the Group is restricted from assigning and subleasing the leased assets outside the Group.

(a) Prepaid land lease payments (before 1 January 2019)

	US$'000
Carrying amount at 1 January 2018	10,411
Additions	8,104
Recognised in profit or loss during the year	(230)
Exchange realignment	(479)
Carrying amount at 31 December 2018	17,806
Current portion included in prepayments, other receivables and other assets	(392)
Non-current portion at 31 December 2018	17,414

15. LEASES (continued)

The Group as a lessee (continued)

(b) Right-of-use assets

The carrying amounts of the Group's right-of-use assets and the movements during the year are as follows:

	Prepaid land lease payments US$'000	Buildings and rooms US$'000	Total US$'000
As at 1 January 2019	**17,806**	**5,822**	**23,628**
Additions	**6,824**	**855**	**7,679**
Depreciation charge	**(420)**	**(956)**	**(1,376)**
Exchange realignment	**(289)**	**–**	**(289)**
As at 31 December 2019	**23,921**	**5,721**	**29,642**

(c) Lease liabilities

Lease liabilities are as indicated below:

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term.

	2019 US$'000
Carrying amount at 1 January	**5,934**
New leases	**7,679**
Accretion of interest recognised during the year	**312**
Payments	**(8,548)**
Carrying amount at 31 December	**5,377**
Analysed into:	
Current portion	**1,769**
Non-current portion	**3,608**
	5,377

15. LEASES (continued)

The Group as a lessee (continued)

(d) The amounts recognised in profit or loss in relation to leases are as follows:

	2019 US$'000
Interest on lease liabilities	**312**
Depreciation charge of right-of-use assets	**1,376**
Expense relating to short-term leases and leases of low-value assets	**914**
Total amount recognized in profit or loss	**2,602**

The Group as a lessor

The Group leases its investment properties (note 14) consisting of one commercial property in Japan, right-of-use assets (note 15) consisting of car parking space in Ireland and land and buildings (note 13) consisting of one office in USA under operating lease arrangements. Rental income recognised by the Group during the year was US$377,000 (2018: Nil), details of which are included in note 5 to the financial statements.

At 31 December 2019, the undiscounted minimum lease payments receivable by the Group in future periods under non-cancellable operating leases with its tenants are as follows:

	2019 US$'000	2018 US$'000
Within one year	**322**	–
After one year but within two years	**116**	–
	438	–

16. GOODWILL

	2019 US$'000	2018 US$'000
Cost at 1 January	**15,287**	1,470
Acquisition of a subsidiary	**–**	13,888
Exchange realignment	**(42)**	(71)
Cost and net carrying amount at 31 December	**15,245**	15,287

Impairment testing of goodwill

Goodwill acquired through business combinations is allocated to the following cash-generating units for impairment testing:

Life science services and products cash-generating unit

The recoverable amount of the life-science services and products cash-generating unit has been determined based on a value in use calculation using cash flow projections based on financial budgets covering a five-to-ten-year period approved by senior management. The discount rate applied to the cash flow projections is 16% to 23%(Pushen:16%; CustomArray:23%).The growth rate used to extrapolate the cash flows of the life science services and products unit beyond the five-to-ten-year period is 0% to 3%(Pushen:3%; CustomArray:0%), which is the same as the long-term growth rate of the industry.

Industrial synthetic biology products cash-generating unit

The recoverable amount of the industrial synthetic biology products cash-generating unit has been determined based on a value in use calculation using cash flow projections based on financial budgets covering a five-year period approved by senior management. The discount rate applied to the cash flow projections is 16% (2018: 16%). The growth rate used to extrapolate the cash flows of the industrial products unit beyond the five-year period is 3% (2018: 3%), which is the same as the long-term growth rate of the industry.

Assumptions were used in the value in use calculation of the three cash-generating unit for 31 December 2019. The following describes each key assumption on which management has based its cash flow projections to undertake impairment testing of goodwill:

Budgeted gross margins – The basis used to determine the value assigned to the budgeted gross margins is the average gross margins achieved in the year immediately before the budget year, increased for expected efficiency improvements, and expected market development.

16. GOODWILL (continued)

Impairment testing of goodwill (continued)

Industrial synthetic biology products cash-generating unit (continued)

Discount rates – The discount rates used are before tax and reflect specific risks relating to the relevant unit.

The values assigned to the key assumptions on market development of industrial synthetic biology products and discount rates are consistent with external information sources.

The carrying amount of goodwill allocated to each of the cash-generating units is as follows:

	Life science services and products		Industrial synthetic biology products		Total	
	2019	2018	**2019**	2018	**2019**	2018
	US$'000	US$'000	**US$'000**	US$'000	**US$'000**	US$'000
Carrying amount of goodwill	**13,868**	13,888	**1,377**	1,399	**15,245**	15,287

17. OTHER INTANGIBLE ASSETS

	Software	Patents and licenses	Customer relationship	Total
	US$'000	US$'000	US$'000	US$'000
31 December 2019				
Cost at 1 January 2019, net of accumulated amortisation	**884**	**18,645**	**113**	**19,642**
Additions	**273**	**8,034**	**–**	**8,307**
Amortisation provided during the year	**(282)**	**(1,506)**	**(15)**	**(1,803)**
Exchange realignment	**(15)**	**(647)**	**(2)**	**(664)**
At 31 December 2019	**860**	**24,526**	**96**	**25,482**
At 31 December 2019:				
Cost	**2,172**	**27,703**	**148**	**30,023**
Accumulated amortisation	**(1,312)**	**(3,177)**	**(52)**	**(4,541)**
Net carrying amount	**860**	**24,526**	**96**	**25,482**
31 December 2018				
Cost at 1 January 2018, net of accumulated amortisation	968	1,364	135	2,467
Acquisition of subsidiaries	–	18,263	–	18,263
Additions	335	331	–	666
Amortisation provided during the year	(370)	(1,197)	(15)	(1,582)
Exchange realignment	(49)	(116)	(7)	(172)
At 31 December 2018	884	18,645	113	19,642
At 31 December 2018:				
Cost	1,927	20,114	151	22,192
Accumulated amortisation	(1,043)	(1,469)	(38)	(2,550)
Net carrying amount	884	18,645	113	19,642

18. INVESTMENTS IN ASSOCIATES

	2019	2018
	US$'000	US$'000
Share of net assets	**2,615**	2,924
Loans to an associate	**2,007**	–

The loans to an associate was unsecured, interest-bearing and repayable within one year. There was no recent history of default and past due amounts for loans to the associate. As at 31 December 2019, the loss allowance was assessed to be minimal.

The Group's trade receivables with the associates are disclosed in notes 22 and note 38 to the financial statements, respectively.

The following table illustrates the aggregate financial information of the Group's associates that are not individually material:

	2019	2018
	US$'000	US$'000
Share of the associates' loss for the year	**(308)**	(201)
Share of the associates' total comprehensive loss	**(308)**	(201)
Exchange realignment	**(1)**	–
Aggregate carrying amount of the Group's investments in the associates	**2,615**	2,924

19. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	2019	2018
	US$'000	US$'000
Financial assets at fair value through profit or loss		
Unlisted equity investments, at fair value	**4,667**	3,405
Investments in financial products, at fair value	**25,434**	70,056
	30,101	73,461

The above equity investments at 31 December 2019 and 2018 were classified as financial assets at fair value through profit or loss as they were held for trading.

The above investments in financial products at 31 December 2019 and 2018 were wealth management products issued by banks in China, Hong Kong. They were mandatorily classified as financial assets at fair value through profit or loss as their contractual cash flows are not solely payments of principal and interest.

20. EQUITY INVESTMENTS DESIGNATED AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	2019 US$'000	2018 US$'000
Equity investments designated at fair value through other comprehensive income		
Unlisted equity investments, at fair value	–	4,949

The above equity investments were irrevocably designated at fair value through other comprehensive income as the Group considers these investments to be strategic in nature.

21. INVENTORIES

	2019 US$'000	2018 US$'000
Raw materials	**5,128**	4,445
Work in progress	**6,629**	2,922
Finished goods	**10,634**	6,606
	22,391	13,973
Less: Provision for inventories	**(2,536)**	(1,544)
	19,855	12,429

Inventory provision of US$992,000 was recognised for the year ended 31 December 2019 (2018: US$388,000). Inventory provision has been included in "cost of sales" in the consolidated statement of profit or loss.

22. TRADE AND NOTES RECEIVABLES

	2019 US$'000	2018 US$'000
Trade receivables	**74,107**	67,999
Notes receivable	**3,396**	2,429
	77,503	70,428
Less: Impairment of trade receivables	**(4,436)**	(2,585)
	73,067	67,843

The Group's trading terms with its customers are mainly on credit. The credit period is 30 to 90 days. The Group seeks to maintain strict control over its outstanding receivables and overdue balances are reviewed regularly by management. In view of the aforementioned and the fact that the Group's trade receivables relate to a large number of diversified customers, there is no significant concentration of credit risk. Trade receivables are non-interest-bearing.

22. TRADE AND NOTES RECEIVABLES (continued)

Included in the Group's trade receivables are amounts due from the Group's associates of US$261,000 (2018: US$994,000), which are repayable on credit terms similar to those offered to the major customers of the Group.

An ageing analysis of the trade receivables as at the end of the year, based on the invoice date, is as follows:

	2019	2018
	US$'000	US$'000
Within 3 months	**68,034**	59,692
3 months to 6 months	**1,585**	2,829
6 months to 12 months	**2,145**	720
Over one year	**2,343**	4,758
	74,107	67,999

Movements in the loss allowance for impairment of trade receivables were as follows:

	Total
	US$'000
At 1 January 2019	**2,585**
Impairment losses recognised	**1,851**
At 31 December 2019	**4,436**
At 1 January 2018	1,611
Acquisition of subsidiaries	6
Impairment losses recognised	1,234
Impairment losses reversed	(262)
Amount written off as uncollectible	(4)
At 31 December 2018	2,585

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar loss patterns (i.e., by geographical region, product type, customer type and rating, and coverage by letters of credit or other forms of credit insurance). The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

22. TRADE AND NOTES RECEIVABLES (continued)

Set out below is the information about the credit risk exposure on the Group's trade receivables using a provision matrix:

	As at 31 December 2019		
	Gross carrying amount USD'000	**Expected loss rate**	**Expected credit loss USD'000**
Trade receivables aged:			
Less than 1 year	**71,764**	**3.33%**	**2,387**
Within 1 to 2 years	**685**	**64.96%**	**445**
Within 2 to 3 years	**400**	**86.50%**	**346**
Over 3 years	**1,258**	**100.00%**	**1,258**
	74,107		**4,436**

	As at 31 December 2018		
	Gross carrying amount USD'000	Expected loss rate	Expected credit loss USD'000
Trade receivables from clients with no credit risk	31,343	–	–
Other trade receivables aged:			
Less than 1 year	34,264	1.70%	582
Within 1 to 2 years	888	57.75%	513
Within 2 to 3 years	245	94.19%	231
Over 3 years	1,259	100%	1,259
	67,999		2,585

Trade receivables that were neither past due nor impaired relate to a large number of diversified customers for whom there was no recent history of default.

The notes receivable were due within six months. The notes receivable was not endorsed pledged as at 31 December 2019 (2018: Nil).

23. PREPAYMENTS, OTHER RECEIVABLES AND OTHER ASSETS

	2019 US$'000	2018 US$'000
VAT recoverable (i)	**9,175**	6,891
Prepayments	**8,199**	5,713
Prepaid income tax	**8,779**	–
Prepaid expense	**1,847**	1,048
Interest receivable	**1,730**	6,071
Other receivables	**1,704**	1,811
Advance to employees	**221**	389
	31,655	21,923
Less: Impairment of other receivables	**(34)**	(34)
	31,621	21,889

(i) The Group's domestic sales of goods and rendering of services are subject to PRC Value Added Tax ("**VAT**"). Input VAT on purchases can be deducted from output VAT payable. The VAT recoverable is mainly the net difference between output and deductible input VAT.

Movements in the provision for impairment of other receivables were as follows:

	Individually impaired US$'000
At 1 January 2019	**34**
Impairment losses recognised	**–**
At 31 December 2019	**34**
At 1 January 2018	25
Impairment losses recognised	9
At 31 December 2018	34

Expected credit losses are estimated by applying a loss rate approach with reference to the historical loss record of the Group. The loss rate is adjusted to reflect the current conditions and forecasts of future economic conditions, as appropriate.

24. CASH AND CASH EQUIVALENTS AND PLEDGED DEPOSITS

	Note	2019	2018
		US$'000	US$'000
Cash and bank balances		**252,397**	494,558
Time deposits		**148,693**	–
Pledged short-term deposits		**972**	12,688
		402,062	507,246
Less:			
Time deposits		**(148,693)**	–
Pledged for short-term bank loans	27	**–**	(11,004)
Pledged for credit cards		**(256)**	–
Pledged for bills payable		**(716)**	(1,684)
Cash and cash equivalents		**252,397**	494,558
Denominated in USD		**159,058**	474,372
Denominated in RMB		**88,154**	13,795
Denominated in HKD		**1,531**	1,962
Denominated in EUR		**1,406**	1,729
Denominated in JPY		**1,255**	1,412
Denominated in GBP		**631**	1,023
Denominated in CHF		**362**	265
Cash and cash equivalents		**252,397**	494,558

At the end of the year, the cash and bank balances of the Group denominated in Renminbi ("**RMB**") amounted to US$88,154,000 (2018: US$13,795,000). The RMB is not freely convertible into other currencies, however, under Mainland China's Foreign Exchange Control Regulations and Administration of Settlement, Sale and Payment of Foreign Exchange Regulations, the Group is permitted to exchange RMB for other currencies through banks authorised to conduct foreign exchange business.

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short-term deposits are pledged for bills payable and credit cards. The bank balances and pledged deposits are deposited with creditworthy banks with no recent history of default. The carrying amounts of the cash and cash equivalents approximate to their fair values.

25. TRADE AND BILLS PAYABLES

An ageing analysis of the trade payables as at the end of the year, based on the invoice date, is as follows:

	2019	2018
	US$'000	US$'000
Trade payables	**14,559**	9,547
Bills payable	**3,068**	1,640
	17,627	11,187

	2019	2018
	US$'000	US$'000
Within 3 months	**13,666**	9,364
3 months to 6 months	**678**	57
6 months to 12 months	**105**	56
Over 1 year	**110**	70
	14,559	9,547

The trade payables are non-interest-bearing and are normally settled on 60-90 day terms.

26. OTHER PAYABLES AND ACCRUALS

	2019	2018
	US$'000	US$'000
Accrued expenses	**64,740**	23,631
Payables for purchases of machinery and construction of buildings	**32,560**	22,817
Accrued payroll	**23,210**	12,852
Other payables	**3,327**	2,366
Taxes payable other than corporate income tax	**1,198**	536
Advances from customers	**–**	11,742
	125,035	73,944

27. INTEREST-BEARING BANK BORROWINGS

	Note	2019 Effective interest rate (%)	2019 Maturity	2019 US$'000	2018 Effective interest rate (%)	2018 Maturity	2018 US$'000
Current							
Bank loans – secured	(b)(i)(ii)	–	–	–	0.1	2019	9,919
Bank loans – unsecured	(a)(ii)	2.4-3.8	2020	16,456	6.6	2019	583
Current portion of long term term bank loans – secured	(b)(i)	0.32	2020	552	–	–	–
				17,008			10,502
Non-current							
Non-current portion of long term bank loans – secured	(b)(i)	0.32	2021-2024	1,748	–	–	–

	2019 US$'000	2018 US$'000
Analysed into:		
Bank loans repayable:		
Within one year or on demand	17,008	10,502
In the second year	552	–
In the third to fifth years, inclusive	1,196	–
	18,756	10,502

(a) The Group's overdraft facilities amounting to US$25,000,000 (2018: Nil), of which US$9,456,123 (2018: Nil) had been utilised as at the end of the reporting period.

(b) Certain of the Group's bank loans are secured by:

(i) Certain of the Group's bank loan is secured by the land and buildings of approximately US$11,547,000 (2018:US$11,623,000).

(ii) None of the Group's bank loans is secured by the pledge of certain of the Group's short-term deposits (2018: US$11,004,000).

28. CONTRACT LIABILITIES

	2019 US$'000	2018 US$'000
Non-current		
License and collaboration revenue	**277,827**	262,127
Current		
License and collaboration revenue	**46,294**	41,018
Rendering of services	**13,403**	–
Sales of products	**433**	–
	60,130	41,018
	337,957	303,145

The movements in contract liabilities during the year are as follows:

	US$'000
At 1 January 2018	207,222
Advance received/due for payment	147,500
Transferred to revenue	(51,577)
At 31 December 2018	303,145
At 1 January 2019	**303,145**
Advance received/due for payment	**99,053**
Transferred to revenue	**(57,261)**
Exchange realignment	**(6,980)**
At 31 December 2019	**337,957**

Contract liabilities include advances received/due for payment at the end of each year. Contract liabilities are recognized as revenue upon the Group satisfying its performance obligations under the agreement.

29. GOVERNMENT GRANTS

	2019 US$'000	2018 US$'000
At 1 January	**4,116**	2,977
Grants received during the year	**–**	1,594
Amount released	**(111)**	(320)
Exchange realignment	**(72)**	(135)
At 31 December	**3,933**	4,116
Current	**90**	98
Non-current	**3,843**	4,018
	3,933	4,116

The grants were related to the subsidies received from local government authorities for the purpose of compensation for the expenditure on certain facilities and were credited to a deferred income account. The grants were released to the statement of profit or loss over the expected useful lives of the relevant assets. The Group also received certain financial subsidies from local government authorities to support local business. There were no unfulfilled conditions and other contingencies attached to these government grants. These government grants were recognised in the statement of profit or loss upon receipt.

30. DEFERRED TAX

The movements in deferred tax liabilities and assets during the year are as follows:

Deferred tax liabilities

	Depreciation allowance in excess of related depreciation US$'000	**Fair value adjustments arising from acquisition of a subsidiary** US$'000	**Unrealised loss from intercompany transactions** US$'000	**Total** US$'000
At 1 January 2019	**46**	**4,017**	**–**	**4,063**
Deferred tax charged/(credited) to the statement of profit or loss during the year	**2,762**	**(267)**	**531**	**3,026**
Exchange realignment	**(31)**	**(3)**	**–**	**(34)**
Gross deferred tax liabilities at 31 December 2019	**2,777***	**3,747**	**531**	**7,055**
At 1 January 2018	48	342	–	390
Acquisition of a subsidiary	6	3,884	–	3,890
Deferred tax credited to the statement of profit or loss during the year	(8)	(196)	–	(204)
Exchange realignment	–	(13)	–	(13)
Gross deferred tax liabilities at 31 December 2018	46	4,017	–	4,063

30. DEFERRED TAX (continued)

Deferred tax assets

	Accrued expenses	Decelerated depreciation for tax purposes	Impairment of assets	Unrealised profit from intercompany transactions	Government grants	Losses available for offsetting against future taxable profits	Unrealised fair value of financial assets at fair value through profit or loss	Total
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
At 1 January 2019	**1,101**	**103**	**1,265**	**8,076**	**617**	**726**	**–**	**11,888**
Deferred tax (charged)/credited to the statement of profit or loss during the year	**97**	**(112)**	**17**	**(6,882)**	**359**	**1,842**	**9**	**(4,670)**
Exchange realignment	**(15)**	**9**	**(11)**	**–**	**(13)**	**(14)**	**–**	**(44)**
Gross deferred tax assets at 31 December 2019	**1,183**	**–**	**1,271**	**1,194**	**963**	**2,554**	**9**	**7,174**
At 1 January 2018	1,318	–	934	4,874	447	–	–	7,573
Acquisition of a subsidiary	–	–	1	–	–	267	–	268
Deferred tax (charged)/credited to the statement of profit or loss during the year	(184)	106	347	3,202	196	467	–	4,134
Exchange realignment	(33)	(3)	(17)	–	(26)	(8)	–	(87)
Gross deferred tax assets at 31 December 2018	1,101	103	1,265	8,076	617	726	–	11,888

* Deferred tax liabilities and deferred tax assets amounted to about US$1,473,000 were net off in subsidiaries' financial statements.

30. DEFERRED TAX (continued)

Deferred tax assets (continued)

For presentation purposes, certain deferred tax assets and liabilities have been offset in the statement of financial position. The following is an analysis of the deferred tax balances of the Group for financial reporting purposes:

	2019 US$'000	2018 US$'000
Net deferred tax liabilities recognised in the consolidated statement of financial position	**5,582**	4,017
Net deferred tax assets recognised in the consolidated statement of financial position	**5,701**	11,842

The Group has tax losses arising in Hong Kong of US$1,227,000 (2018: US$133,000) that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose.

The Group has tax losses arising in Mainland China of US$32,593,000 (2018: US$7,613,000) that will expire in one to five years and US$5,842,000 (2018: US$1,915,000) that will expire in ten years for offsetting against future taxable profits. Deferred tax assets have not been recognised in respect of these losses as they have arisen in subsidiaries that have been loss-making for some time and it is not considered probable that taxable profits will be available against which the tax losses can be utilised.

The Group has tax losses arising in the United States of US$113,393,000 (2018: Nil) that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose.

The Group has tax losses arising in Irelands of US$38,290,000 (2018: Nil) that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose.

The Group has tax losses arising in Netherlands of US$2,000 (2018: Nil) that are available indefinitely for offsetting against future taxable profits of the companies in which the losses arose.

30. DEFERRED TAX (continued)

Deferred tax assets (continued)

Deferred tax assets have not been recognised in respect of the following items:

	2019	2018
	US$'000	US$'000
Tax losses	**191,347**	9,661

Pursuant to the PRC Corporate Income Tax Law, a 10% withholding tax is levied on dividends declared to foreign investors from the foreign investment enterprises established in Mainland China. The requirement is effective from 1 January 2008 and applies to earnings after 31 December 2007. A lower withholding tax rate may be applied if there is a tax treaty between Mainland China and the jurisdiction of the foreign investors. For the Group, the applicable rate is 5%. The Group is therefore liable for withholding taxes on dividends distributed by those subsidiaries established in Mainland China in respect of earnings generated from 1 January 2008.

31. SHARE CAPITAL AND SHARE PREMIUM

Shares

	31 December 2019	31 December 2018
	US$'000	US$'000
Authorised:		
Ordinary shares of US$0.001 each	**5,000**	5,000
Issued and fully paid:		
Ordinary shares of US$0.001 each	**1,879**	1,836

31. SHARE CAPITAL AND SHARE PREMIUM (continued)

Shares (continued)

A summary of movements in the Company's share capital and share premium is as follows:

	Number of shares in issue	Share capital US$'000	Treasury shares US$'000	Share premium US$'000	Total US$'000
At 1 January 2018	1,733,606,187	1,734	–	120,770	122,504
Purchases of minority interests of the subsidiary	–	–	–	(297)	(297)
Acquisition of equity by minority shareholders	–	–	–	399	399
Issue of shares under the share placing option	75,000,000	75	–	251,218	251,293
Shares repurchased	(6,278,000)	(6)	–	(11,469)	(11,475)
Share options exercised	33,034,890	33	–	3,479	3,512
At 31 December 2018 and 1 January 2019	1,835,363,077	1,836	–	364,100	365,936
Purchases of minority interests of the subsidiary	**–**	**–**	**–**	**(1,588)**	**(1,588)**
Acquisition of equity by minority shareholders	**–**	**–**	**–**	**383**	**383**
Shares repurchased	**–**	**–**	**(7,774)**	**–**	**(7,774)**
Share options exercised	**43,013,573**	**43**	**–**	**5,886**	**5,929**
At 31 December 2019	**1,878,376,650**	**1,879**	**(7,774)**	**368,781**	**362,886**

32. SHARE OPTION SCHEME

a) The Company

In 2019, under the Company's Post-IPO share option scheme, the Company granted performance-based share options to certain employees, which are generally vested over a 5-year term. The performance goals are determinded by the board of directors. For those awards, evaluations are made as of each reporting period to assess the likelihood of performance criteria being met. Share-based compensation expenses are then adjusted to reflect the reversion of original estimates.

Share options do not confer rights on the holders to dividends or to vote at shareholders' meetings. The only condition for vesting is service condition.

	2019		2018	
	Weighted average exercise price US$ per share	**Number of options '000**	Weighted average exercise price US$ per share	Number of options '000
At 1 January	**0.3444**	**261,842**	0.1996	286,119
Granted during the year	**2.4010**	**10,400**	2.9960	12,600
Forfeited during the year	**1.6192**	**(1,810)**	0.4931	(3,842)
Exercised during the year	**0.0903**	**(43,014)**	0.0817	(33,035)
At 31 December	**0.4765**	**227,418**	0.3444	261,842

32. SHARE OPTION SCHEME (continued)

a) The Company (continued)

The exercise prices and exercise periods of the share options outstanding as at the end of the year are as follows:

31 December 2019 **Number of options** **'000**	Exercise price* US$ per share	Exercise period
194	0.0515	2013/08/10~2025/07/31
68,016	0.0617	2014/12/31~2025/07/31
46,776	0.0772	2010/12/31~2025/07/31
28,075	0.1029	2013/02/10~2025/07/31
8,316	0.1552	2016/06/22~2026/06/21
10,679	0.3102	2017/09/23~2026/09/22
24,002	0.4514	2019/04/25~2027/04/25
11,175	1.0672	2019/12/31~2027/10/10
8,385	1.1969	2019/12/31~2027/11/19
2,000	1.7948	2018/11/29~2023/11/28
4,515	2.3444	2020/07/19~2029/07/18
5,885	2.4444	2020/11/29~2029/11/28
9,400	3.3710	2019/01/01~2028/05/03
227,418		

32. SHARE OPTION SCHEME (continued)

a) The Company (continued)

31 December 2018 Number of options '000	Exercise price* US$ per share	Exercise period
1,232	0.0026	2008/05/12~2019/12/31
86	0.0046	2009/07/03~2019/07/31
91	0.0072	2008/09/26~2019/07/31
145	0.0139	2012/08/01~2019/07/31
389	0.0154	2013/12/31~2019/12/20
2,556	0.0257	2012/12/31~2019/12/31
194	0.0515	2013/08/10~2025/07/31
68,016	0.0617	2014/12/31~2025/07/31
67,787	0.0772	2010/12/31~2025/07/31
43,897	0.1029	2013/02/10~2025/07/31
8,436	0.1552	2016/06/22~2026/06/21
11,445	0.3102	2017/09/23~2026/09/22
25,158	0.4514	2019/04/25~2019/04/25
11,175	1.0672	2019/12/31~2027/10/10
8,635	1.1969	2019/12/31~2027/11/19
3,000	1.7948	2018/11/29~2023/11/28
9,600	3.3710	2019/01/01~2028/05/03
261,842		

* The exercise price of the share options is subject to adjustment in the case of rights or bonus issues, or other similar changes in the Company's share capital.

The fair value of the share options granted during the year was US$12,152,250 (US$1.168 each) (2018: US$17,362,853, US$1.378 each), of which the Group recognised a share option expense of US$8,955,000 (2018: US$8,148,000) during the year ended 31 December 2019.

The fair value of equity-settled share options granted during the year was estimated as at the date of grant, using a binomial model, taking into account the terms and conditions upon which the options were granted. The following table lists the inputs to the model used:

	2019	2018
Dividend yield (%)	**–**	–
Expected volatility (%)	**46-47**	31-34
Risk-free interest rate (%)	**1.46-1.54**	2.14-2.26
Expected life of options (year)	**10**	5-10
Weighted average share price (HK$ per share)	**18.30-19.13**	13.88-26.45

32. SHARE OPTION SCHEME (continued)

a) The Company (continued)

The volatility measured at the standard deviation of expected share price returns is based on statistical analysis of comparable listed companies in the same industry.

At 31 December 2019, the Company had 227,418,000 share options outstanding under the share option scheme. The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 227,418,000 additional ordinary shares of the Company, an additional share capital of approximately US$227,418 and a share premium of approximately US$ 108,137,620 (before issue expenses).

At the date of approval of these financial statements, the Company had 223,452,418 share options outstanding under the share option scheme, which represented approximately 11.9% of the Company's shares in issue as at that date.

b) The Legend

In 2019, under the Company's Legend share option scheme, the Company granted performance-and-time-based share options to certain employees, which are generally vested over a 5-year term. The performance goals are determinded by the board of directors. For those awards, evaluations are made as of each reporting period to assess the likelihood of performance criteria being met. Share-based compensation expenses are then adjusted to reflect the reversion of original estimates.

Share options do not confer rights on the holders to dividends or to vote at shareholders' meetings.

The following share options were outstanding during the year:

	2019		2018	
	Weighted average exercise price US$ per share	**Number of options '000**	Weighted average exercise price US$ per share	Number of options '000
At 1 January	**0.7782**	**14,311**	–	–
Granted during the year	**1.4973**	**3,757**	0.7483	16,090
Forfeited during the year	**1.0909**	**(55)**	0.5073	(1,779)
At 31 December	**0.9273**	**18,013**	0.7782	14,311

32. SHARE OPTION SCHEME (continued)

b) The Legend (continued)

The exercise prices and exercise periods of the share options outstanding as at the end of the year are as follows:

31 December 2018 Number of options '000	Exercise price* US$ per share	Exercise period
6,347	0.5	2019/12/25 – 2027/12/25
7,283	1.0	2019/07/01 – 2028/08/29
656	1.0	2019/12/31 – 2028/12/30
3,225	1.5	2020/07/02 – 2029/07/01
502	1.5	2020/11/29 – 2029/11/28
18,013		

31 December 2018 Number of options '000	Exercise price* US$ per share	Exercise period
6,347	0.5	2019/12/25 – 2027/12/25
7,288	1.0	2019/07/01 – 2028/08/29
676	1.0	2019/12/31 – 2028/12/30
14,311		

The fair value of the share options granted during the year was US$1,099,000(US$0.2944 each) (2018: US$4,329,189, US$0.269 each), of which the Group recognised a share option expense of US$1,272,000 (2018: US$704,000) during the year ended 31 December 2019.

The fair value of equity-settled share options granted during the year was estimated, using a binomial model, taking into account the terms and conditions upon which the options were granted. The following table lists the inputs to the model used:

	2019	2018
Dividend yield (%)	**–**	–
Expected volatility (%)	**66.4-80.3**	64.2-66.4
Risk-free interest rate (%)	**1.98-2.69**	2.48-2.87
Expected life of options (year)	**10**	10
Weighted average share price (US$ per share)	**0.590-0.615**	0.352-0.615

The volatility measured at the standard deviation of expected share price returns is based on statistical analysis of comparable listed companies in the same industry.

32. SHARE OPTION SCHEME (continued)

b) The Legend (continued)

At the end of reporting period, the Legend had 18,013,000 share options outstanding under the scheme. The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 18,013,000 additional ordinary shares of the Legend, an additional share capital of approximately US$1,801 and a share premium of approximately US$16,701,654 (before issue expenses).

33. RESTRICTED STOCK SHARES

The Company operates a restricted stock units scheme (the "**RSU Scheme**") for the purpose of providing incentives and rewards to eligible participants who contribute to the success of the Group's operations. Eligible participants of the Scheme include the Company's directors, including independent non-executive directors, and employees of any member of the Group. The Scheme became effective on March 22, 2019 and, unless otherwise cancelled or amended, will remain in force for 10 years from that date. The Scheme has a performance vesting condition and is subject to forfeiture if the participants cannot meet certain performance target set by the board of directors.

The movement in the number of RSU outstanding for the year ended 31 December 2019 was as follows:

	Numbers 2019	Numbers 2018
At 1 January	**–**	
Granted during the year	**1,198**	
Forfeited during the year	**–**	–
Exercised during the year	**–**	–
At 31 December	**1,198**	–

The fair value of the share options granted during the period was US$2,823,384(US$2.357 each) (2018: Nil), of which the Group recognised a share option expense of US$555,000 (2018: Nil) during the year ended 31 December 2019.

34. RESERVES

The amounts of the Group's reserves and the movements therein for the current and prior years are presented in the consolidated statement of changes in equity on pages 149 to 150 of the financial statements.

In accordance with the Company Law of the PRC, certain subsidiaries of the Group which are domestic enterprises are required to allocate 10% of their profit after tax, as determined in accordance with the relevant PRC accounting standards, to their respective statutory surplus reserves until the reserves reach 50% of their respective registered capital. Subject to certain restrictions set out in the Company Law of the PRC, part of the statutory surplus reserves may be converted to increase share capital, provided that the remaining balance after the capitalisation is not less than 25% of the registered capital.

The exchange fluctuation reserve comprises all foreign exchange differences arising from the translation of the financial statements of operations with a functional currency other than USD.

35. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

(a) Major non-cash transactions

During the year, the Group had non-cash additions to right-of-use assets and lease liabilities of US$855,000 and US$855,000, respectively, in respect of lease arrangements for buildings and rooms (2018: Nil).

During the year, the Group had non-cash additions to intangible assets of US$6,966,000 (2018: Nil).

(b) Changes in liabilities arising from financing activities

	Lease liabilities –Buildings and rooms	**Bank and other loans**
	US$'000	US$'000
At 31 December 2018	–	10,502
Effect of adoption of HKFRS 16	5,934	–
At 1 January 2019 (restated)	**5,934**	**10,502**
Changes from financing cash flows	**(1,412)**	**–**
New leases/additions	**855**	**8,255**
Interest expense	**312**	**–**
Interest paid classified as operating cash flows	**(312)**	**–**
At 31 December 2019	**5,377**	**18,757**

35. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS (continued)

(b) Changes in liabilities arising from financing activities (continued)

	Bank and other loans US$'000
At 1 January 2018	–
Changes from financing cash flows	10,502
At 31 December 2018	10,502

(c) Total cash outflow for leases

The total cash outflow for leases included in the statement of cash flows is as follows:

	2019 US$'000
Within operating activities	**1,226**
Within financing activities	**1,412**
At 31 December 2019	**2,638**

36. PLEDGE OF ASSETS

Details of the Group's time deposits pledged for the Group's bills payables and credit cards are included in note 24 to the financial statements.

Details of the Group's land and buildings pledged for the Group's bank loans are included in note 13 and note 14 to the financial statements.

37. COMMITMENTS

(a) The Group had the following capital commitments at the end of the year:

	2019 US$'000	2018 US$'000
Contracted, but not provided for: plant and machinery	**42,177**	29,909

(b) Operating lease commitments as at 31 December 2018

The Group leased certain of its production and office properties under operating lease arrangements. Leases for properties were negotiated for terms of one to ten years.

At 31 December 2018, the Group had total future minimum lease payments under non-cancellable operating leases falling due as follows:

	2018 US$'000
Within one year	2,329
In the second to fifth years, inclusive	5,446
After five years	830
	8,605

(c) The Group has various lease contracts that have not yet commenced as at 31 December 2019. The future lease payments for these non-cancellable lease contracts are US$262,000 due within one year, and US$22,000 due in the second to fifth years.

38. RELATED PARTY TRANSACTIONS

Details of the Group's principal related parties are as follows:

Company	Relationship
Hunan Gomeet Biotechnology Co., Ltd. ("**Gomeet**")	Associate
Maple Bio (Nanjing) Co., Ltd. ("**Maple Bio Nanjing**")	Associate
Maple Bio HK Limited ("**Maple Bio HK**")	Associate
Maple Bio ("**Maple Bio**")	Associate
GenScript Corporation ("**GS Corp**")	The ultimate holding company

(a) In addition to the transactions detailed elsewhere in these financial statements, the Group had the following transactions with related parties during the year:

	Note	**2019** **US$'000**	2018 US$'000
Sales of products to Gomeet	(i)	**399**	39
Sales of products and service to Maple Bio Nanjing	(i)	**25**	7
Sales of sundries to Maple Bio Nanjing	(i)	**–**	18
Loans to Maple Bio Nanjing	(ii)	**2,007**	–

Note:

(i) The prices are mutually agreed after taking into account the prevailing market prices.

(ii) The loans to Fengyang Nanjing were unsecured, interest-bearing and repayable within one year.

38. RELATED PARTY TRANSACTIONS (continued)

(b) Outstanding balances with related parties:

The Group had the following significant balances with its related parties during the year:

(i) Due from related parties

	2019	2018
	US$'000	US$'000
Maple Bio Nanjing	**2,026**	758
Gomeet	**97**	146
Maple Bio	**89**	89
GS Corp	**55**	–
Maple Bio HK	**1**	1
	2,268	994

Excepted for the balance amounted to US$2,007,000 with Maple Bio Nanjing (2018: Nil) which was unsecured, interest-bearing and repayable within one year, the other balances are unsecured, interest-free and have no fixed terms of repayment.

(c) Compensation of key management personnel of the Group:

	2019	2018
	US$'000	US$'000
Short-term employee benefits	**2,843**	1,709
Pension scheme contributions	**24**	33
Equity-settled share option expense	**902**	412
Total compensation paid to key management personnel	**3,769**	2,154

Further details of directors' emoluments are included in note 8 to the financial statements.

The related party transactions in respect of items in note (a) above also constitute connected transactions or continuing connected transactions as defined in Chapter 14A of the Listing Rules.

39. FINANCIAL INSTRUMENTS BY CATEGORY

The carrying amounts of each of the categories of financial instruments as at the end of the reporting period are as follows:

2019

Financial assets

	Financial assets at fair value through profit or loss		
	Designated as such upon initial recognition US$'000	Financial assets at amortised cost US$'000	Total US$'000
Trade and notes receivables	–	73,067	73,067
Financial assets included in prepayments, other receivables and other assets	–	3,655	3,655
Financial assets at fair value through profit or loss	30,101	–	30,101
Pledged deposits	–	972	972
Time deposits	–	148,693	148,693
Cash and cash equivalents	–	252,397	252,397
	30,101	478,784	508,885

Financial liabilities

	Financial liabilities at amortised US$'000
Trade and bills payables	17,627
Financial liabilities included in other payables and accruals (note 26)	35,887
Interest-bearing bank and other borrowings	18,756
Lease liabilities	5,377
	77,647

39. FINANCIAL INSTRUMENTS BY CATEGORY (continued)

The carrying amounts of each of the categories of financial instruments as at the end of the reporting period are as follows (continued):

2018

Financial assets

	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income		
	Designated as such upon initial recognition US$'000	Equity investments US$'000	Financial assets at amortised cost US$'000	Total US$'000
Equity investments designated at fair value through other comprehensive income	–	4,949	–	4,949
Trade and notes receivables	–	–	67,843	67,843
Financial assets included in prepayments, other receivables and other assets	–	–	7,882	7,882
Financial assets at fair value through profit or loss	70,056	–	–	70,056
Pledged deposits	–	–	12,688	12,688
Cash and cash equivalents	–	–	494,558	494,558
	70,056	4,949	582,971	657,976

Financial liabilities

	Financial liabilities at amortised US$'000
Trade and bills payables	11,187
Financial liabilities included in other payables and accruals (note 26)	2,366
Interest-bearing bank and other borrowings	10,502
	24,055

40. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS

Fair values

Management has assessed that the fair values of cash and cash equivalents, pledged deposits, time deposits, financial assets included in prepayments, other receivables and other assets, trade and notes receivables, trade and bills payables and financial liabilities included in other payables and accruals, interest-bearing bank and other borrowings and lease liabilities approximate to their carrying amounts largely due to the short-term maturities of these instruments.

The Group's finance department headed by the finance manager is responsible for determining the policies and procedures for the fair value measurement of financial instruments. The finance department reports directly to the finance manager. At each reporting date, the finance department analysed the movements in the values of financial instruments and determined the major inputs applied in the valuation. The valuation was reviewed and approved by the finance manager. The valuation process and results are discussed with the directors twice a year for interview and annual financial reporting.

The fair values of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The fair values of the financial assets at fair value through profit or loss have been calculated by discounting the expected future cash flows using rates currently available for instruments with similar terms, credit risk and remaining maturities.

Fair value hierarchy

The following tables illustrate the fair value measurement hierarchy of the Group's financial instruments.

40. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS (continued)

Assets measured at fair value:

As at 31 December 2019

	Fair value measurement using			
	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000	Total US$'000
Financial assets at fair value through profit or loss:	–	30,101	–	30,101

As at 31 December 2018

	Fair value measurement using			
	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000	Total US$'000
Equity investments designated at fair value through other comprehensive income	–	4,949	–	4,949
Financial assets at fair value through profit or loss:	–	70,056	–	70,056
		75,005	–	75,005

41. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

The Group's principal financial instruments comprise cash and cash equivalents, time deposits and pledged short-term deposits. The main purpose of these financial instruments is to raise finance for the Group's operations. The Group has various other financial assets and liabilities such as trade and notes receivables and trade and notes payables, which arise directly from its operations.

The main risks arising from the Group's financial instruments are foreign currency risk, credit risk and liquidity risk. The board of directors reviews and agrees policies for managing each of these risks and they are summarised below.

Foreign currency risk

The Group has transactional currency exposures. Such exposures arise from sales or purchases by operating units in currencies other than the units' functional currencies. Approximately 6% (2018: 3%) of the Group's sales were denominated in currencies other than the functional currencies of the operating units making the sales, whilst approximately 2% (2018: 2%) of costs were denominated in currencies other than the units' functional currencies.

The following table demonstrates the sensitivity to a reasonably possible change in the RMB exchange rate, with all other variables held constant, of the Group's (loss)/profit before tax (due to changes in the fair value of monetary assets and liabilities).

	Increase/ (decrease) in the rate of foreign currency	**Increase/ (decrease) in (loss)/profit before tax**
	%	US$'000
Year ended 31 December 2019		
If US$ strengthens against RMB	**5**	**6,491**
If US$ weakens against RMB	**(5)**	**(6,491)**
Year ended 31 December 2018		
If US$ strengthens against RMB	5	342
If US$ weakens against RMB	(5)	(342)

41. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

Credit risk

The Group trades only with recognised and creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. In addition, receivable balances are monitored on an ongoing basis and the Group's exposure to bad debts is not significant. For transactions that are not denominated in the functional currency of the relevant operating unit, the Group does not offer credit terms without the specific approval of the Head of Credit Control.

Maximum exposure and year-end staging

The tables below show the credit quality and the maximum exposure to credit risk based on the Group's credit policy, which is mainly based on past due information unless other information is available without undue cost or effort, and year-end staging classification as at 31 December 2019. The amounts presented are gross carrying amounts for financial assets.

As at 31 December 2019

	12-month ECLs	Lifetime ECLs			
	Stage 1 US$'000	Stage 2 US$'000	Stage 3 US$'000	Simplified approach US$'000	Total US$'000
Trade and notes receivables*	–	–	–	77,503	77,503
Financial assets included in prepayments and other receivables					
–Normal**	3,655	–	–	–	3,655
–Doubtful**	–	–	–	–	–
Time deposits and pledged short term deposits					
–not yet past due	149,665	–	–	–	149,665
Cash and cash equivalents					
–not yet past due	252,397	–	–	–	252,397
	405,717	–	–	77,503	483,220

41. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

Maximum exposure and year-end staging (continued)

As at 31 December 2018

	12-month ECLs	Lifetime ECLs			
	Stage 1 US$'000	Stage 2 US$'000	Stage 3 US$'000	Simplified approach US$'000	Total US$'000
Trade and notes receivables*	–	–	–	67,843	67,843
Financial assets included in prepayments and other receivables					
–Normal**	7,882	–	–	–	7,882
–Doubtful**	–	–	–	–	–
Time deposits					
–not yet past due	12,688	–	–	–	12,688
Cash and cash equivalents					
–not yet past due	494,558	–	–	–	494,558
	515,128	–	–	67,843	582,971

* For trade receivables to which the Group applies the simplified approach for impairment, information based on the provision matrix is disclosed in note 22 to the financial statements.

** The credit quality of the financial assets included in prepayments, other receivables and other assets is considered to be "normal" when they are not past due and there is no information indicating that the financial assets had a significant increase in credit risk since initial recognition. Otherwise, the credit quality of the financial assets is considered to be "doubtful".

Further quantitative data in respect of the Group's exposure to credit risk arising from trade and other receivables are disclosed in notes 22 and 23 to the financial statements, respectively.

41. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

Liquidity risk

The Group monitors its risk to a shortage of funds using a recurring liquidity planning tool. This tool considers the maturity of both its financial investments and financial assets (e.g., trade receivables and other financial assets) and projected cash flows from operations.

The maturity profile of the Group's financial liabilities as at the end of the reporting period, based on contractual undiscounted payments, is as follows:

Year ended 31 December 2019

	On demand US$'000	Less than 3 months US$'000	3 to 12 months US$'000	1 to 5 years US$'000	Over 5 years US$'000	Total US$'000
Interest-bearing bank borrowings	–	17,144	419	1,758	–	19,321
Trade and bills payables	–	17,627	–	–	–	17,627
Other payables and accruals	–	35,887	–	–	–	35,887
Lease liabilities	–	322	1,447	3,807	614	6,190
	–	70,980	1,866	5,565	614	79,025

Year ended 31 December 2018

	On demand US$'000	Less than 3 months US$'000	3 to 12 months US$'000	1 to 5 years US$'000	Over 5 years US$'000	Total US$'000
Interest-bearing bank borrowings	–	10,520	–	–	–	10,520
Trade and bills payables	83	11,104	–	–	–	11,187
Other payables and accruals	–	2,366	–	–	–	2,366
	83	23,990	–	–	–	24,073

41. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

Capital management

The primary objectives of the Group's capital management are to safeguard the Group's ability to continue as a going concern and to maintain a strong credit rating and healthy capital ratios in order to support its business and maximise shareholders' value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. The Group is not subject to any externally imposed capital requirements. No changes were made in the objectives, policies or processes for managing capital during the years ended 31 December 2019 and 31 December 2018.

The Group monitors capital using a gearing ratio, which is total liabilities divided by total assets. The gearing ratios as at the end of the years were as follows:

	2019	2018
	US$'000	US$'000
Total liabilities	**517,113**	423,677
Total assets	**889,411**	916,976
Gearing ratio	**58.1%**	46.2%

42. STATEMENT OF FINANCIAL POSITION OF THE COMPANY

Information about the statement of financial position of the Company at the end of the reporting period is as follows:

	2019	2018
	US$'000	US$'000
NON-CURRENT ASSETS		
Equity investments designated at fair value through other comprehensive income	–	4,949
Investments in subsidiaries	97,420	87,910
Total non-current assets	97,420	92,859
CURRENT ASSETS		
Financial assets at fair value through profit or loss	25,503	35,030
Due from subsidiaries	181,109	106,950
Interest receivable	1,060	1,513
Prepayments, other receivables and other assets	277	136
Time deposits	57,334	–
Cash and cash equivalents	45,062	209,848
Total current assets	310,345	353,477
CURRENT LIABILITIES		
Due to subsidiaries	19,348	65,420
Trade and bills payables	18	21
Other payables and accruals	30	403
Total current liabilities	19,396	65,844
NET CURRENT ASSETS	290,949	287,633
TOTAL ASSETS LESS CURRENT LIABILITIES	389,325	380,492
Net assets	388,369	380,492
EQUITY		
Share capital	1,879	1,836
Treasury shares	(7,774)	–
Reserves	394,264	378,656
Total equity	388,369	380,492

42. STATEMENT OF FINANCIAL POSITION OF THE COMPANY (continued)

Note:

A summary of the Company's reserves is as follows:

	Share premium US$'000	Share option reserve US$'000	Fair value reserve of financial assets at fair value through other comprehensive income US$'000	Accumulated losses US$'000	Total US$'000
At 1 January 2018	122,288	10,936	–	(7,239)	125,985
Total comprehensive loss for the year	–	–	(11)	2,139	2,128
Exercise of share options	3,479	(833)	–	–	2,646
Issue of shares under the share placing option	251,218	–	–	–	251,218
Shares repurchased	(11,469)	–	–	–	(11,469)
Equity-settled share option arrangements	–	8,148	–	–	8,148
At 31 December 2018 and 1 January 2019	**365,516**	**18,251**	**(11)**	**(5,100)**	**378,656**
Total comprehensive loss for the year	**–**	**–**	**11**	**2,289**	**2,300**
Exercise of share options	**5,886**	**(2,086)**	**–**	**–**	**3,800**
Equity-settled share option arrangements	**–**	**9,508**	**–**	**–**	**9,508**
At 31 December 2019	**371,402**	**25,673**	**–**	**(2,811)**	**394,264**

The share option reserve comprises the fair value of share options granted which are yet to be exercised, as further explained in the accounting policy for share-based payments in note 2.4 to the financial statements. The amount will either be transferred to the share premium account when the related options are exercised, or be transferred to retained profits should the related options expire or be forfeited.

43. SUBSEQUENT EVENT

The outbreak of the novel coronavirus (COVID-19) in early January 2020 has spread throughout China and to countries across the world. The COVID-19 caused delay on the Group's employees' return to work and has certain impact on the Group's shipping service and customers' on-site audit. The Group will continue to monitor and assess the impact of the ongoing development of the epidemic on the financial position and operating results of the Group and respond accordingly. Up to the date of this report, the assessment is still in progress.

44. APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved and authorised for issue by the board of directors on 27 March 2020.

GENSCRIPT BIOTECH CORPORATION

金斯瑞生物科技股份有限公司*