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Dear Sirs/Madams

**Consultation Paper on the Listing Regime for Specialist Technology Companies**

We refer to the Consultation Paper on the Listing Regime for Specialist Technology Companies (the "**Consultation Paper**") issued in October 2022, and we are pleased to be offered the opportunity to comment on the proposals raised in the Consultation Paper. Unless otherwise defined, all capitalised terms used in this letter shall have the same meaning as defined in the Consultation Paper.

***Introduction***

1. As a global pharmatech platform that applies AI, quantum physics and robotic automation to empower companies worldwide, we welcome the HKEX's proposal to diversify its markets by introducing a listing regime for specialist technology companies in Hong Kong.
2. In general, we support the proposed listing framework that seeks to provide a listing platform for specialist technology companies with the highest growth potential within the industry, while striking a balance to provide market safeguards to ensure a sound basis for the proposed IPO valuations of listing applicants. We trust that the proposal will preserve the integrity of the Hong Kong stock market and promote Hong Kong as a premium listing venue for high quality specialist technology companies.

***Specific comments on the proposal***

***Questions 14 and 15 – R&D Investment expenditure ratio test***

3. **Questions 14 and 15** relate to the R&D Investment expenditure ratio test for Specialist Technology Companies. In this respect, we invite the HKEX to adjust its proposal such that, for a Pre-Commercial Company, the requirement with respect to its R&D Investment shall be at least 50% of its total operating expenditure on average for its three financial years prior to listing, instead of imposing the 50% minimum R&D Investment requirement in each of its three financial years prior to listing.
4. We would like to first draw the HKEX's attention to the Profit Test under Rule 8.05(1) of the Listing Rules. As stated in the Consultation Conclusions on The Main Board Profit Requirement issued by the HKEX, when discussing the new profit spread requirement (i.e. the profit requirement for the first two financial years of the track record period vis-à-vis the final financial year), it is stated that the HKEX will be prepared to grant relief from the profit spread on case-specific circumstances, provided that the listing applicant meets the increased aggregate profit threshold of HK\$80 million in total for the three years in the track record period,

and listed growth stage companies as a type of company for which the HKEX may evaluate the underlying reasons for its inability to meet the profit spread.

5. Accordingly, we propose that HKEX should adopt a consistent approach and apply the same considerations in formulating the R&D Investment expenditure ratio test. The current formulation of the R&D Investment expenditure ratio test imposes a fixed 50% requirement in each of the three years in the Track Record Period. While the HKEX acknowledges there are situations relating to the listing applicant's business nature or business operations that may lead to fluctuations in its profit and causing it to fall foul of the profit spread requirement (as stated in the consultation conclusions and set out in the above), the same acknowledgement/consideration should also be applicable to the R&D Investment expenditure ratio test. Another factor specific to the cost of a listing applicant (as opposed to revenue), and thus which the R&D Investment expenditure ratio test would be sensitive to, is that certain types of costs, typically capital expenditure costs incurred for construction and equipment, would be amortised or depreciated across differing periods of time. The period of time across which each such cost item is spread affects the ratio calculation. Hence, taking an average R&D Investment ratio across three years minimises any such impact of this factor and more accurately reflects the actual cost structure of a specialist technology listing applicant.
6. We also invite the HKEX to consider a tiered R&D Investment expenditure ratio test depending on the size of a listing applicant, measured by market capitalisation, as compared with the current proposal of a flat 50% test applicable to Pre-Commercial Companies of all sizes. As a business scales, a higher amount of overhead expenses and other general and administrative expenses is necessitated to drive business operations. Therefore, while a start-up technology company with fewer staff and less administrative and management expenses may find it easier to meet the 50% R&D Investment ratio, a larger-scale and more sophisticated specialist technology company may find it harder to meet the required ratio percentage. A tiered approach to ratio requirements based on company size is not a novel concept from a Listing Rules requirement perspective. For example, the clawback waiver requirements of an IPO and the current proposed requirements on minimum total investment from Sophisticated Independent Investors apply a similar approach.
7. When assessing the eligibility of a listing applicant pursuant to the Profit Test, the HKEX acknowledges there are certain one-off non-recurring expenses items which can affect the profit of a listing applicant in a given year, and a listing applicant is allowed to exclude such cost items that are generated by activities outside the ordinary course of its business when demonstrating its eligibility under the Profit Test. The current proposal is for the total operating expenditure for a period (i.e. the denominator in the R&D Investment expenditure ratio test) to be the sum of the total expenses of the company as reflected in the financial statements of the company during the period. The current proposal excludes any expense of financial nature and includes any R&D Investment. We submit that the current formulation overlooks certain cost items that have a significant impact on the outcome of the cost ratio and does not fully reflect the commercial reality of whether a specialist technology listing applicant is devoting sufficient amount of investment in its R&D operations, for example:
  - (a) the typical R&D expenses of a company as a percentage of its total operating expenditure varies across different industries, and therefore, the application of a one-size-fits-all threshold on all types of specialist technology companies is not the most appropriate. To illustrate this argument, leading US-listed and China-listed innovative technology companies in sectors including AI drug discovery, material sciences, and new energy, have fluctuating R&D expenses year-over-year. Taking the example of two AI drug discovery companies listed in the US, being Schrodinger, Inc. (stock code: SDGR) and Abcellera Biologics Inc. (stock code: ABCL), the R&D expenses as a percentage of operating expenses of Schrodinger, Inc. for 2021 and for the nine months ended 30 September 2022 was 51% and 51%, respectively, while the R&D expenses as a percentage of operating expenses of Abcellera Biologics Inc. for 2021 and for the nine months ended 30 September 2022 was 38% and 36%, respectively. By comparison, the R&D expenses as a percentage of operating expenses of Tianneng

Power International Ltd. (a company listed on the Shanghai Stock Exchange, stock code: 688819), a company engaged in the green energy business, for 2021 and for the nine months ended 30 September 2022 was 43% and 43%, respectively.

- (b) the general and administrative expenses of a listing applicant in the last year of the Track Record Period may include uncapitalized costs, usually of a significant amount, that represent its expenses paid to professional parties (such as, reporting accountants, legal advisers, valuers, reorganization advisers, etc.) in preparation for the listing, especially when the listing timetable is delayed by macro-economic conditions and geopolitical factors. The large amount of general and administrative expense recognized in the last year of the Track Record Period in such case may skew the outcome of the R&D Investment expenditure ratio test, where the ratio in the last year of the Track Record Period becomes exceptionally low, even though the listing applicant continues to invest in its R&D operations. Such general and administrative expense would typically be excluded for the purpose of the profit test under Rule 8.05 of the Listing Rules;
- (c) the consultation paper is unclear on the treatment of capital expenditure for the construction of facilities that are not entirely used for R&D purposes. For example, for Pre-Commercial Companies that are close to commercialising their R&D results, their development may necessitate a significant amount of capital expenditure for the construction of a manufacturing facility to ramp up commercialisation. Due to the time needed for the construction, such costs are generally incurred over the period of a number of years before the facility can be put into use and depreciation costs are recognized on the listing applicant's financials. Similar to the circumstance described in paragraph 7(a) above, the large amount of capital expenditure incurred translates into a disproportionately large denominator and skews the outcome of the R&D Investment expenditure ratio test; and
- (d) the amount of R&D Investment expended in each year/period within the Track Record Period can also fluctuate as part of the company's ordinary course of business, depending on multiple naturally occurring factors, such as the products under development and the stage of development. An analogy can be drawn from the amount of R&D expenditure made on core product(s) for biotech listing applicants. While, in principle, a biotech listing applicant should be focusing its R&D efforts on the research and development of its core products, we have observed that, since the introduction of the biotech listing regime in 2018, the proportion of R&D expenses (as a percentage of the total expenses) expended on the core product(s) of a biotech listing applicant continues to fluctuate significantly year to year. For example, despite R&D having been continuously conducted on the same core product, a biotech listing applicant involved in the R&D of an innovative medical device may spend a smaller proportion of R&D expenses on the development on its product candidate in year 1 of the Track Record Period given the product was in a "first-in-man" clinical trial involving a small number of clinical trial subjects. Its proportion of R&D expenses may increase significantly, however, in the second year of the Track Record Period when the medical device enters its confirmatory clinical trial stage, which is commonly conducted on a much wider patient population than a "first-in-man" trial.

#### Question 19 – Independence requirement of Sophisticated Independent Investors

8. **Question 19** relates to the definition of a "Sophisticated Independent Investor", and it is proposed that a person who is a controlling shareholder (or within the group of persons who are considered as controlling shareholders) of a listing applicant will not be considered as having met the independence requirement of a Sophisticated Independent Investor. In this regard, we propose that the timing for determining the independence of a Sophisticated Independent Investor should be at the time of its investment, instead of at the time of the listing application or at the time of listing.

9. As outlined in paragraphs 150 to 154 of the Consultation Paper, 18C listing applicants are required to receive meaningful investment from Sophisticated Independent Investors because independent third party institutional investment helps relieve concerns over difficulties in price discovery. Safeguard comes from the fact that a third-party sophisticated investor, which invested in the specialist technology company a sufficiently long time before the company makes a listing application, remains invested in the company as an investor, and this is treated as providing an objective validation of the technology and the business. Following the original intent of this requirement, we propose the timeframe to determine the independence of a Sophisticated Independent Investor should be at the time of its investment, instead of at the time of the listing application or at the time of listing. Because such sophisticated investor (being independent at the time of its investment) would have independently conducted extensive due diligence checks on the listing applicant and independently analysed the listing applicant's technology and valuation prior to its decision to invest as a pre-IPO investor.

Question 21 – Shareholding percentage requirement for Pathfinder SII

10. **Question 21** relates to the proposed requirement that there should be two Pathfinder SIIs, being Sophisticated Independent Investors holding such amount of shares or securities convertible into shares equivalent to 5% or more of the issued share capital of the listing applicant as at the date of the listing application and throughout the pre-application 12-month period. In this regard, we propose that (a) the shareholding percentage threshold for a Pathfinder SII be lowered from 5% to 3%, and (b) the number of Pathfinder SII(s) be reduced from two to one.
11. Given the R&D-heavy orientation of its business operations, large-scale specialist technology companies generally require multiple rounds of financing with diverse investors. Given the dilutive effect from the rounds of pre-IPO financing, it would therefore be appropriate to lower the shareholding percentage threshold for Pathfinder SIIs from 5% to 3% and to reduce the number of Pathfinder SII(s) from two to one. Large-scale specialist companies often enjoy a higher valuation and a high market capitalisation. Therefore lowering the percentage shareholding threshold for Pathfinder SIIs from 5% to 3% does not compromise the safeguard offered by "meaningful investments" being made by Pathfinder SIIs when looked at in an absolute dollar amount.
12. With respect to our proposal to decrease the number of Pathfinder SIIs required from two to one, we note that for 18A listing applicants, a very similar requirement is imposed whereby meaningful investment is required to be received from at least one sophisticated investor. In the introduction of the listing regime for biotech companies consultation paper issued by the HKEX in April 2018, the HKEX stated that such requirement is intended to demonstrate a reasonable degree of market acceptance exists for the 18A applicant's R&D and biotech product. We note that the rationale behind the introduction of the requirement for meaningful investment by sophisticated investors pursuant to Chapter 18A of the Listing Rules is similar to the rationale behind the current proposal of meaningful investment by Pathfinder SII(s). Both requirements seek to establish a certain degree of third-party validation of an innovative/novel technology or product underlying the business that seeks listing. We respectfully submit that our proposal to reduce the number of Pathfinder SIIs required to one is in line with requirements imposed on biotech listing applicants under Chapter 18A of the Listing Rules.

Other comments – Share incentives for specialist technology companies

13. As noted in Guidance Letter GL97-18 issued by the HKEX and in the Consultation Paper on Proposed Amendments to Listing Rules relating to Share Schemes of Listed Issuers issued by the HKEX in October 2021, companies in the internet technology sector or that have internet-based business models often place greater emphasis on retaining and incentivising talented persons in order to develop their businesses, and this is often achieved through the grant of share options. Accordingly, it was stated that the HKEX would consider favourably granting waivers from, among others, the scheme mandate limit and individual limits of 10% and 1% for share schemes under Chapter 17 of the Listing Rules. We submit this consideration

should be equally applicable to specialist technology companies, in which share incentives are often perceived as an effective tool to recruit and retain talents and incentivise innovation. Hence, we propose that the same approach on the granting of waivers from the scheme mandate limit should be extended to specialist technology companies.

If the HKEX would like to discuss any of our comments, please do not hesitate to contact our [REDACTED]

Yours faithfully

**QuantumPharm Inc. (XtalPi)**