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ASIA EDITION

"Diagnostic market in the Asia Pacific region is currently in a critical period"

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As a leader in the precision medicine diagnostic platform solutions, Seoul (South Korea) based Bertis has ventured into developing unique biomarkers for cancer and other major ailments, providing diagnostic and analysis solutions powered by proteomics, bioinformatics, and Artificial Intelligence (AI). Besides developing companion diagnostic markers for precision medicine, Bertis is at the forefront of advanced quantitative proteomics research, as well as companion diagnostics for oncology drug development and personalised treatment. Seungman Han, Chief Executive Officer (CEO) of Bertis shares further insights on the current trends and innovations in the Asian proteomics diagnosis platform.

Proteomics has developed a versatile platform technology for discovering diagnostic tests based on differences in protein composition between individuals. Diagnostic sectors have advanced its capabilities to identify biological markers for a given disease by comparing blood samples from patients and healthy individuals.

- **How robust is the proteomics diagnosis platform as predictors of disease status? What's Bertis' role in developing target treatments?**

Proteins provide clinically useful information by reflecting the actual expression of the functional trait as a phenotype, thus allowing real-time data representation of the disease state. However, both the upside and the downside of protein are that it is far more diverse, and dynamic compared to genomes. Historically, proteomics was regarded as challenging for disease prediction because of the diverse results that were obtained depending on the conditions of the sample and the situations during analysis and research, in addition to the processing of vast amounts of data. However, as informatic technology has advanced in conjunction with protein analysis technology, the quality of protein data has improved considerably and proteomics-based diagnostic techniques have also advanced.

With our unrivaled proteomics technology, Bertis' mission is to combat deadly diseases. Our goal is to develop products for the early detection of diseases such as breast cancer, pancreatic cancer, and ovarian cancer. We also contribute to the development of precision medicine and targeted treatments, as well as in analysis services such as PASS (Pan-omics Analysis Service & Solution), a platform for integrative analysis of pan-omics (multi-omics) data, which is being developed to assist with the discovery of new drug targets substances.

Our flagship solutions include Mastocheck, the world’s first proteomics-based blood test solution for early breast cancer detection, and PASS.

- **How competitive is the proteomics-based screening and diagnostic tests market? How is the momentum of the market?**

Proteomics is expected to provide solutions to the next trend in healthcare innovations such as precision medicine and the conquering of cancer. The importance of proteomics in the healthcare field is growing to the extent that proteomics data must be used in new drug development and patient treatment in the US FDA guidelines. Furthermore, Cancer Moonshot, a US government initiative launched in 2016, accelerates cancer research and improves cancer prevention, detection, and treatment, highlighting the need for proteomics-based diagnosis.

As a promising next-generation technology followed by genomics worldwide, proteomics-focused companies, including US-based films, were driving their efforts in research and development. Many NASDAQ-listed companies such as Seer, SomaLogic, and Olink, specialise in protein profiling, a technology for detecting more proteins in samples. These companies are diverging their interests to proteomics diagnosis with protein profiling capabilities.

Bertis has experience and expertise in developing and commercialising protein biomarkers in the blood to diagnose early breast cancer, which was the first to receive approval from the South Korean authority. Using proteomics technology, we have successfully commercialised diagnostic solutions. Thus, we expect to contribute greatly with the launching of useful diagnostics, aligned with the expansion of the proteomics market.

- **What is Bertis' stake in stabilising the industry through its unrivaled proteomics expertise?**

In addition to utilising diagnosis solutions in a real clinical setting, Bertis has more than 10 years of experience working with proteomics R&D expertise in clinical, experimental development, and data analysis. With the world's leading capability in protein profiling, Bertis can identify phosphopeptides in tissue samples by analysing over 50,000 proteoforms.

A key focus of Bertis is also in developing an innovative health information interpretation AI model called “SAN (Spectrum is All You Need)” to overcome the limitations of existing mass spectrometry proteomics data interpretation and to maximise its utilisation. A preliminary study of SAN revealed that patients with ovarian cancer or pancreatic cancer could be classified with 95 per cent accuracy. Its first achievements were announced at ‘Human Proteome Organisation 2022 (HUPO 2022)’, the world’s largest academic event in the field of proteomics.

Additionally, HUPO 2023 will be held in Korea in 2023. The academic event, HUPO encourages international collaboration and cooperation in proteomics through training and development of new technologies. The event brings together leading global and APAC regional entities to share research and attract new investments in proteomics. By exchanging and collaborating with companies and research institutions, Bertis hopes to maximise the potential of proteomics.

- **How has the funding and investment process been so far?**

A total of $35 million has already been raised by Bertis, with SK Planet, part of the SK Group, the third-largest multinational corporation in South Korea, and Hyosung being the biggest investors. Our research and business will be supported by a funding round targeting over $30 million in the next few months.

- **How do you perceive the complexity and regulatory process involved with commercialisation and expansion into diverse markets?**

Medical device commercialisation and market entry require complicated processes and customised strategies for each region and often require cooperation with local partners such as research and medical institutions. Although it acts as a safeguard, sometimes it acts as a barrier to innovative, pioneering products like proteomics diagnosis. Bertis' strategy is to launch proteomics diagnostic assays in Korea first and then we are looking to enter other geographical regions such as US middle east and Asia markets with possession of commercialisation experience in Korea. Since Korea is also a very competitive market for easier diagnosis access with an established advanced medical system, experience and know-how in the Korean market will provide insight into the most appropriate strategies in individual markets.

- **Could you share your expansion plans?**

Bertis has established a long-term plan to enter major Asian countries for several years and as result, we recently introduced Mastocheck in Singapore in 2022, making it the first entry to an international market. We plan to accelerate the expansion of our product in other Asian countries, as one of the key milestones this year. Based on our success in South Korea and our experience in entering the Singapore market, we expect to produce a positive result.

- **How do you foresee the proteomics market potential within Asia Pacific? How will the market dynamics evolve in 2023?**

I believe the diagnostic market in the Asia Pacific region is currently in a critical period. To determine the future direction of the market, it is important to establish which technologies and methods are initially implemented. As a rapidly developing technology, proteomics-based biomarker diagnostics can provide convenient, accurate and cost-effective opportunities, which allows more people to be benefited from medical advantages. Based on these strengths, Bertis plans to focus on contacting and collaborating with various partners in Asia in 2023 to introduce proteomics-based diagnostic technologies to more countries.

While exploring the potential trends in proteomics technology in Asian countries during a recent discussion on Mastocheck's business development, we discovered a huge demand among APAC companies and institutions. Currently, Bertis is primarily entering Asian markets with Mastocheck as its early diagnostic solution. We are working towards advancing our proteomics technology platforms and upgrading diagnostic pipelines in order to make a positive impact on the Asian proteomics market.

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