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ASIA EDITION

Ã¢â?¬Å?Personalised medicine is now a reality, not just an aspirationÃ¢â?¬Â•

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Terumo Blood and Cell Technologies, (a subsidiary of Terumo Corporation, Japan) is at the forefront of advancing blood- and cell-based therapies. In an interview with BioSpectrum Asia, Antoinette Gawin, President and CEO,Terumo Blood and Cell Technologies outlines the company's current strategy, key projects, the importance of the APAC region, and her perspective on evolving trends in the industry.

Can you share how the company’s focus has evolved since its founding, and what areas are central to Terumo's current strategy?

We are part of Terumo, a global company that has been contributing to society through healthcare for over 100 years. Headquartered in Japan, our name comes from our first innovation - the humble thermometer. Our division, Terumo Blood and Cell Technologies (Terumo BCT), began as a Colorado-based startup 60 years ago, innovating around equipment that collects and processes our fragile, yet powerful, blood and cells.

Today, our portfolio has grown beyond equipment, providing data management, optimisation services and clinical expertise to expand the application of transfusion medicine and increase access to the foundational power of blood as an essential medicine. This includes expanding therapeutic applications of our current filtration technology, enabling treatment of cancers with stem cell transplants, while shaping the source materials to fuel plasma-derived therapies and emerging cell therapies that address rare diseases.

What major trends in the healthcare industry do you see shaping the future of your product lines and how is Terumo adapting to these changes?

Personalised medicine is now a reality, not just an aspiration. Each human has unique blood and a unique genetic profile. As we learn more about specific diseases and patient populations, our apheresis technology can filter blood for genetically inherited anomalies, such as the sickle cell-shaped red cell in those with sickle cell disease, then replace it with a healthy red blood cell. We can tailor the collection of cells to improve the success rate of cell therapy or tailor the focus of starting material needed to discover a permanent cure. As we deepen our knowledge of genomics, proteomics and the function of specific cell types, we can filter even more selectively and tailor treatments to a specific patient.

Additionally, we have built a sophisticated Patient Access function. This acknowledges our philosophy that great technology that doesn't get into the hands of patients is a waste. Patient Access connects clinical, health economics and patient challenges to influence reimbursement frameworks around the world. This may include connecting diverse stakeholders, from patient advocates to government entities who can mobilise funding sources, influence standards of care, and create awareness around rare diseases and underserved populations.

Sickle Cell disease is one example, where existing therapies can prevent chronic pain and, in some cases, unnecessary death. We've worked with stakeholders across the UK health system to update treatment guidelines and expand investment by £1.5 million. This broadened access to red blood cell exchange (RBCx) therapy and brought care closer to patients.

Can you discuss the company's approach to tailoring solutions for diverse healthcare needs across different regions?

We prioritise understanding the complexities of the local healthcare ecosystem. Healthcare remains a uniquely local delivery system, influenced heavily by local operating practices, reimbursement schemes and the diverse needs of the patient populations.

For example, in a mature healthcare market, access to safe blood is taken for granted. Those suffering trauma or postpartum bleeding don't consider where the blood used in their emergency transfusion is coming from. Contrast that with countries where one is required to obtain a prescription for blood and pay in advance, and others where family members and likely donors are asked to be present during treatment in case blood is required.

Ninety per cent of us will need blood at some point in our lives. We work closely with our customers to share best practices from blood donation campaigns worldwide – from 'flash mobs' in India to NASCAR campaigns in the US.

Our innovations include automating the processing of blood, currently performed manually in many locations. This is a game changer as it increases the yield of each donation, creates a consistent product and eliminates the intensive labour required to produce a viable product.

We have applied this concept to our innovations for cell collections and cell therapy manufacturing. Transitioning from manual lab activities to a closed system automation enables consistency and predictability, two elements critical to gaining regulatory approval for new drugs, and foundational to scaling the delivery of these emerging therapies.

We continue to invest in local manufacturing and supply chains, such as our recent investment in Hangzhou which brings more innovations fit for purpose to the Chinese market.

Asia is increasingly being recognised as a key player in the global healthcare market. What role does Terumo see for Asia in its global strategy, and what opportunities does the region present?

Our heritage as an Asian company encourages long-term investment, building solutions to shape standards in the industries we serve. It is embedded in our mission of Contributing to Society through Healthcare.

Just as we led the transition from manual to automated blood processing, we have automated key elements of the cell collection and manufacturing process. Our closed system allows consistency and repeatability, critical as these therapies begin to scale.

Diverse immune cell therapies technologies, including CAR-T, TCR-T, and CAR-NK, are rapidly expanding across Asia, with China leading in 40 per cent of global clinical trials and approvals. Cost-effective, scalable solutions must be tailored to address the diversity of local economic conditions, regulatory frameworks, and patient accessibility needs. We streamline CAR-T production through a fast, simple workflow, enabling the delivery of high-dose, high-quality cells. Currently, this unique protocol that we co-developed with Eureka Bio is being implemented by early adopters in China.

Therapies from mesenchymal stem cells (MSCs) include applications in regenerative medicine, immune modulation, and inflammatory diseases. In Korea, a partner recently integrated our self-contained, automated Quantum platform into its GMP manufacturing standards to produce MSC-based therapies.

Additionally, a leading organisation has incorporated the Quantum platform into its MSC training courses to support Korean biotech companies, providing trainees with hands-on experience using an automated, scalable, GMP-compliant solution.

Can you highlight some recent advancements or upcoming projects that exemplify innovation?

Despite huge growth in plasma-derived therapies, drug developers struggled to provide sufficient, high-quality source plasma. We leveraged our core competencies to launch the Rika Plasma Donation System. This includes a faster plasma collection device, allowing a donor to donate in 35 minutes, and a digital ecosystem that simplifies the reporting, quality systems and tracking for a plasma centre manager, as well as tools to remotely monitor and update a broadly distributed fleet of devices.

In cell therapy, our portfolio supports the journey of a cell —from patient collection to modification and manufacturing, then reinfused to the patient. As our Optia platform technology is the gold standard for cell collections, many partners reach out to explore new therapeutic applications such as acute kidney injury and sepsis. Our willingness to collaborate and build for the long term distinguishes us in the market.

Ayesha Siddiqui