



Press Release
Media Contacts:
IB Communications
Tel +44 (0)20 89434685
terumo@ibcomms.agency

Terumo Blood and Cell Technologies partners with CiRA Foundation to develop automated iPS cell manufacturing

- **iPS cell manufacturing organization researchers to integrate Terumo Blood and Cell Technologies' Quantum Flex, expertise through collaboration**
- **Partners work to establish an automated and closed approach for efficient cultivation and manufacture of iPS-derived cells, a key hurdle for the next generation of cell-based therapies**

Lakewood, Colorado, and Kyoto, Japan, March 19, 2024 – Terumo Blood and Cell Technologies (Terumo BCT), a medical technology company, and CiRA Foundation, a public interest organization for the transfer of induced pluripotent stem (iPS) cells to industry, today announced a partnership designed to propel the broad use of iPS cells for a range of new therapies. By leveraging CiRA Foundation's leading iPS cell knowledge and Terumo BCT's enabling technologies and cell therapy manufacturing know-how, the companies seek to develop an automated and clinically relevant workflow for iPS cell-derived therapies, a potential turning point for the cell and gene therapy (CGT) field.

iPS cells hold enormous potential for cell-based therapies, as they can be an unlimited source of starting material and can be reprogrammed to nearly any functional cell type, such as neuron cells, cardiac muscle, and blood cells. However, the lack of scalability to produce sufficient cells for clinical doses currently impedes progress into clinical applications, since these complex protocols require expert handling and precise control over weeks or months. To solve these issues, the CiRA Foundation is working on a project titled "my iPS Project," in which Terumo BCT is participating.

Together, the organizations aim to create a closed, automated, integrated process that can consistently produce high-quality iPS and iPS-derived cells at scale on Terumo BCT's Quantum Flex™ Cell Expansion System. The companies will further increase manufacturing efficiency and control using digital technology. Terumo BCT will share expertise with CiRA Foundation scientists as they automate manual processes to expand and differentiate iPS cells. The goals are to make iPS cell manufacturing clinically viable, accessible and cost-effective and, ultimately, to help expedite clinical uptake of iPS cell-derived therapies.

"This partnership represents an incredible opportunity to broaden the future of cell-based therapeutics, blending the world-leading iPS cell knowledge of CiRA Foundation researchers with our automation and cell expansion expertise and technology," said Veerle d'Haenens, General Manager, Global Cell Therapy Technologies and Therapeutic Systems at Terumo BCT. "We are honored to work with pioneers in the space toward a goal with such a great potential impact. It reflects our commitment to raise standards in cell therapy, a growing pillar of healthcare."

"Collaboration has always underpinned our approach to bridging the gap between basic iPS cell research and commercial therapeutic development," said Masayoshi Tsukahara Ph.D., CiRA Foundation's Executive Director, Head of the Research and Development Center. "Terumo BCT will have a dedicated scientist co-located with us to accelerate the project, helping translate manual, flask-based processes into robust automated protocols. We look forward to sharing the results of our work in the coming years."

CiRA Foundation produces iPS cells for academics and companies through collaborations that expand translational iPS cell knowledge globally. There are more than ten ongoing clinical trials for the CiRA Foundation's iPS cell-based therapies, with the potential for many more.

As a subsidiary of Terumo Corporation, a Japan-based global healthcare company with more than 100 years of history, Terumo BCT has been a leader in blood and cell technology. For the CGT space, its solutions are used for developing and commercializing cell-based therapies for cancer, sickle cell disease and more. Terumo BCT has long been dedicated to enabling iPS cell research and therapeutics development, and its Quantum™ line of hollow-fiber perfusion-based cell expansion platforms is an established technology for scaling the rapid expansion of iPS cells using Good Manufacturing Practices (GMP).

About Terumo Blood and Cell Technologies

Terumo Blood and Cell Technologies (Terumo BCT) is a medical technology company. Our products, software and services enable customers to collect and prepare blood and cells to help treat challenging diseases and conditions. Our employees worldwide believe in the potential of blood and cells to do even more for patients than they do today. This belief inspires our innovation and strengthens our collaboration with customers. Terumo BCT's customers include blood centers, hospitals, therapeutic apheresis clinics, cell collection and processing organizations, researchers and private medical practices. Our customers are based in over 150 countries. We have 750+ granted patents, with more than 150 additionally pending. We have global headquarters in Lakewood, Colorado, along with four regional headquarters, seven manufacturing sites and five research and development centers across the globe. Terumo Blood and Cell Technologies is a subsidiary of Terumo Corporation (TSE: 4543), a global leader in medical technology.

About the CiRA Foundation

The CiRA Foundation is a public interest incorporated foundation that was founded by Kyoto University to manage some of the responsibilities previously handled by the Center for iPS Cell Research and Application (CiRA), Kyoto University. The President is Shinya Yamanaka M.D. Ph.D., and he is well known as the Nobel Prize winner in Physiology or Medicine in 2012 for successfully reprogramming skin cells and creating iPS cells. The CiRA Foundation's goal is to bring top-tier iPSC technologies at reasonable cost. It also acts as a bridge between academia and industry for the production, storage, and quality control of iPS cells.