

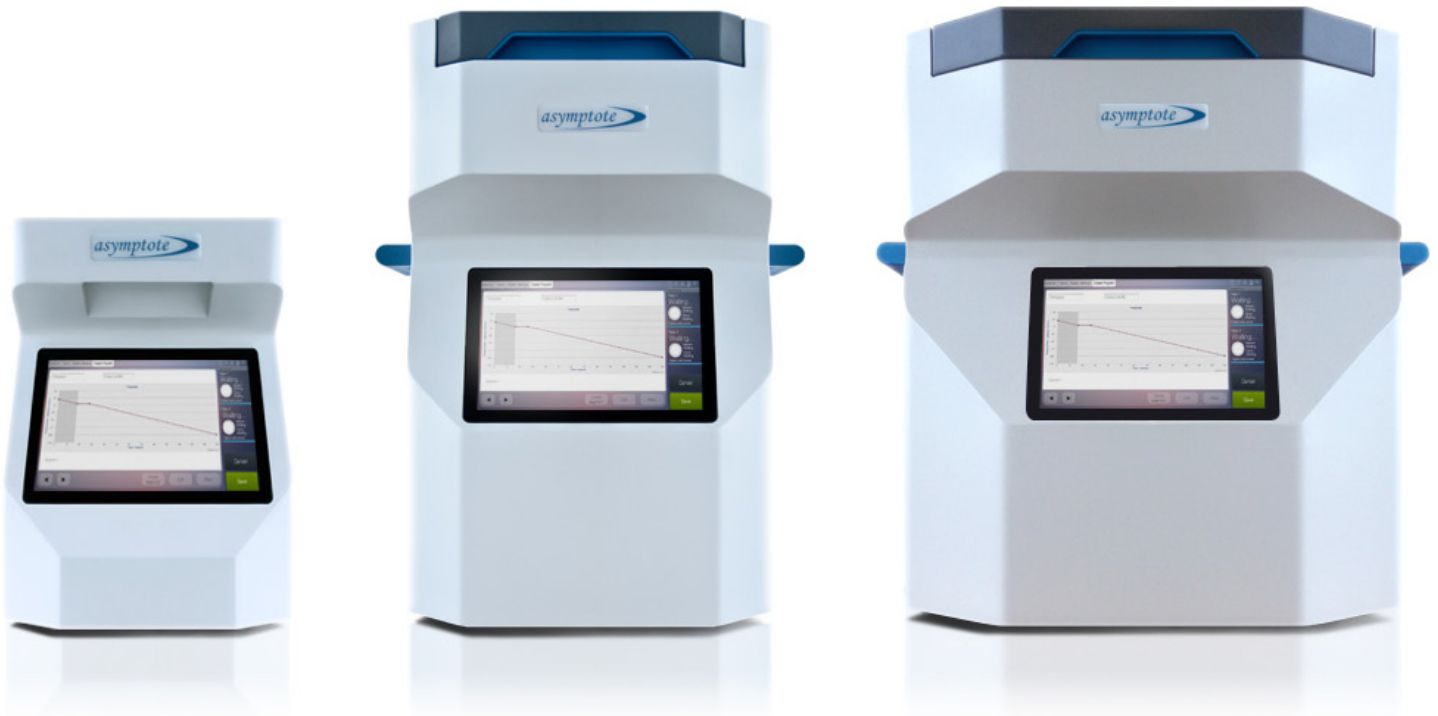
22nd April 2014

Asymptote launching the VIA Freeze range of controlled rate freezers at ISCT Paris

Cambridge-based cryopreservation specialists Asymptote Ltd will launch its unique range of liquid nitrogen free controlled rate freezers specially designed for the needs of regenerative medicine at the annual meeting of the International Society for Cellular Therapy (ISCT) to be held in Paris.

Cryopreservation is the long term stabilisation of cells and tissues achieved by freezing. This process takes the cells down to and stores them at cryogenic temperatures (below -150°C) in a precisely controlled way. It is recognised that cryopreservation is critical to the future of many cell therapeutics to achieve eventual product translation and delivery. However the standards demanded for cryopreservation of cells for clinical application cannot be met with conventional equipment. The VIA Freeze range of controlled rate freezers are the first elements of a cryogenic cold chain in development by Asymptote which will ensure the high quality standards required for clinical delivery of cells and tissues in regenerative medicine. This concept is being supported by a number of grants from the Technology Strategy Board as part of its strategy to support the development of manufacturing tools and technologies for this new industry. Asymptote is working closely with leading scientists, manufacturers and regulators in the field of regenerative medicine for input both on the specifications of the equipment and for testing the performance of the equipment with a wide range of cell therapies ranging from banking of stem cell lines for manufacturing purposes through to a bioartificial liver.





Conventional cryogenic equipment uses liquid nitrogen as a coolant, the Asymptote cold chain exploits Stirling cryocoolers. For operation only electricity is required, avoiding the cost of liquid nitrogen and its associated infrastructure resulting in low running and capital costs. The avoidance of liquid nitrogen also allows the equipment to be easily employed in the clean rooms in which regenerative medicines are manufactured since the contamination and oxygen depletion problems are eliminated.

Three models of the controlled rate freezers will be launched at ISCT, with different capacities to suit applications ranging from process development in the laboratory, establishment of cell banks in a manufacturing facility to final production of clinical samples. Optimised thermal design ensures accurate control of product cooling rates whilst minimising sample-to-sample variation. These new controlled rate freezers provide a validated, scalable and robust solution to cryopreservation. A wide range of containers may be processed in the equipment and variants support direct integration with vial filling equipment, increasing throughput, decreasing exposure time to cryoprotectant. The freezer has a touch screen user interface with fully featured software making the system exceptionally easy to use.

Asymptote plans to launch other components of its liquid nitrogen free cold chain within the next year, offering a storage and shipping systems and bespoke devices for thawing cells. This cold chain will be fully regulatory compliant from sourcing of cells in the operating theatre through manufacturing and final to delivery to the patient.

Notes for editors

Contact Asymptote:

info@asymptote.co.uk

Contact Asymptote's press officer:

sacton@asymptote.co.uk

Website:

www.asymptote.co.uk

Telephone:

(01223) 421 161

Technology Strategy Board:

www.innovateuk.org