

LGC to bring Abcellute's revolutionary hepatocyte preservation technology to European researchers

Guaranteed supply of "fresh" cells will have major impact on drug discovery costs

LGC Standards, Europe's leading supplier of reference standards, in combination with Abcellute Ltd, a Cardiff(UK)-based biotech company, have signed a commercial agreement to bring a revolutionary new approach to the preservation of hepatocyte cells for use in preclinical drug discovery to the European research community.

Hepatocytes – cells from the liver which play a key role in the metabolism of many prescription drugs - are widely used throughout the pharmaceutical discovery community to uncover the key toxicological effects of many potential new drug candidates. Traditionally refrigeration at +4°C has been used to slow down cell metabolism and increase the shelf life of fresh cells, but is unable to halt the irreversible metabolic changes which occur within the cell. As a result many researchers have resorted to using cells stored frozen in liquid nitrogen (cryopreservation). Under these extreme conditions, some of the cells will survive for long periods, but the subsequent yield of the thawed cells is very low. Moreover, many of the natural metabolic systems are considerably diminished in activity, resulting in the use of a cell which does not represent all of the natural characteristics of a living cell.

The cell preservation technology developed by the scientists at Abcellute uses a patented mixture of nutrients and immersion of the cells in a unique matrix which coats and protects them allowing cell survival for up to 5 days with minimal loss of function. In particular the maintenance of phase 2 enzyme activity will be key in providing scientists using the Abcellute cells with a product comparable to using fresh cells with the convenience of an extended shelf life. Cells preserved using the Abcellute matrix are stored easily at 10C for up to 5 days where they remain in their original native state. Prior to use, the cells are re-activated and subsequently behave as normal fresh cells, retaining their 'intact whole organ' characteristics. Using the "fresh" cells preserved by the Abcellute technology reduces the need for daily extraction of fresh cells and the risks associated with toxicological evaluations using cryopreserved cells which may not effectively mimic the *in-vivo* situation.

Commenting on the potential that the Abcellute technology brings to the drug discovery market place, Dr Matthias Brommer, Director, LGC Standards, said: *“We are excited by the synergy that this collaboration will create. The ability to preserve hepatocyte cells as “fresh” for 5 days will bring greater convenience, and an improved understanding of the potential for many new compounds, and hence contribute significantly to the understanding of each new candidate’s potential. The technology offers huge potential savings to drug discovery research and pre clinical testing costs in particular.*

“LGC’s strong scientific expertise in cellular toxicology combined with our international logistics capabilities will make access to the Abcellute preserved cells to scientists throughout Europe more efficient and we look forward to assisting our customers improve the quality of preclinical information so crucial for cost-effective decision making.”

“This commercial partnership is the natural progression of the strong relationship which we have developed with LGC Standards over recent years”, said Abcellute’s Chief Executive, Alex Watson. “Research collaborations, such as the DTI MfB Programme (Measurement for Biotechnology) created a platform for the building of respect for each other’s core expertise and commercial values. The subsequent adoption of the Abcellute preservation technology by LGC Standards was a major milestone in the evolution of the commercial partnership. Now, with the implementation of this Agreement, Abcellute will gain significant commercial benefit from LGC Standard’s professional, credible and effective reach into the European Drug Discovery marketplace. We look forward to the further enhancement of this relationship which will include the development of new technologies and products built on the combined core technologies of both companies.

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About LGC Standards reference materials business

The reference materials business at LGC Standards is a Europe-wide distribution business focused on a number of key market sectors including pharmaceutical testing, food analysis, environmental analysis, forensic science, clinical science and general analyte determination. Reference materials assist analysts dealing with a broad range of analyses to improve the accuracy, traceability and repeatability of a diverse range of chemical measurements. LGC Standards’ head office is located at LGC’s Teddington laboratory in the UK with the network of distribution offices including UK, Spain, Sweden, Italy, Germany, Poland, France and India. LGC Standards has distribution partnerships with many of the world’s leading reference materials producers, including ATCC, ULTRA Scientific, Cambridge Isotope Laboratories, NMIA, Cerilliant and the Institute for Reference Materials and Measurements.

About Abcellute

Abcellute was founded in September 2001 as a spinout from the School of Biosciences, Cardiff University. Abcellute’s core technology is based on a novel matrix which permits the

preservation and storage of fresh primary liver cells or hepatocytes for up to 5 days at non-freezing temperatures without loss of biological function or principle biomarkers.

The company's primary strategy is to attain global adoption of its cell preservation platform technology, thereby providing the research community with enhanced cell systems to improve management and development of key areas such as pre-clinical drug evaluation and regenerative medicine.

Abcellute's main operational base is in the Medicentre facility, the Heath Hospital, Cardiff. . Private equity and VC funded, the company has a highly experienced scientific (5 PhDs; 1 MSc), commercial and financial team.

About LGC

LGC is an international science-based company and market leader in analytical, forensic and diagnostic services and reference standards. A progressive and innovative enterprise, LGC operates in socially responsible fields underpinning the safety, health and security of the public and the regulation of industry, for UK government departments and blue chip clients.

LGC operates internationally through five divisions - LGC Forensics, Life & Food Sciences, Pharmaceutical & Chemical Services, LGC Standards and Research & Technology, which houses specialist laboratories for the delivery of contracts under the Department for Innovation, Universities and Skills (DIUS) and to serve its designated role as the UK's National Measurement Institute for chemical and bioanalysis.

Our methodology is extensively accredited to the international standard ISO 17025. Headquartered in Teddington, Middlesex, the LGC Group employs over 1100 staff in 21 laboratories and centres across Europe and in India. Privatised in 1996 and now majority-owned by funds managed by LGV Capital, LGC was founded over 150 years ago as the Laboratory of the Government Chemist - a statutory function maintained by LGC today.

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