



Sphere Medical Holding PLC

Sphere Medical and Birmingham University Medical School Awarded Department of Health Grant for the Development of a Novel Microsensor for Safe Sedation and Anaesthesia

Sphere Medical Holding PLC, the Cambridge, UK, based medical microtech company in collaboration with the University of Birmingham Medical School, is pleased to announce the award of a grant for the development of a novel microsensor for Safe Sedation and Anaesthesia from the Department of Health via The Health Technology Devices (HTD) programme, a new funding scheme aimed at research into innovative healthcare technologies, towards the development of new medical devices.

Due to considerable patient benefits the use of intravenous anaesthetics and sedatives is widespread. In contrast to gaseous anaesthetic agents, however, no device exists to monitor the plasma concentration of intravenous anaesthetics in real time. Consequently, drug delivery relies on a combination of clinical judgement and subjective methods of assessing the depth of anaesthesia, leading to an inherent variability in the quality of anaesthesia or sedation and limiting the use of such drugs with their many favourable properties and patient benefits.

In order to address this significant clinical need, Sphere Medical and The University of Birmingham are collaborating to develop a novel device for the real-time monitoring of the plasma concentration of an intravenous anaesthetic. This work has been awarded a grant from the Department of Health for around £200k as part of a matched funding project. The device will enable clinicians to titrate the drug to the desired target concentration, detect accumulation or changes in the clearance rate of the drug, and provide early detection of faults in the drug delivery system. It will therefore improve the safety, efficacy and cost-effectiveness of total intravenous anaesthesia (TIVA) and sedation, in particular in critical care, and is likely to be rapidly adopted as a standard of care for these procedures, to reduce the incidence of unintended awareness during procedures, and to improve patient outcome and quality of care while reducing costs and waiting times.

The device will be based on the combination of Sphere's existing and proven microsensor technology with a novel, synthetic receptor technology. It has been designed to be compatible with current clinical practice and will provide frequent and accurate information to healthcare professionals throughout the patient's treatment or hospital stay.

Dr Stuart Hendry, Sphere Medical's CEO, said "We are delighted to have received this support from the Department of Health to assist Sphere together with Birmingham University Medical School in the development of a novel monitoring product that has the potential to improve the economics of critical care and benefit millions of patients world wide.

Dr Clutton-Brock, Head of Department of Anaesthesia and Intensive Care Medicine at the University of Birmingham, said "This important grant will fund the combined academic and industrial development of a novel point-of-care testing technique. When developed to a clinically usable stage this will have an immediate impact on the safety, efficacy and efficiency of clinical care in this group of patients"



About Sphere Medical

Sphere Medical PLC is developing highly innovative monitoring products to provide clinical and economic benefits in the critical care environment, based on the company's proprietary technology. The products allow minimally invasive, real time measurement of clinical chemistry parameters and therapeutic drug concentrations, giving healthcare professionals the information they require to more effectively manage therapy and optimise patient outcomes. Sphere Medical was founded in 2002 and is based in Cambridge, UK.

For further information please see www.spheremedical.com

About Birmingham University

The School of Medicine at the University of Birmingham is a major international centre for research and education in medicine and medical sciences. In recent years the School has expanded dramatically, and now has one of the largest intakes of undergraduate students in the UK (450/year), and employs over 1000 teaching, research, technical, support and administrative staff. The Department of Anaesthesia and Intensive Care medicine has a well established programme of research in the field of clinical measurement.

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