

Providing patients with round the clock care.

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A new bedside monitor of volatile organic compounds (VOCs) or biomarkers present in exhaled breath is proposed using sensitive mass spectrometry (MS). Addressing the need for real-time analysis of the deranged cellular metabolism found in high-risk patients in critical care.

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The need

Critical Care patients can experience profound and dynamic disturbances in physiological processes associated with disease or injury. Clinicians need a bedside monitor to indicate the magnitude of these metabolic disturbances in real-time, providing early-warning of impending clinical deterioration and instant feedback to guide therapies.

The solution

A sensitive and fast response MS instrument which allows real-time analysis. In order to mimic the physiological disturbances exhibited in critical illness, pilot investigations will be in healthy volunteers undertaking extreme exercise. It is hoped that a library of candidate biomarkers in exhaled breath will be identified for future use in the clinical setting.

The output

Collaboration with HIDEN Analytical

1st Phase
Healthy volunteer study completed and presented at a national conference

Phase 2
Studies of volunteer trials underway leading to surgical and critical patient studies

Publications submitted and in preparation

Pathway status:

Idea

Research Team

Discovery

Prototype

Safety/Efficacy

Product

Deploy/Commercial

In use