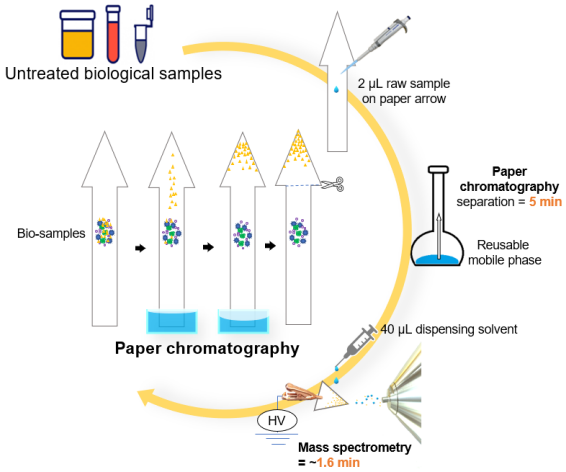
UNIVERSITY OF LIVERPOOL

Enterprise: Licensing & Ventures

Paper-Arrow: Detection of Analytes in Biological Samples



Key Features

- Rapid and cost-effective assay for a range of analytes
- Highly accurate
- Compliance with stringent clinical precision criteria
- Clinical study completed
- User friendly
- Patent pending

The Challenge

The accurate quantification of analytes such as hormones and drug metabolites from biological samples is a vital part of clinical diagnostics. However, in many cases current approaches are inadequate, and most analytical techniques suffer due to interference and matrix effects. This usually mandates significant sample preparation procedures to ensure compliance with stringent precision criteria.

Our Technology

We have developed Paper-Arrow Mass Spectrometry (PA-MS). This technique combines sample collection, extraction, enrichment, separation and ionisation onto a single paper strip, and the entire analysis process, from sample to result, can be carried out in less than 10 min requiring only 2 µL of raw biomedia. For example, inter-individual variability from a panel of human saliva samples was found to be < 10% using this technique (Figure).

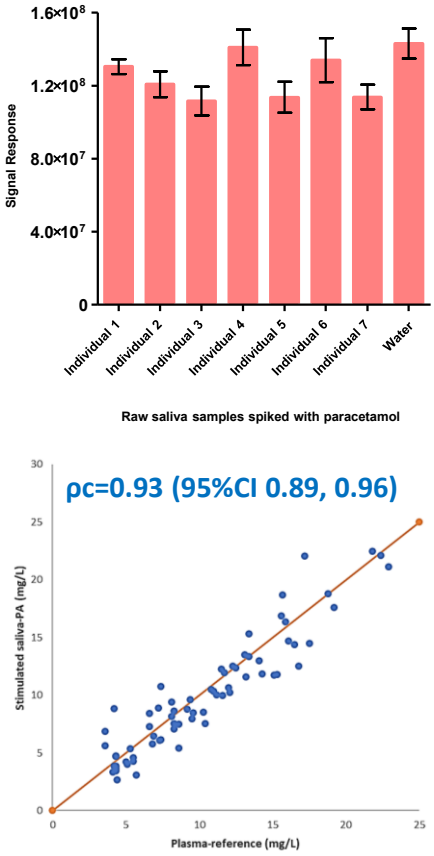


Figure. (right) Comparison of participants' resting saliva sample responses and blank water, and (left) concordance between Paper-Arrow with Raw Saliva and a gold standard test using Plasma.

Competitive Advantage

Our approach has demonstrated performance that out performs best-in-class state-of-the-art methods whilst being user-friendly, rapid and cost-effective.

Opportunity

We are seeking a commercial partner to help drive the development of this technology to a product. We are planning to develop our technology into a collection of assays for a range of analytes.

Intellectual property

We have a pending patent, which can be shared under confidentiality.

Uni Ref: 1011