

# Tandem LCMS approach to metabolite profiling – AppNote Poster

# Hydrophilic and hydrophobic molecules in a single line injection

Presented at the Metabolomics Society meeting in Amsterdam, June 2010; below is the introduction from the poster or you can download and view the entire poster by clicking on the link below.

#### **INTRODUCTION:**

A tandem liquid chromatography (LC) setup has been developed to analyze a larger subset of molecules in a complex sample from a single injection by coupling multiple chromatographic chemistries. We have coupled Reversed Phase (RP) chromatography with Aqueous Normal Phase (ANP) chromatography. The LC configuration allows sequential separation of hydrophilic and hydrophobic compounds on respective, complementary stationary and mobile phases. In a metabolite profiling analysis of a urine extract, approximately 900 and 600 molecules can be detected on RP and ANP columns, respectively. The Tandem-LC setup presented here allows detection of approximately 1500 resolved molecules with both hydrophilic and hydrophobic properties. The Tandem-LC setup can be used to resolve many complex samples, including molecules extracted from plant material, animal tissue, culture fluid and single cellular organisms. The Tandem-LC configuration is robust, relatively simple to setup and greatly reduces instrument and analyst time, even more so when coupled with a fast-polarity switching MS. Presented with the permission of the authors.

### **CONCLUSION:**

We have resolved both hydrophilic and hydrophobic molecules on respective columns from a single in-line injection. A single data file can contain information from both columns as well as data collected in positive and negative mode.

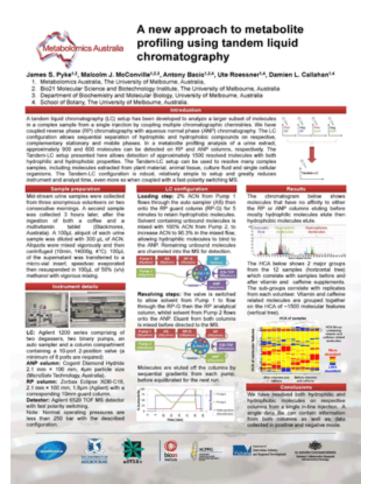
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## **Attachment**

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