Progress toward the validation of liquid chromatography—tandem mass spectrometry-based methods for the quantitative determination of key kynurenine pathway metabolites in human plasma and cerebrospinal fluid

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Abstract

Methods

### SAMPLE PREPARATION

- Matrix effects are observed with each method.
- The exact conditions and parameters to be used in the extraction procedure should be established prior to the validation of the method.
- The use of surrogate matrix calibration standards is recommended to account for matrix effects.
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### Curvature Equivalence

- Methods are ready for formal method validation following demonstration of improvements made to the LLOQ QCs prepared in surrogate matrix; remainder of QCs prepared in genuine heparin human plasma or human CSF

### Test Results - CDF

- The Waters Xevo G2 QDa was used for all analysis of the CDF metabolites. The Xevo G2 QDa has proven to be a robust instrument with high detection limits and excellent signal-to-noise ratios. The instrument was found to be reproducible with good linearity across the entire concentration range.

### Pre-Validation Test Results - CDF

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### Conclusion

- The kynurenine pathway (KP) is a focus of study for neuroprotective effects. In addition, drugs that target the KP may become elevated at some point in time.

### References