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-Original Article-

Profiling of a Wide Range of Neurochemicals in Human Urine by Ultra Performance Liquid Chromatography-Tandem Mass Spectrometry Combined with *In Situ* Selective Derivatization

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Highlights

- A UPLC-MS/MS method was developed to profile a wide range of neurochemicals from the metabolic pathways of tyrosine, tryptophan, and glutamate in human urine samples.
- This is the first time *in situ* selective derivatization is applied to acidic and zwitterionic neurochemicals.
- Acidic and basic neurochemicals were simultaneously detected in positive ion mode.
- Appropriate MRM transition ions were chosen based on MS/MS fragmentations.
- Clinical approach for the observation of metabolic alterations of neurochemicals in urine samples of Parkinson's disease patients.