

## Accepted Manuscript

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

Authors: Wonwoong Lee, Na Hyun Park, Tae-Beom Ahn, Bong Chul Chung, Jongki Hong

PII: S0021-9673(17)31505-4  
DOI: <https://doi.org/10.1016/j.chroma.2017.10.021>  
Reference: CHROMA 358926

To appear in: *Journal of Chromatography A*

Received date: 17-5-2017  
Revised date: 28-8-2017  
Accepted date: 6-10-2017

Please cite this article as: Wonwoong Lee, Na Hyun Park, Tae-Beom Ahn, Bong Chul Chung, Jongki Hong, Profiling of a Wide Range of Neurochemicals in Human Urine by Ultra Performance Liquid Chromatography-Tandem Mass Spectrometry Combined with *In Situ* Selective Derivatization, *Journal of Chromatography A* <https://doi.org/10.1016/j.chroma.2017.10.021>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



-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**

**Wonwoong Lee,<sup>a</sup> Na Hyun Park,<sup>a</sup> Tae-Beom Ahn,<sup>b</sup> Bong Chul Chung<sup>c</sup>, Jongki Hong<sup>a,\*</sup>**

<sup>a</sup>College of Pharmacy, Kyung Hee University, Seoul 02447, Korea

<sup>b</sup>Department of Neurology, College of Medicine, Kyung Hee University, Seoul 02447, Korea

<sup>c</sup>Molecular Recognition Research Center, Korea Institute of Science and Technology,  
Seoul 02792, Korea

\* Corresponding author: Tel: +82-2-961-9255; Fax: +82-2-961-0357;

E-mail: [jhong@khu.ac.kr](mailto:jhong@khu.ac.kr)

### 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.

Download English Version:

<https://daneshyari.com/en/article/7609505>

Download Persian Version:

<https://daneshyari.com/article/7609505>

[Daneshyari.com](https://daneshyari.com)