Supplemental Material For

Method Development and Validation for Quantitation of FruArg in Mice Plasma and Brain Tissue Using UPLC-MS/MS

Mitch C. Johnson[1,2], Hailong Song[2,3,4], Jiankun Cui[2,3,4], Valeri V. Mossine[2,5], Zezong Gu[2,3,4,*], and C. Michael Greenlief [1,2,*]

[1]Department of Chemistry, University of Missouri, Columbia, Missouri, 65211, United States
[2]Center for Botanical Interaction Studies, University of Missouri, Columbia, Missouri, 65211, United States
[3]Center for Translational Neuroscience, University of Missouri School of Medicine, Columbia, Missouri, 65212, United States
[4]Department of Pathology & Anatomical Sciences, University of Missouri School of Medicine, Columbia, Missouri 65212, United States
[5]Department of Biochemistry, University of Missouri, Columbia, Missouri, 65211, United States

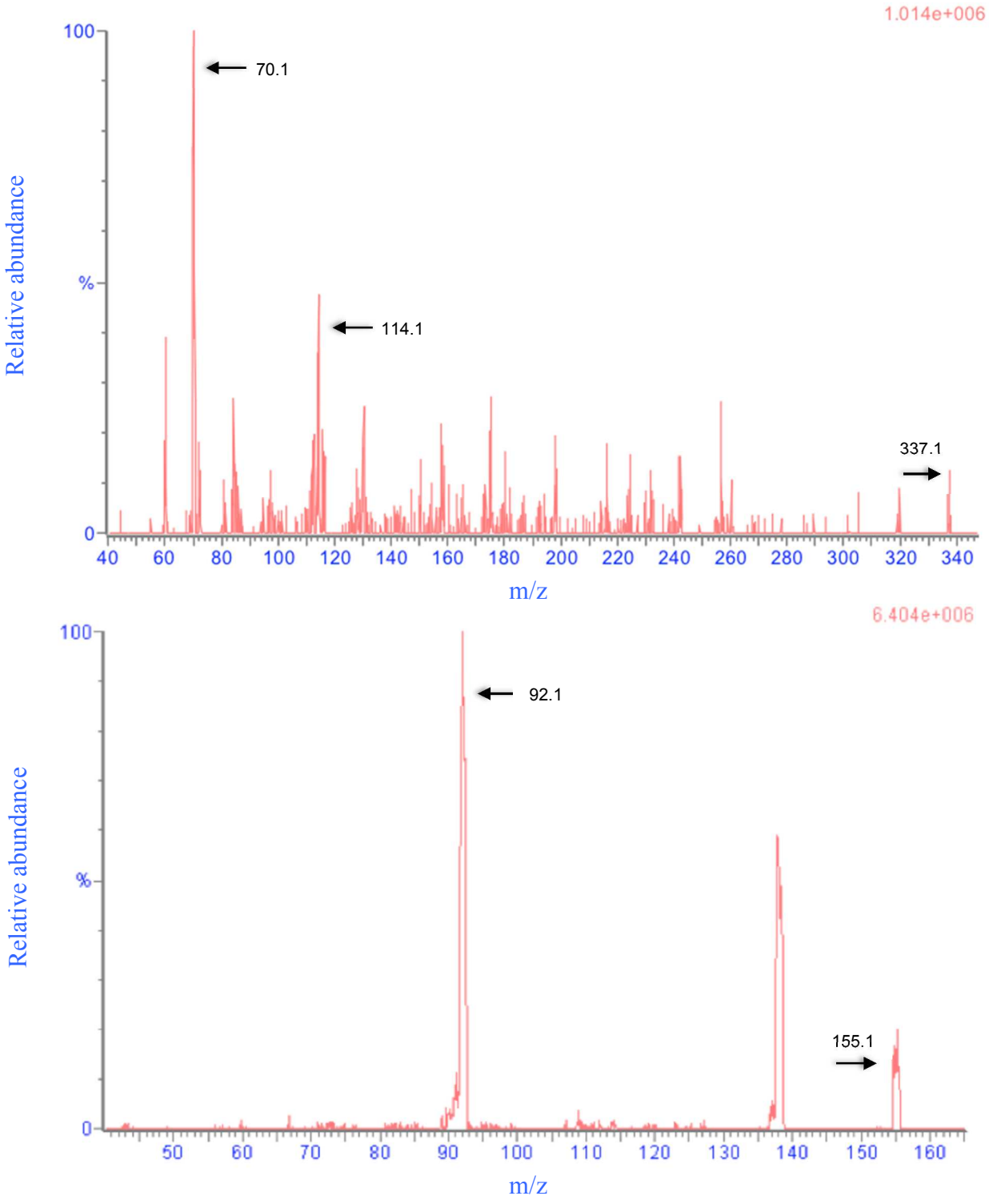

Figure S1. Product ion mass spectrum (MS/MS) for FruArg (top) and L-Lysine-d_8 (bottom). Parent m/z of FruArg is 337.3 Da and L-Lysine-d_8 is 155.1 Da. MRM transitions of FruArg were identified at m/z = 337.1 → 70.1 and 114.1 Da; as well as m/z = 155.1 → 92.1 Da for L-Lysine-d_8. The most abundant daughter ions were used for quantification.

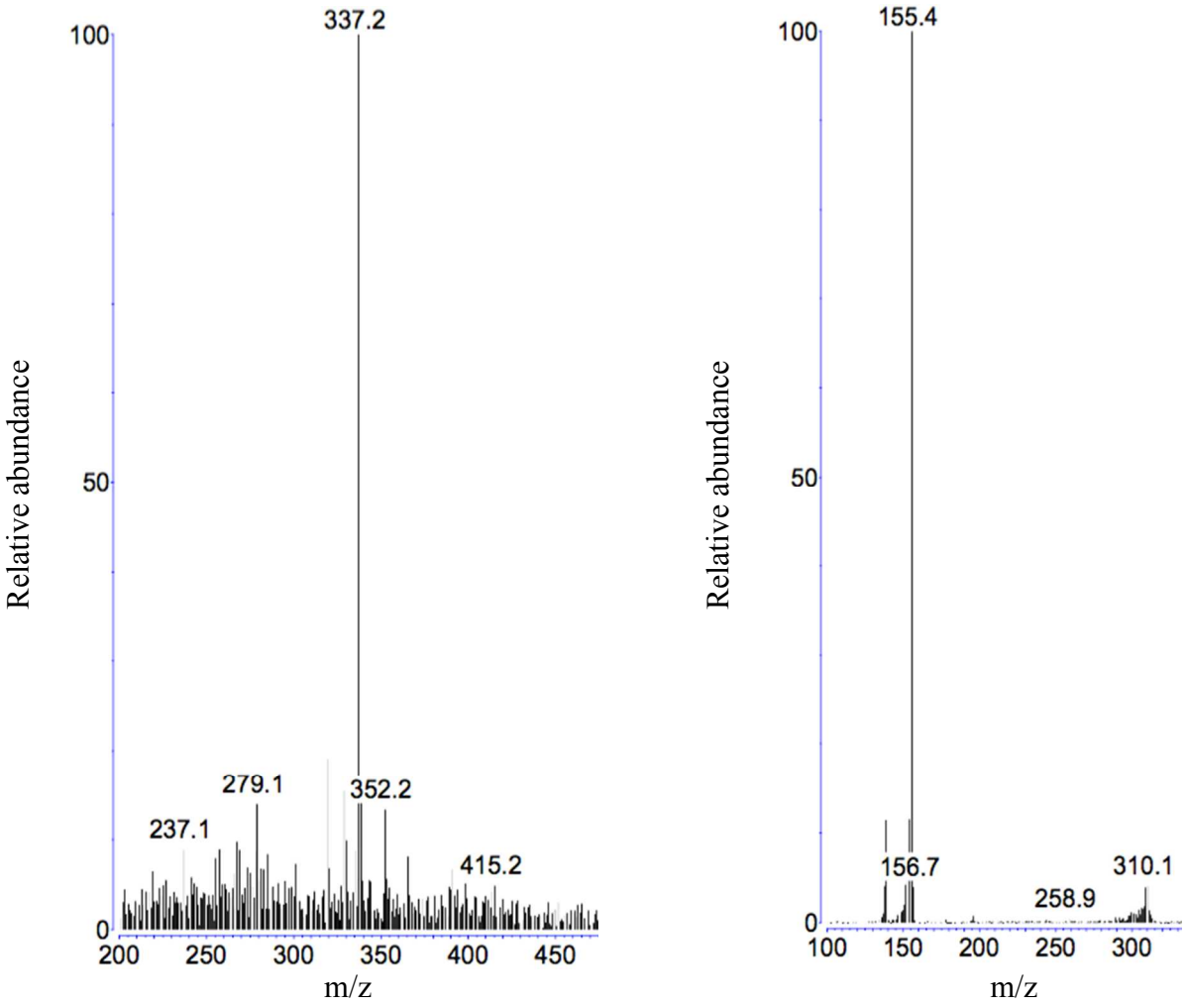

Figure S2. Direct infusion mass spectrum of FruArg (left) and L-Lysine-d_8 (right) using ESI positive mode.

Table S1. Average [FruArg] (n=3) at 15 min after intraperitoneal injection	
	[FruArg] pmol/mg tissue ± SE
cerebellum	6 ± 2
cortex	4 ± 2
hippocampus	4 ± 2
striatum	7 ± 3

SE: Standard error

Table S2. Average values (n=4) for AUC FruArg/L-Lysine d_8 spiked before SPE, after SPE and external FruArg standards.		
	Plasma $\frac{\text{AUC FruArg}}{\text{AUC L-Lysine d8}} \pm$ SE	**Brain Tissue** $\frac{\text{AUC FruArg}}{\text{AUC L-Lysine d8}} \pm$ SE
FruArg spike before SPE	2.43 ± 0.01	2.89 ± 0.04
FruArg spike after SPE	2.44 ± 0.02	4.6 ± 0.2
FruArg external standard	2.447 ± 0.001	4.41 ± 0.02

SE: Standard error