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Correction: UHPLC-MS/MS combined with microdialysis for simultaneous determination of nicotine and neurotransmitter metabolites in the rat hippocampal brain region: application to pharmacokinetic and pharmacodynamic study

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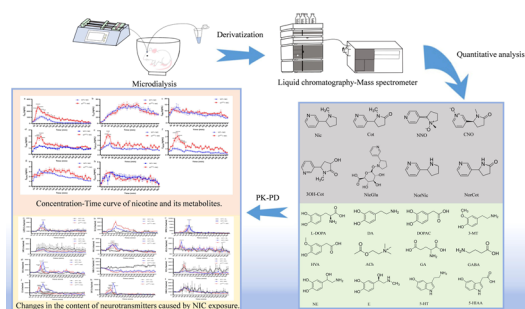
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Correction for 'UHPLC-MS/MS combined with microdialysis for simultaneous determination of nicotine and neurotransmitter metabolites in the rat hippocampal brain region: application to pharmacokinetic and pharmacodynamic study' by Mingyu Zhu *et al.*, *Anal. Methods*, 2024, <https://doi.org/10.1039/d4ay00522h>.

The authors regret that there were multiple errors in the original article.

In the graphical abstract, "GluNic" should be changed to "NicGlu". The corrected graphical abstract is shown below.



In Table 4, the "Glu" row should be changed to "GA". The corrected Table 4 is shown here.

In Table 5, the "Nic" column should be changed to "WT". The corrected Table 5 is shown here.

In the conclusion, the sentence "Nicotine administration leads to an elevation in the concentration of ACh, Glu, DA, NE, and 5-HT, the rats exhibit increased activity, followed by rapid breathing and heightened heart rate, eventually returning to a state of calmness." should be changed to "Nicotine administration leads to an elevation in the concentration of ACh, GA, DA, NE, and 5-HT, the rats exhibit increased activity, followed by rapid breathing and heightened heart rate, eventually returning to a state of calmness."

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Table 4 Stability of the 20 target compounds under three storage conditions ($n = 6$)

Comp.	Added conc.	Three freeze–thaw cycles ($n = 6$)		Room temperature for 24 h ($n = 6$)		−80 °C for 7 days ($n = 6$)	
		Precision RSD (%)	Accuracy RE (%)	Precision RSD (%)	Accuracy RE (%)	Precision RSD (%)	Accuracy RE (%)
ACh	1	5.8	2.1	7.5	9.1	3.8	0.9
	20	2.3	1.2	4.3	3.5	2.5	1.2
	50	3.5	0.7	1.9	3.3	2.2	1.4
GA	10	3.5	0.4	4.4	−5.9	2.7	5.4
	200	4.1	0.2	2.8	1.6	2.3	2.6
	500	3.3	−2.8	1.3	0.4	2.2	5.3
GABA	1	1.6	0.9	2.5	−4.1	1.4	0.7
	20	1.3	−0.1	0.7	0.7	0.6	−3.5
	50	3.6	−0.3	0.8	0.6	0.8	−5.1
5-HIAA	1	6.0	1.8	5.2	−1.4	5.0	−1.1
	20	2.8	−4.6	2.6	−4.5	1.5	−5.0
	50	2.2	−1.1	2.1	1.6	1.3	1.4
HVA	1	2.0	−0.8	3.9	−3.1	2.5	−3.3
	20	0.6	−1.1	1.2	−1.4	0.9	−2.1
	50	2.6	−0.1	0.9	0.1	0.8	−0.1
DA	1	3.2	−0.8	1.4	−0.5	3.3	−4.1
	20	4.2	1.9	6.2	−3.7	3.2	0.7
	50	4.2	0.5	4.6	1.1	4.7	9.3
E	1	8.1	−4.0	7.2	6.0	2.0	−1.6
	20	1.6	−6.4	3.5	−1.5	1.5	−6.8
	50	3.5	0.2	1.7	−1.2	1.4	1.0
3-MT	1	2.0	2.9	1.8	0.0	1.6	−1.1
	20	3.7	2.6	1.1	1.8	1.1	0.7
	50	6.2	−0.2	1.5	0.1	0.5	2.7
NE	1	1.8	0.5	6.2	8.6	1.8	−0.7
	20	2.7	0.9	4.0	0.4	0.9	0.4
	50	6.0	0.4	2.5	3.1	1.0	4.8
5-HT	1	1.7	0.6	2.1	−3.8	1.4	5.0
	20	1.2	0.1	0.9	−1.2	2.2	7.1
	50	2.9	0.6	1.0	0.2	2.2	8.8
L-DOPA	1	9.7	3.0	11.0	1.8	4.8	2.2
	20	3.9	2.0	2.9	−1.2	1.3	5.7
	50	4.7	3.8	0.7	−9.0	1.9	4.4
DOPAC	1	7.0	2.8	4.0	−12.3	3.0	−10.6
	20	6.4	4.3	3.4	−13.8	3.6	−7.5
	50	4.0	9.1	3.9	−9.0	2.9	−3.2
Nic	5	8.8	−7.0	9.9	−3.1	2.3	4.9
	100	7.2	−3.0	9.7	−0.6	3.9	−2.4
	250	3.4	0.2	4.4	2.8	3.8	0.3
Cot	1	3.3	−1.0	3.1	−8.4	1.4	0.7
	20	2.4	−0.6	1.0	−1.9	0.4	2.7
	50	3.1	−2.5	1.2	−2.5	1.3	1.9
NNO	1	8.6	−3.4	3.1	−12.5	3.9	1.9
	20	2.4	1.8	1.4	3.9	2.7	3.1
	50	4.7	−11.9	0.8	−5.8	1.9	−6.9
CNO	1	4.6	−1.2	3.2	−6.0	2.2	−3.5
	20	1.0	−0.7	1.0	−1.7	1.3	−2.3
	50	4.8	−4.7	1.2	−0.3	1.3	−4.5
NorNic	1	2.0	0.1	1.2	−6.2	2.4	−1.4
	20	2.0	0.0	1.0	−3.0	1.4	−0.3
	50	3.0	−1.2	1.4	−0.9	0.6	0.8
NorCot	1	2.5	−0.8	4.1	−4.0	5.4	−2.1
	20	1.6	−2.0	1.6	−2.6	0.8	−3.6
	50	3.7	−2.5	0.8	0.5	0.8	−4.2
3OH-Cot	1	2.0	1.2	3.7	−3.6	2.5	−0.7
	20	2.5	−3.3	1.2	−4.6	2.1	−2.3
	50	2.5	−5.8	2.0	−2.2	2.5	0.5
NicGlu	1	2.7	0.9	4.0	0.6	7.7	6.4
	20	2.5	−8.5	1.4	4.4	4.2	2.7
	50	4.6	−13.8	4.4	3.5	1.5	−1.5



Table 5 Main pharmacokinetic parameters of nicotine and its metabolites after intraperitoneal injection of nicotine into rats

	$t_{1/2z}$ (min)		C_{max} ($\mu\text{g L}^{-1}$)		T_{max} (min)		CLZ/F ($\text{L min}^{-1} \text{kg}^{-1}$)		MRT (0- ∞) (min)		AUC _{0-∞} min ($\mu\text{g L}^{-1} \text{min}^{-1}$)	
	$\alpha 7^{\text{ko}}$	WT	$\alpha 7^{\text{ko}}$	WT	$\alpha 7^{\text{ko}}$	WT	$\alpha 7^{\text{ko}}$	WT	$\alpha 7^{\text{ko}}$	WT	$\alpha 7^{\text{ko}}$	WT
Nic	58.83	23.52	276.99	133.46	41.67	56.67	0.04	0.10	144.77	96.29	34 173.50	11 024.32
Cot	167.66	120.18	72.45	65.50	181.67	215.00	0.05	0.06	348.58	313.40	19 705.22	20 287.00
NorNic	146.60	765.68	4.35	3.75	153.33	55.00	0.83	0.91	291.95	1118.92	1293.21	1971.44
NorCot	27.38	90.37	4.22	3.82	138.33	98.33	1.16	0.96	181.89	234.13	865.86	1088.49
NNO	145.32	38.21	14.01	16.25	101.67	53.33	0.25	0.36	307.25	176.66	4363.87	2838.20
CNO	59.15	3746.84	3.39	1.55	48.33	78.00	1.70	2.24	199.20	3357.19	615.17	3986.21
3OH-Cot	59.82	97.42	4.44	2.32	51.67	56.67	1.22	1.71	198.63	244.49	825.93	613.30
NicGlu	34.31	32.83	3.76	1.28	60.00	96.00	1.87	5.14	159.27	154.30	546.00	205.15

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

