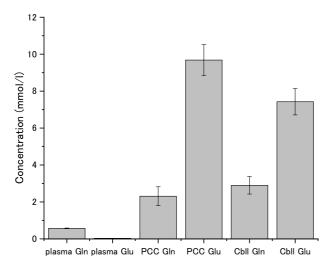
	DCC			CARA	C1-	Ct-	CCII		274.4	.01.
A	PCC 1st	Male 1	tCr 1	GABA 10	Gln 10	Glu 3	GSH 6	<u>mI</u> 4	tNAA 2	tCho 3
A	130	Male 2	2	12	12	4	6	6	2	4
		Male 3	1	11	11	3	6	4	2	3
		Male 4	2	14	11	3	6	5	2	3
		Male 5	2	10	10	3	6	4	1	3
		Male 6	2	10	10	3	7	4	2	3
		Male 7	2	11	10	3	6	4	1	3
		Male 8	1	11	12	3	6	4	1	3
		Male 9	2	10	8	3	6	5	2	4
		Male 10	2	10	11	3	7	4	2	4
		Female 1	2	12	11	3	6	5	2	3
		Female 2	1	9	11	3	6	4	1	3
		Female 3	2	11	14	3	6	5 5	2	4
		Female 4 Female 5	2	11 11	14 13	3	7 6	4	2	4
		Female 6	2	10	9	3	9	7	2	4
		Female 7	1	9	9	3	5	4	1	3
		Female 8	2	11	9	3	6	4	2	4
		Female 9	1	10	11	2	5	3	1	2
		Female 10	2	10	9	3	6	4	1	3
	2nd	Male 1	1	10	11	3	6	4	1	3
		Male 2	2	11	12	3	7	5	2	4
		Male 3	1	12	13	3	6	4	1	3
		Male 4	2	10	10	4	5	5	1	4
		Male 5	2	10	10	3	6	4	1	3
		Male 6	2	10	10	3	7	4	2	3
		Male 7	2 2	12	9	3	6 7	5	2	3
		Male 8 Male 9	1	13 11	11 9	3	6	4 4	2 2	3
		Male 10	1	9	11	3	7	4	1	3
		Female 1	2	12	10	3	7	4	2	3
		Female 2	1	11	14	3	5	4	1	3
		Female 3	1	11	13	3	6	4	1	4
		Female 4	1	10	13	3	6	4	1	3
		Female 5	1	9	13	3	5	4	1	3
		Female 6	1	9	9	3	6	4	1	4
		Female 7	2	12	10	4	6	5	1	4
		Female 8	1	10	10	3	6	4	2	3
		Female 9	1	10	12	3	6	4	1	3
		Female 10	1	11	10	3	6	5	1	4
		mean (SD)	1.5 (0.5)	10.7 (1.1)	10.9 (1.6)	3.1 (0.3)	6.2 (0.7)	4.4 (0.7)	1.5 (0.5)	3.3 (0.5)
В										
D	Cb11		tCr	GABA	Gln	Glu	GSH	mI	tNAA	tCho
	1st	Male 1	1	10	12	4	5	4	2	2
		Male 2	2	8	8	4	6	5	2	3
		Male 3	1	8	8	3	5	4	1	2
		Male 4	2	11	12	6	8	6	3	4
		Male 5	1	10	8	3	5	4	1	2
		Male 6	1	11	10	4	6	4	2	2
		Male 7	1	9	8	4	6	4	2	2
		Male 8 Male 9	1 1	7 9	8 7	3 4	4 7	3 4	1 2	2 2
		Male 10	2	8	10	5	6	6	2	3
		Female 1	2	9	11	4				
		Female 2		,			6	4	2	3
		remale /	2	9	9	4	6 5	4	2 2	3
			2	9 9	9 9		6 5 5		2 2 1	3
		Female 2 Female 3 Female 4				4	5	4	2	3 2
		Female 3	1	9	9 11 9	4 3	5 5 6 5	4 4	2 1	3 2 3 2
		Female 3 Female 4	1 2	9 10	9 11	4 3 4	5 5 6	4 4 4	2 1 2	3 2 3 2 2
		Female 3 Female 4 Female 5	1 2 1	9 10 14	9 11 9	4 3 4 4 4 4	5 6 5 5	4 4 4 3 4 5	2 1 2 1 1 2	3 2 3 2 2 2 3
		Female 3 Female 4 Female 5 Female 6 Female 7 Female 8	1 2 1 1 2 2	9 10 14 9 8 10	9 11 9 7 8 10	4 3 4 4 4 4 5	5 6 5 5 5	4 4 4 3 4 5	2 1 2 1 1 2 2	3 2 3 2 2 2 3 3
		Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9	1 2 1 1 2 2 1	9 10 14 9 8 10 16	9 11 9 7 8 10	4 3 4 4 4 4 5	5 6 5 5 5 10 6	4 4 4 3 4 5 3 4	2 1 2 1 1 2 2 2 1	3 2 3 2 2 3 3 3
		Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10	1 2 1 1 2 2 1 1	9 10 14 9 8 10 16 9	9 11 9 7 8 10 10	4 3 4 4 4 4 5 4 3	5 6 5 5 5 10 6 5	4 4 3 4 5 3 4 4	2 1 2 1 1 2 2 2 1	3 2 3 2 2 2 3 3 3 3
	2nd	Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10 Male 1	1 2 1 1 2 2 2 1 1	9 10 14 9 8 10 16 9	9 11 9 7 8 10 10 9	4 3 4 4 4 5 4 3	5 6 5 5 5 10 6 5	4 4 3 4 5 3 4 4 4 4	2 1 2 1 1 2 2 2 1 1 1 2 2	3 2 3 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10 Male 1 Male 2	1 2 1 1 2 2 2 1 1 1	9 10 14 9 8 10 16 9	9 11 9 7 8 10 10 9	4 3 4 4 4 5 4 3 4	5 6 5 5 5 10 6 5 6 5	4 4 4 3 4 5 3 4 4 4 4 4 3	2 1 2 1 1 2 2 2 1 1 2 1 2	3 2 3 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10 Male 1 Male 2 Male 3	1 2 1 1 2 2 2 1 1 1 1 1	9 10 14 9 8 10 16 9 10 9	9 11 9 7 8 10 10 9 10 9	4 3 4 4 4 5 4 3 4 4	5 6 5 5 5 10 6 5 6 5	4 4 4 3 4 5 3 4 4 4 4 3 4	2 1 2 1 1 2 2 2 1 1 2 1 2 2 1 1 2 2 2	3 2 3 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 4 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10 Male 1 Male 2 Male 3	1 2 1 1 2 2 2 1 1 1 1 1 1	9 10 14 9 8 10 16 9 10 9	9 11 9 7 8 10 10 9 10 9	4 3 4 4 4 5 4 3 4 4 4 5	5 6 5 5 5 10 6 5 6 5	4 4 4 3 4 5 3 4 4 4 4 4 4 4	2 1 2 1 1 2 2 1 1 1 2 2 1 1 2 2 2 1 1 2 2 2 2 1 2	3 2 3 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 8 Female 9 Female 10 Male 1 Male 2 Male 3 Male 4	1 2 1 1 2 2 1 1 1 1 1 1	9 10 14 9 8 10 16 9 10 9	9 11 9 7 8 10 10 9 10 9	4 3 4 4 4 5 4 3 4 4 4 5	5 6 5 5 5 10 6 5 6 5 5	4 4 3 4 5 3 4 4 4 4 5 5	2 1 2 1 1 2 2 1 1 2 2 1 1 2 2 2 1 2	3 2 3 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5	1 2 1 1 2 2 1 1 1 1 1 1 1 1 2 2	9 10 14 9 8 10 16 9 10 9 15 9	9 11 9 7 8 10 10 9 10 9 16 8 8	4 3 4 4 4 5 4 3 4 4 5 5 4 5 4 5 5	5 6 5 5 10 6 5 6 5 6 5 7	4 4 4 3 4 5 3 4 4 4 3 4 5 5 5 5 5 5 5 5	2 1 2 1 1 2 2 1 1 2 1 2 2 1 2 2 2 1 2	3 2 3 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 4 Female 5 Female 6 Female 7 Female 9 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6	1 2 1 1 2 2 1 1 1 1 1 1	9 10 14 9 8 10 16 9 10 9 15 9 8 8	9 11 9 7 8 10 10 9 10 9 16 8 8 8	4 4 4 4 5 4 3 4 4 5 4 5 3 4 4 5 5 3 3	5 6 5 5 10 6 5 6 5 6 5 7	4 4 3 4 5 3 4 4 4 4 3 4 5 5 4 4 5 4 5 4	2 1 2 1 1 2 2 2 1 1 2 2 2 1 2 2 2 1 2 2 2 1	3 2 3 2 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5	1 2 1 1 2 2 2 1 1 1 1 1 1 1 1 2 2 1	9 10 14 9 8 10 16 9 10 9 15 9	9 11 9 7 8 10 10 9 10 9 16 8 8	4 3 4 4 4 5 4 3 4 4 5 5 4 5 4 5 5	5 6 5 5 5 10 6 5 6 5 5 6 5 7 7	4 4 4 3 4 5 3 4 4 4 3 4 5 5 5 5 5 5 5 5	2 1 2 1 1 2 2 1 1 2 1 2 2 1 2 2 2 1 2	3 2 3 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 6 Female 7 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7 Male 8	1 2 1 1 2 2 2 1 1 1 1 1 1 1 1 1 2 2 1	9 10 14 9 8 10 16 9 10 15 9 8 8 8	9 11 9 7 8 10 10 9 10 9 16 8 8 12 8 8	4 3 4 4 4 5 4 3 4 4 5 4 5 4 5 4 5 4 5 4	5 6 5 5 10 6 5 6 5 6 5 7	4 4 3 4 5 3 4 4 4 5 5 3 4 4 4 5 5 4 4 5 4 4 5 4 4 5 4 4 4 4	2 1 2 1 1 2 2 2 1 1 2 2 2 1 2 2 1 2 2 2 1 2	3 2 3 2 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 9 Female 9 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7	1 2 1 1 2 2 1 1 1 1 1 1 1 2 2 1 1 1 1 2 1	9 10 14 9 8 10 16 9 10 9 15 9 8 8 8	9 11 9 7 8 10 10 9 10 9 16 8 8 12 8	4 4 4 4 5 4 4 5 4 4 5 4 5 4 4 5 4 4 5 4 4 4 5 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 5 4 5 5 4 5 5 4 5 5 4 5 5 4 5 5 4 5 5 5 4 5	5 6 5 5 5 10 6 5 6 5 7 7 5 5 5	4 4 3 4 5 3 4 4 4 5 5 5 4 4 4 5 5 5 4 4 4 5 5 5 6 4 4 5 5 6 7 8 7 8 7 8 8 7 8 8 7 8 7 8 8 8 7 8 7	2 1 2 1 1 2 2 1 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 1 2 2 2 1 2 1 2 2 2 2 1 2 1 2 2 2 2 1 2 1 2 1 2 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 1 2 1 1 2 1 1 2 1 2 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 2 2 1 2 1 2	3 2 3 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7 Male 8 Male 8 Male 9 Male 10	1 2 1 1 2 2 2 1 1 1 1 1 1 2 2 1 1 1 1 2 1	9 10 14 9 8 10 16 9 10 9 15 9 8 8 8 8	9 11 9 7 8 10 10 9 10 9 16 8 8 12 8 8	4 4 4 4 5 4 4 5 5 3 4 4 5 3 4 4 5 5 3 4 5 5 3 4 5 5 5 5	5 6 5 5 5 10 6 5 6 5 7 7 5 5 6	4 4 3 4 5 3 4 4 4 5 5 5 4 4 4 5 5 5 4 4 5 5 4 4 5 5 4 4 5 5 4 4 5 5 4 4 4 5 5 4 4 4 5 5 4 4 5 5 4 4 4 5 5 5 4 4 4 5 5 5 4 4 4 4 5 5 5 5 4 4 4 4 4 4 4 4 4 5 5 4 4 4 4 4 4 5 5 4 4 4 4 4 5 5 5 5 4 4 4 4 5 5 5 5 4 4 4 4 5 5 5 4 4 4 4 5 5 5 4 4 4 5 5 5 5 4 4 4 4 5 5 5 5 5 4 4 4 4 5 5 5 5 4 4 4 5 5 5 5 4 4 5 5 5 5 5 4 4 5	2 1 2 1 1 2 2 1 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 1 1 2 2 1 1 2 1 2 1 2 1 1 2 1 1 1 1 2 1	3 2 3 2 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2
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	2nd	Female 3 Female 5 Female 6 Female 7 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7 Male 8 Male 9 Male 10 Female 10 Female 1	1 2 1 1 2 2 2 1 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 2 1 1 1 1 1 1 1 2 1	9 10 14 9 8 10 16 9 10 9 15 9 8 8 8 9	9 11 9 7 8 10 10 9 10 9 16 8 8 12 8 9 11 8	4 4 4 4 5 4 5 4 5 3 4 4 5 5 4 5 5 4	5 6 5 5 5 10 6 5 6 5 5 5 5 7 5 5 5 5 6 6 5 5 6 6 5 5 6 6 6 5 5 5 6 6 6 6 5 5 6	4 4 4 5 3 4 4 4 4 5 5 4 4 4 5 5 4 4 4 5 5 4 4 5 5 4 4 5 5 4 4 5 5 4	2 1 2 1 1 2 2 1 1 2 2 2 2 2 2 1 1 2 2 2 2 1 1 2 2 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1	3 2 3 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2 2
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	2nd	Female 3 Female 5 Female 6 Female 7 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7 Male 8 Male 9 Male 10 Female 10 Female 1 Female 2 Female 3 Female 5 Female 5 Female 6	1 2 1 1 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1	9 10 14 9 8 10 9 10 9 15 9 9 8 8 8 9 9 8 9	9 11 9 7 8 10 10 9 10 9 16 8 8 8 12 8 9 11 8 8 9	4 3 4 4 4 5 4 5 4 4 4 4 4 4 4	5 6 5 5 5 10 6 5 6 5 5 5 5 5 7 5 5 5 6 6 5 5 6 6 6 6	4 4 4 5 3 4 4 4 5 5 4 4 4 5 5 4 4 4 4 4	2 1 2 1 1 2 2 1 1 2 2 2 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 2 1 2 2 2 2 1 2	3 2 3 2 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2
	2nd	Female 3 Female 5 Female 5 Female 6 Female 7 Female 8 Female 10 Male 1 Male 2 Male 3 Male 4 Male 5 Male 6 Male 7 Male 8 Male 10 Female 10 Female 2 Female 3 Female 3	1 2 1 1 2 2 1 1 1 1 1 2 1 1 1 1 1 1 1 1	9 10 14 9 8 10 16 9 10 9 15 9 8 8 8 9 9 8 8 9	9 11 9 7 8 10 10 9 16 8 8 12 8 8 9 11 8 10 10 10 9 16 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10	4 4 4 5 4 4 5 4 5 4 4 4 4 4 4 4	5 6 5 5 5 10 6 5 6 5 5 5 5 7 7 5 5 6 6 5 6 6 6 6 6 6	4 4 4 3 4 5 3 4 4 4 4 5 5 4 4 4 4 5 5 4 4 4 4	2 1 2 1 1 2 2 1 1 2 2 2 2 2 2 1 1 2 2 2 1 1 2 2 2 1 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2	3 2 3 2 2 2 3 3 3 3 2 2 2 2 2 2 2 2 2 2

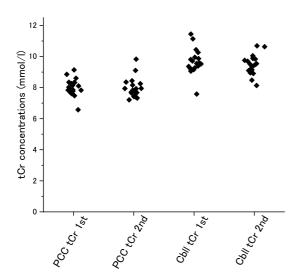
Supplemental Table S1. Cramér-Rao Lower bound (CRLB) in PCC and Cbll.

All CRLB values of each metabolite, which had the mean CRLB less than 15%, were demonstrated (A. PCC, B. Cbll).



Supplemental Figure S1. Concentrations of Glutamine and Glutamate in plasma and brain.

Concentrations of Glutamine and Glutamate in plasma and brain (PCC and Cbll) are demonstrated. While concentrations of Gln in plasma and brain are in the same order, the differences of Glu concentrations in plasma and brain are huge, indicating that the transportabilities of Gln and Glu are different between plasma and brain.



Supplemental Figure S2. tCr concentrations in PCC and Cbll of two measurements.

Each concentration of tCr in all measurements were shown.