

### Plasma Anion( $\mu$ M)

### Supplementary Table 1

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Supplementary Table 1-4														Supplementary Table 1-5																				
		TGU-0W		TGU-0W		0W		TGU-3W		TGU-3W		2W		TGU-2W		TGU-2W		TGU-2W		TGU-2W														
Compound		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																	
Phenylurethane	N	3.5	1.8	2.7	2.7	2.3	2.4	2.3	3.0	1.6	1.5	0.8	0.80	21	7.8	24	9.3	14.3	1.2	1	2	3	4	5	6									
3-Dimethyl sulfide	N	18	15	27	27	18.0	5.5	19	23	30	10	15	19.0	8.1	0.80	99	81	84	24	24	28.3	111	100	104	27.5	27.5	1.25							
Alkanetriol	N	16	16	26	26	16.5	6.4	19	23	20	11	15	6.7	0.847	50	45	49	10	10	6.7	6.7	6.7	6.7	6.7	6.7	6.7								
Trisopropylbenzene	N	11	11	16	16	11.0	1.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0										
2-Hydroxyphenyl-alane	N	4.3	5.3	4.8	5.2	4.9	0.36	4.6	5.5	4.6	5.1	3.7	4.7	0.06	0.013	0.06	0.013	0.06	1.2	10	7.9	11	8.3	9.4	1.2	10	35	15	11	15.7	10.9	2.37		
Cysteine-Sulfate	N	5.8	4.6	5.3	2.6	4.2	1.5	4.5	5.5	6.0	4.5	1.1	5.1	0.064	0.203	10	11	11	30	20.5	13.8	15	18	25	12	15	16.1	5.6	5.3	0.371				
4-Phytol	N	1.6	2.0	1.4	0.82	1.5	0.41	1.5	2.0	2.1	1.8	2.0	0.50	0.209	1.271	3.3	4.8	5.4	5.3	4.8	5.4	5.3	4.8	5.4	5.3	4.8	5.4	5.3	4.8	5.4	5.3	4.8		
Isobutylamine	N	17	19	15	25	18.8	3.6	20	28	31	21	14	25.0	7.7	0.300	1.205	38	33	32	62	44	40.3	20.5	38	53	44	34	56.7	18.2	41.9	1.225			
2-Hydroxybutyrate	N	3.6	3.6	4.4	3.3	3.0	3.7	0.59	4.0	1.9	2.5	2.7	2.7	0.79	0.065	0.76	5.6	6.3	6.7	8.2	5.5	6.3	6.7	5.5	6.3	6.7	5.5	6.3	6.7	5.5	6.3	6.7		
4-Acetylpyridine	N	3.0	3.0	3.0	3.0	3.0	0.50	3.0	3.0	3.0	3.0	3.0	3.0	0.50	0.063	0.063	1.433	2.4	2.1	1.6	0.50	2.7	2.6	2.4	2.3	0.39	0.39	1.128	0.509	0.509	0.509			
2-Hydroxy-4-hydroperoxide	N	1.4	0.74	1.0	0.57	1.0	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0	0.49	0.373	1.403	2.4	2.1	1.6	0.50	2.7	2.6	2.4	2.3	0.39	0.39	1.128	0.509	0.509	0.509			
Penicillate	N	5.6	6.3	6.0	4.5	6.3	0.58	5.7	5.2	5.2	5.4	4.6	5.5	0.54	0.412	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067				
Penicillate	N	1.1	0.71	1.1	1.1	1.1	0.27	1.2	1.2	1.2	1.2	1.2	1.2	0.37	0.361	1.172	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.311	1.199	0.459	1.199	0.459	1.199	0.459			
Aspartate	N	1.1	0.71	1.1	1.1	1.1	0.27	1.2	1.2	1.2	1.2	1.2	1.2	0.37	0.361	1.172	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.311	1.199	0.459	1.199	0.459	1.199	0.459			
Glycine-1-phosphate	N	5.5	5.3	5.5	4.7	5.3	0.68	2.8	5.4	5.7	5.3	5.1	4.9	1.2	0.466	0.951	4.5	7.1	6.4	8.0	6.6	1.3	8.3	7.9	5.9	5.3	7.2	1.5	0.527	0.082	0.082			
2-Methylbutyrate	N	1.8	N.D.	1.8	N.D.	2.0	0.77	1.8	N.D.	2.0	N.D.	N.D.	N.D.	0.22	0.047	0.047	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
Glutarate	N	16	12	9.2	7.3	4.1	9.8	4.6	12	17	7.8	9.0	11.5	3.4	0.19	1.173	12	14	8.8	4.5	10.3	3.8	20	13	12	10	23	15.7	5.7	1.130	1.159	0.844		
Acetate	N	1.8	1.8	1.8	1.8	1.8	0.21	1.8	1.8	1.8	1.8	1.8	1.8	0.21	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061				
Sebacate	N	0.26	0.22	N.D.	N.D.	0.10	0.05	0.20	N.D.	0.21	N.D.	N.D.	N.D.	0.02	0.02	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061				
Lactate	N	250	260	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250					
N-Acetylglutamate	N	2.7	1.5	2.4	2.2	2.2	1.6	2.0	1.6	2.2	2.4	2.2	2.4	1.6	0.50	0.307	0.307	1.50	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5	1.2	1.5		
Pelargonate	N	12	7.3	12	7.0	6.7	8.9	2.6	10	8.5	8.0	8.5	8.0	6.3	1.2	0.655	0.820	9.1	7.6	8.3	9.6	8.7	7.1	8.2	8.0	8.4	8.7	8.2	8.0	8.4	8.7	8.2	8.0	
Dehydroacetate	N	2.5	2.9	3.6	1.7	2.2	2.6	0.78	3.7	3.0	3.7	3.0	3.7	3.0	0.78	0.252	0.252	1.220	4.1	3.6	3.1	3.5	3.7	0.87	4.4	2.1	3.0	1.1	2.004	0.781	0.363	0.363	0.363	
Fumarate	N	2.5	2.9	3.6	1.7	2.2	2.6	0.78	3.7	3.0	3.7	3.0	3.7	3.0	0.78	0.252	0.252	1.220	4.1	3.6	3.1	3.5	3.7	0.87	4.4	2.1	3.0	1.1	2.004	0.781	0.363	0.363	0.363	
2-Hydroxypropanoate	N	7.7	7.4	7.3	7.9	7.6	8.0	0.77	10	7.8	7.6	8.0	7.8	8.5	1.3	0.306	1.050	6.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	7.5	7.2	
4-Methyl-2-pentenoate	N	37	31	44	74	46	46.2	16.7	42	27	35	38	34	35.3	6.0	0.209	0.780	30	17	28	32	38	30	20	32	30	20	32	30	20	32	30	20	32
Glycinate	N	200	240	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250			
2-Oxopropane	N	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8			
N,N-dimethylacetamide	N	8.5	7.8	7.6	7.7	8.5	1.6	7.4	9.0	10	7.0	7.6	7.8	1.2	0.355	0.860	4.5	5.0	4.4	5.0	4.5	5.0	4.4	5.0	4.5	5.0	4.4	5.0	4.5	5.0	4.4	5.0	4.5	
Glyceraldehyde	N	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7			
Ethylene phosphate	N	13.3	8.7	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3			
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.	N.D.	N.D.	0.21	0.061	0.061	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
2-Hydroxybutyrate	N	1.8	N.D.	1.8	N.D.	1.8	N.D.	1.8	N.D.</																									

## **Supplementary Table 1 - 4**

### Metabolome analysis of the

Metabolome analysis of the nephrectomized TG rat plasma and urine by CE-MS. Measured plasma anions (Supplementary Table 1), plasma cations (Supplementary Table 2), urine anions (Supplementary Table 3), urine cations (Supplementary Table 4) are listed. Plasma compounds are listed in the order of magnitude of 3w/0w ratio of TG(-) rat. A higher 3w/0w ratio means a high concentration of the compound at 3 weeks after nephrectomy compared with the value before nephrectomy. Yellow indicate the compounds that show a statistically significant difference in the plasma concentration before and after nephrectomy. We only nominated compounds that showed differences between both TG(-) and TG(+) rats as well as two different TG rat lines. Furthermore, among the compounds depicted in yellow, we further chose compounds that showed significantly lower concentrations in TG(+) rats than in TG(-) rats 3 weeks after nephrectomy, which are depicted in red. Note that under these criteria, we could not find a compound whose plasma concentration was increased in TG(+) rats compared to TG(-) rats 3 weeks after nephrectomy. Statistical difference was determined by Student's t-test.