

SUPPLEMENTARY TABLES

**METABOLOMICS REVEALS ATTENUATION OF THE SLC6A20 KIDNEY TRANSPORTER
IN NONHUMAN PRIMATE AND MOUSE MODELS OF TYPE 2 DIABETES MELLITUS**

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Supplementary Table 1. QPCR Primer Sequences		
QPCR Primer	Sequence (5'-3')	Species
SLC6A20 - FWD	CCATCCTTACCCCTCTGACA	Rhesus
SLC6A20 - REV	CACAGTTGACAAGGCACACC	Rhesus
SLC36A1 - FWD	CATGGTCATTGTCACCATCC	Rhesus
SLC36A1 - REV	GTAGAACTGGAGCGCGTAGG	Rhesus
HNF1 α - FWD	GCTGTACCAGAGCTCAGACTCC	Rhesus
HNF1 α - REV	CATCTGCGTGGAGATGAAGG	Rhesus
COLLECTRIN/TMEM27 - FWD	CTGAAGTGGATGACGCTGAA	Rhesus
COLLECTRIN/TMEM27 - REV	CATCATTAAATGTGCCCTCCC	Rhesus
β -ACTIN - FWD	CCATCATGAAGTGTGACGTGG	Rhesus
β -ACTIN - REV	TTCTGCATCCTGTCAGCAATG	Rhesus
Slc6a20a - FWD	GATGATGTAGGGGACCAGGA	Mouse
Slc6a20a - REV	ATCCGCTGCAGTTCGTGT	Mouse
Slc6a20b - FWD	GATGATGTAGGGGACCAGGA	Mouse
Slc6a20b - REV	ATCTCCTATGCTGTGGGCCT	Mouse
Slc36a1 - FWD	CTTCGTTCCGAAGCCTCTGT	Mouse
Slc36a1 - REV	AGGTGGGCTGAGCAGGAG	Mouse
Hnf1 α - FWD	GACTTGACCATCTTCGCCAC	Mouse
Hnf1 α - REV	CTGAAAGAGCCGGAGAACCT	Mouse
Hnf1 β - FWD	ACCATGGTGACTGATTGTCG	Mouse
Hnf1 β - REV	TCCTCTCCACCCAACAAGAT	Mouse
Slc5a2 - FWD	AAGATGCACCCAGCTTTGAT	Mouse
Slc5a2 - REV	CATTGTCTCGGGCTGGTATT	Mouse
β -Actin- FWD	TATTGGCAACGAGCGGTTCC	Mouse
β -Actin- REV	GGCATAGAGGTCTTTACGGATGTC	Mouse

Supplementary Table 2. Metabolomics Cohort – Demographics and Clinical Chemistry.

Monkey ID	Metabolic Status	Age (years) [†]	Body Weight (kg) [#]	Fasting Plasma Glucose (mmol/l) [‡]	Serum Triglycerides (mmol/l) [‡]	HbA1c (%) [‡]	Plasma Insulin (pmol/l) [§]
C11	N	16	12.0	3.6	1.1	3.9	174
C07	N	27	10.8	4.4	0.7	4.4	257
D12	N	10	16.3	3.1	0.5	4.3	263
E12	N	6	7.5	3.2	0.5	4.2	93
F12	N	8	10.6	2.9	0.8	4	160
F13	N	14	9.7	2.9	0.4	3.8	194
G14	N	20	20.9	2.8	0.5	4.5	472
G11	N	16	9.5	3.3	0.8	4.2	149
T13	N	11	9.4	3.7	0.7	3.8	188
Y10	N	15	14.5	3.4	1.3	4.4	444
B10	T2DM	18	19.0	10.3	5.8	10.1	826
D10*	T2DM	18	20.5	7.4	11.0	9.9	1241
F11	T2DM	16	14.4	12.7	20.1	11	353
J09	T2DM	29	10.9	13.6	5.5	7.9	155
K12	T2DM	25	11.1	10.6	20.6	8.3	252
P11	T2DM	21	18.8	8.7	2.5	10.0	892
S08	T2DM	18	15.6	8.4	7.3	10.1	628
T11	T2DM	24	16.2	6.6	2.9	9.6	3203
U11	T2DM	20	16.2	9.6	19.6	9.9	240
V10	T2DM	24	15.4	11.5	4.0	10.2	875
W10	T2DM	19	15.2	12.9	7.9	10.1	301

[#]p<0.05, [†]p<0.01 using unpaired t test

[§]p<0.01, [‡]p<0.001 using Mann-Whitney U test

*Never received insulin

Supplementary Table 3. Biochemistry Cohort – Demographics and Clinical Chemistry at Death.

Monkey ID	Metabolic Status	Age (years)	Body Weight (kg)	Fasting Plasma Glucose (mmol/l) #	Serum Triglycerides (mmol/l) #	HbA1c (%)#	Plasma Insulin (pmol/l)
I10	N	18.9	9.8	4.8	1.1	4.8	188
C11	N	16.5	12.3	3.1	0.6	4.2	257
Z08	N	27.8	27.2	3.9	0.7	4.5	403
S09	N	30.6	7.1	4.5	1.9	4.3	403
L11	N	28.7	8.0	3.0	0.6	4.4	208
Q12	N	18.7	10.4	3.8	0.3	3.8	264
J06	N	29.7	8.2	3.8	2.3	na	378
Y07	N	14.0	9.5	3.7	0.5	4.0	162
J11	N	26.4	8.7	4.7	2.5	4.4	278
G10	T2DM	23.0	14.9	15.3	2.8	8.2	35
X05	T2DM	29.9	11.3	12.2	2.1	na	180
W04	T2DM	24.3	11.1	19.6	22.7	8.1	250
S08	T2DM	19.2	13.8	9.1	1.5	10.8	458
S10	T2DM	21.9	17.5	15.1	5.9	11.0	306
A10	T2DM	18.9	14.2	17.7	9.9	10.4	222

#p<0.01 using Mann-Whitney U test; na, measurement not available