

Supplemental Table 1 A. Correlation analysis of insulin resistance parameters and body characteristics in mice in CONTROL diet group.

	<i>Males</i>	6 Week Body Weight (g)	17 Week Body Weight (g)	Weight Change (%)	Visceral Fat (g)	Fasting Glucose (mg/dL)	T-CHOL (mg/dL)	HDL-C (mg/dL)	TG (mg/dL)	Random Glucose (mg/dL)	AUC _{GLUCO} SE(mg/dL. min)	K _{ITT} (%/min)	T _{1/2} _{GLUCOSE} (min)
Females													
6 Week Body Weight (g)			0.809**	-0.389	0.325	-0.420	-0.431	0.369	0.269	0.130	-0.055	0.310	-0.088
17 Week Body Weight (g)		0.518*		0.227	0.184	-0.356	-0.351	0.428	0.506*	0.175	-0.054	0.336	-0.075
Weight Change (%)		-0.614**	0.357		-0.260	0.129	0.166	0.061	0.347	0.068	0.021	0.016	0.022
Visceral Fat (g)		0.351	0.412	0.011		0.267	-0.521*	0.166	0.053	0.362	0.263	-0.023	-0.135
Fasting Glucose (mg/dL)		-0.528*	-0.277	0.320	-0.096		0.247	0.092	-0.065	0.433	0.117	-0.005	0.054
T-CHOL (mg/dL)		-0.250	-0.178	0.111	0.053	0.302		-0.412	-0.174	0.007	-0.288	-0.128	-0.027
HDL-C (mg/dL)		0.045	0.148	0.088	-0.024	0.400	-0.001		0.519*	0.436	0.140	0.417	0.009
TG (mg/dL)		-0.302	-0.274	0.076	-0.190	0.574*	0.039	0.270		0.033	-0.045	0.353	0.069
Random Glucose (mg/dL)		-0.492	-0.551	0.152	0.641	0.532	0.499	0.721	0.426		0.335	0.231	-0.260
AUC _{GLUCOSE} (mg/dL.min)		-0.255	-0.197	0.116	0.999*	0.757	0.627	0.783	0.544	0.427		-0.381	0.469*
K _{ITT} (%/min)		-0.430	-0.278	0.296	-0.725	-0.240	-0.006	-0.159	-0.396	0.531*	-0.399		-0.688**
T _{1/2} _{GLUCOSE} (min)		-0.010	-0.134	-0.105	0.970	0.528	0.352	0.495	0.603	-0.393	0.554*	-0.761**	

Significant correlations are indicated in **bold** by ** at the 0.01 level and * at the 0.05 level (2-tailed).Correlations in males are indicated in *italics*.

Supplemental Table 1B. Correlation analysis of insulin resistance parameters, MSG intake and body characteristics in mice in MSG diet group.

	<i>Males</i>	MSG Intake (mg/kg)	6 Week Body Weight (g)	17 Week Body Weight (g)	Weight Change (%)	Visceral Fat (g)	Fasting Glucose (mg/dL)	T-CHOL (mg/dL)	HDL-C (mg/dL)	TG (mg/dL)	Random Glucose (mg/dL)	AUC _{GLUCO} _{SE} (mg/dL.min)	K _{ITT} (%/min)	T _{1/2} _{GLUCOSE} (min)
Females														
MSG Intake (mg/kg)			0.834**	0.627*	-0.725**	0.522*	0.616*	-0.338	-0.029	-0.065	0.285	0.008	0.076	0.039
6 Week Body Weight (g)		0.770*		0.627*	-0.725**	0.522*	0.615*	-0.338	-0.029	-0.065	0.285	0.007	0.099	-0.132
17 Week Body Weight (g)		0.762**	0.761**		0.078	0.563*	0.586*	-0.343	-0.146	-0.275	0.149	-0.193	0.056	-0.187
Weight Change (%)		-0.698**	-0.698**	-0.070		-0.204	-0.285	0.337	0.019	-0.044	-0.017	-0.084	-0.033	-0.010
Visceral Fat (g)		0.510*	0.510*	0.465	-0.273		0.781**	-0.206	0.072	-0.140	0.350	-0.005	0.180	-0.173
Fasting Glucose (mg/dL)		0.328	0.328	0.284	-0.303	0.542*		-0.191	-0.042	-0.269	0.259	0.013	0.006	-0.193
T-CHOL (mg/dL)		0.028	0.027	0.326	0.103	0.555*	0.089		0.399	0.140	0.264	0.216	-0.190	0.250
HDL-C (mg/dL)		-0.133	-0.133	-0.190	0.141	-0.019	-0.166	-0.203		0.261	-0.089	-0.336	-0.070	0.178
TG (mg/dL)		-0.224	-0.223	0.183	0.375	-0.368	-0.227	0.002	0.252		-0.354	0.149	-0.535*	0.583*
Random Glucose (mg/dL)		0.318	0.318	0.228	-0.274	-0.043	0.043	-0.190	-0.393	-0.242		0.514*	0.797**	-0.707**
AUC _{GLUCOSE} (mg/dL.min)		0.329	0.329	0.335	-0.057	0.082	0.550*	-0.155	-0.113	-0.088	0.420		0.274	-0.233
K _{ITT} (%/min)		0.435	0.435	0.099	-0.387	-0.086	0.059	-0.373	-0.582*	-0.397	0.653**	0.310		-0.904**
T _{1/2} _{GLUCOSE} (min)		-0.342	-0.342	-0.229	0.090	0.199	0.272	0.220	0.315	0.242	-0.457*	-0.124	-0.742**	

Significant correlations are indicated in **bold** by ** at the 0.01 level and * at the 0.05 level (2-tailed).

Correlations in males are indicated in *italics*.

Supplemental Table 1C. Correlation analysis of insulin resistance parameters and body characteristics in mice in ASP diet group.

	<i>Males</i>	ASP Intake (mg/kg)	6 Week Body Weight (g)	17 Week Body Weight (g)	Weight Change (%)	Visceral Fat (g)	Fasting Glucose (mg/dL)	T-CHOL (mg/dL)	HDL-C (mg/dL)	TG (mg/dL)	Random Glucose (mg/dL)	AUC _{GLUCO} _{SE} (mg/dL.min)	K _{ITT} (%/min)	T _{1/2} _{GLUCOSE} (min)
Females														
ASP Intake (mg/kg)			0.486*	0.682**	-0.422	0.043	-0.217	-0.204	-0.058	0.628**	-0.319	-0.380	-0.175	0.356
6 Week Body Weight (g)		-0.243		0.680**	-0.424	0.034	-0.219	-0.211	-0.049	0.637**	-0.329	-0.391	-0.165	0.369
17 Week Body Weight (g)		0.464*	0.461*		0.376	0.101	0.351	-0.075	0.177	0.165	0.247	0.030	-0.082	0.074
Weight Change (%)		-0.371	-0.374	0.650**		0.075	0.717**	0.162	0.293	-0.599**	0.715**	0.528*	0.111	-0.353
Visceral Fat (g)		0.103	0.106	-0.119	-0.185		-0.083	-0.022	0.519*	0.164	0.083	0.104	0.139	-0.041
Fasting Glucose (mg/dL)		0.353	0.352	0.631**	0.352	-0.068		-0.320	-0.041	-0.525*	0.598**	0.336	0.196	-0.247
T-CHOL (mg/dL)		0.043	0.040	0.105	0.073	-0.112	0.188		0.097	-0.380	0.439	0.487*	-0.128	-0.277
HDL-C (mg/dL)		0.417	0.419	0.103	-0.253	0.392	0.207	-0.101		0.047	0.048	0.208	-0.061	0.255
TG (mg/dL)		-0.330	-0.327	-0.342	-0.086	0.242	-0.420	-0.276	-0.084		-0.701**	-0.606**	-0.081	0.448
Random Glucose (mg/dL)		-0.031	-0.033	0.674**	0.736**	-0.226	0.738**	0.310	-0.177	-0.251		0.793**	-0.028	-0.349
AUC _{GLUCOSE} (mg/dL.min)		-0.088	-0.090	0.258	0.343	-0.001	-0.081	0.427	-0.218	-0.234	0.297		-0.464*	0.042
K _{ITT} (%/min)		0.132	0.133	0.067	-0.033	0.406	0.477*	0.236	0.296	-0.284	0.383	-0.075		-0.623**
T _{1/2} _{GLUCOSE} (min)		-0.037	-0.038	-0.025	-0.006	-0.354	-0.415	-0.333	-0.216	0.180	-0.434	0.012	-0.960**	

Significant correlations are indicated in **bold** by ** at the 0.01 level and * at the 0.05 level (2-tailed).Correlations in males are indicated in *italics*.

Supplemental Table 1D. Correlation analysis of insulin resistance parameters and body characteristics in mice in MSG+ASP diet group.

	<i>Males</i>	ASP Intake (mg/kg)	MSG Intake (mg/kg)	6 Week Body Weight (g)	17 Week Body Weight (g)	Weight Change (%)	Visceral Fat (g)	Fasting Glucose (mg/dL)	T-CHOL (mg/dL)	HDL-C (mg/dL)	TG (mg/dL)	Random Glucose (mg/dL)	AUC _{GLUCOSE} SE (mg/dL.min)	K _{ITT} (%/min)	T _{1/2} _{GLUCOSE} (min)
Females															
ASP Intake (mg/kg)			0.999**	<i>0.416</i>	<i>0.316</i>	<i>-0.309</i>	<i>-0.095</i>	0.531*	<i>-0.235</i>	<i>-0.211</i>	<i>-0.280</i>	<i>-0.187</i>	<i>-0.057</i>	<i>0.206</i>	<i>-0.403</i>
MSG Intake (mg/kg)		0.999**		<i>0.416</i>	<i>0.368</i>	<i>-0.308</i>	<i>-0.093</i>	0.532*	<i>-0.236</i>	<i>-0.211</i>	<i>-0.280</i>	<i>-0.185</i>	<i>-0.056</i>	<i>0.210</i>	<i>-0.406</i>
6 Week Body Weight (g)		0.788**	0.788**		<i>0.368</i>	<i>-0.308</i>	<i>-0.093</i>	0.532*	<i>-0.237</i>	<i>-0.211</i>	<i>-0.281</i>	<i>-0.185</i>	<i>-0.056</i>	<i>0.209</i>	<i>-0.406</i>
17 Week Body Weight (g)		0.752**	0.752**	0.752**		0.771**	0.511*	0.644**	<i>-0.289</i>	<i>0.022</i>	<i>0.027</i>	<i>0.201</i>	<i>0.415</i>	<i>-0.042</i>	<i>0.040</i>
Weight Change (%)		-0.488*	-0.488*	-0.488*	<i>0.208</i>		0.581*	<i>0.291</i>	<i>-0.132</i>	<i>0.179</i>	<i>0.223</i>	<i>0.336</i>	0.478*	<i>-0.195</i>	<i>0.320</i>
Visceral Fat (g)		0.671**	0.671**	0.671**	0.523*	<i>-0.393</i>		<i>0.040</i>	<i>0.231</i>	0.523*	0.535*	<i>-0.068</i>	<i>0.060</i>	<i>0.030</i>	<i>-0.096</i>
Fasting Glucose (mg/dL)		<i>-0.298</i>	<i>-0.296</i>	<i>-0.297</i>	<i>0.095</i>	0.556*	<i>-0.222</i>		-0.700**	<i>-0.212</i>	<i>-0.072</i>	<i>0.171</i>	<i>0.456</i>	<i>0.469</i>	<i>-0.428</i>
T-CHOL (mg/dL)		<i>0.324</i>	<i>0.324</i>	<i>0.323</i>	<i>0.083</i>	<i>-0.387</i>	<i>0.270</i>	<i>-0.221</i>		<i>0.292</i>	<i>0.280</i>	<i>0.090</i>	<i>-0.338</i>	<i>-0.312</i>	<i>0.243</i>
HDL-C (mg/dL)		<i>-0.159</i>	<i>-0.159</i>	<i>-0.160</i>	<i>-0.384</i>	<i>-0.268</i>	<i>-0.328</i>	<i>-0.355</i>	<i>0.088</i>		<i>0.353</i>	<i>0.068</i>	<i>-0.035</i>	<i>-0.257</i>	<i>0.273</i>
TG (mg/dL)		<i>0.272</i>	<i>0.270</i>	<i>0.270</i>	<i>0.279</i>	<i>-0.025</i>	<i>-0.262</i>	<i>-0.239</i>	<i>0.402</i>	<i>0.269</i>		<i>-0.069</i>	<i>0.140</i>	<i>-0.373</i>	<i>0.426</i>
Random Glucose (mg/dL)		0.596**	0.596**	0.596**	<i>0.378</i>	<i>-0.397</i>	0.676**	<i>-0.047</i>	<i>0.373</i>	<i>-0.200</i>	<i>-0.068</i>		<i>0.390</i>	<i>0.115</i>	<i>-0.125</i>
AUC _{GLUCOSE} (mg/dL.min)		0.462*	0.462*	0.462*	<i>0.233</i>	<i>-0.387</i>	<i>0.492</i>	<i>0.030</i>	<i>0.202</i>	<i>-0.134</i>	<i>-0.330</i>	<i>0.358</i>		-0.719*	<i>0.548</i>
K _{ITT} (%/min)		<i>0.198</i>	<i>0.198</i>	<i>0.198</i>	<i>0.270</i>	<i>0.066</i>	<i>0.114</i>	<i>-0.130</i>	<i>0.137</i>	<i>0.208</i>	<i>0.309</i>	<i>0.336</i>	-0.469*		-0.851**
T _{1/2} _{GLUCOSE} (min)		<i>0.114</i>	<i>0.114</i>	<i>0.114</i>	<i>0.023</i>	<i>-0.148</i>	<i>0.132</i>	<i>0.082</i>	<i>0.250</i>	<i>-0.050</i>	<i>-0.300</i>	<i>-0.022</i>	0.820**	-0.682**	

Significant correlations are indicated in **bold** by ** at the 0.01 level and * at the 0.05 level (2-tailed).Correlations in males are indicated in *italics*.