Table S8. w^{1118} Strain Females Diet Response Surfaces ANOVA & Regression Analysis

Response	Coefficient	Df	Estimate	Sum of Squares	F	P
log (µgTAG/fly)	(Intercept)		3.73			
	Sugar	1	-0.02	1.35	30.44	<0.0001
	Yeast	1	0.10	0.22	5.00	0.0250
	$Yeast^2$	1	-0.06	0.27	6.08	0.0133
	Sugar·Yeast	1	0.05151	0.35	7.8084	0.0078
	Residuals	135		0.0443		
log (µgProt./fly)	(Intercept)		3.26			
	Sugar	1	0.45	0.13	0.67	0.4220
	Yeast	1	0.22	6.20	30.83	<0.0001
	$Sugar^2$	1	-0.11	0.96	4.79	0.0281
	Residuals	136		0.2012		
log (TAG/Prot.)	(Intercept)		-0.02			
	Sugar	1	0.13	2.33	15.54	<0.0001
	Yeast	1	-0.26	8.70	58.00	<0.0001
	Residuals	137		0.1501		
sqrt (µg food /fly/6h)	(Intercept)		19.71			
	Sugar	1	-6.59	0.85	0.99	0.3604
	Yeast	1	-8.09	445.74	518.57	<0.0001
	$Sugar^2$	1	0.87	16.08	18.71	0.0002
	$Yeast^2$	1	0.79	7.19	8.36	0.0054
	Sugar·Yeast	1	2.02	29.09	33.85	<0.0001
	$Sugar^2$·$Yeast^2$	1	-0.07	16.98	19.75	<0.0001
	Residuals	121		0.86		
sqrt (calories/fly/6h)	(Intercept)		0.266			
	Sugar	1	-0.103	0.0954	123.71	<0.0001
	Yeast	1	-0.094	0.1123	145.53	<0.0001
	$Sugar^2$	1	0.025	0.0243	31.50	<0.0001
	$Yeast^2$	1	0.011	0.0003	0.43	0.5173
	Sugar·Yeast	1	0.023	0.0040	5.24	0.0227
	$Sugar^2$·$Yeast^2$	1	-0.001	0.0062	8.07	0.0061
	Residuals	121		0.0008		

Statistical analysis and best fit model for Diet Response Surface estimation (see Experimental procedures for details) presented in Figure S2A (log µgTAG/fly), S2B (log µgProt./fly) S2C (logTAG/Prot), S2D (Sqrt (Food/fly/day)), and S2E (Sqrt (calories/fly/day)). Estimated regression coefficients are from a multiple regression analysis, while degrees of freedom (Df), sums of squares, and F values are obtained by ANOVA. P values are obtained by randomization.