

**Table S1.** Results from the Linear mixed models (LMM). LMM to predict biomarker responses with concentration (formula: *biomarker* ~ conc). The model included replicate as a random effect (formula: ~1 | replicate). Analysis was performed using R package nlme.

		formula	random effect	conditional R <sup>2</sup>	marginal R <sup>2</sup>	Intercept	95% CI	t(54)	P
<b>Protein</b>									
	3 days	protein ~ concentration	replicate	0.35	0.34	0.90	[0.83, 0.97]	25.63	p < .001
	5 days	protein ~ concentration	replicate	0.60	0.50	1.20	[1.12, 1.28]	31.61	p < .001
	7 days	protein ~ concentration	replicate	0.60	0.57	1.58	[1.46, 1.70]	27.09	p < .001
	14 days	protein ~ concentration	replicate	0.66	0.60	1.33	[1.22, 1.43]	24.77	p < .001
	28 days	protein ~ concentration	replicate	0.48	0.46	1.61	[1.45, 1.76]	20.73	p < .001
<b>Glycogen</b>									
	3 days	glycogen ~ concentration	replicate	0.63	0.60	1.53	[1.38, 1.67]	21.25	p < .001
	5 days	glycogen ~ concentration	replicate	0.19	0.19	0.96	[0.92, 1.00]	44.90	p < .001
	7 days	glycogen ~ concentration	replicate	0.43	0.43	1.08	[1.03, 1.14]	41.13	p < .001
	14 days	glycogen ~ concentration	replicate	0.58	0.47	1.45	[1.24, 1.67]	13.76	p < .001
	28 days	glycogen ~ concentration	replicate	0.65	0.65	2.02	[1.90, 2.13]	35.13	p < .001
<b>Total lipids</b>									
	3 days	lipids ~ concentration	replicate	0.34	0.4	0.76	[0.72, 0.80]	37.85	p < .001
	5 days	lipids ~ concentration	replicate	0.06	0.02	1.01	[0.97, 1.05]	48.84	p < .001
	7 days	lipids ~ concentration	replicate	0.52	0.52	0.93	[0.91, 0.96]	69.97	p < .001
	14 days	lipids ~ concentration	replicate	0.37	0.37	0.75	[0.67, 0.84]	18.39	p < .001
	28 days	lipids ~ concentration	replicate	0.22	0.16	0.96	[0.89, 1.03]	29.32	p < .001
<b>CAT activity</b>									
	3 days	cat ~ concentration	replicate	0.39	0.30	1.10	[0.88, 1.31]	10.28	p < .001
	5 days	cat ~ concentration	replicate	0.71	0.52	0.69	[0.56, 0.82]	10.89	p < .001
	7 days	cat ~ concentration	replicate	0.60	0.60	0.56	[0.52, 0.60]	27.56	p < .001
	14 days	cat ~ concentration	replicate	0.60	0.55	0.83	[0.68, 0.97]	11.34	p < .001
	28 days	cat ~ concentration	replicate	0.47	0.45	0.78	[0.71, 0.85]	22.18	p < .001
<b>SOD activity</b>									
	3 days	sod ~ concentration	replicate	0.27	0.24	0.96	[0.80, 1.13]	11.84	p < .001

<i>5 days</i>	sod ~ concentration	replicate	0.20	0.20	0.91	[0.85, 0.96]	32.96	p < .001
<i>7 days</i>	sod ~ concentration	replicate	0.53	0.44	0.58	[0.46, 0.70]	9.54	p < .001
<i>14 days</i>	sod ~ concentration	replicate	0.36	0.35	0.69	[0.60, 0.79]	14.6	p < .001
<i>28 days</i>	sod ~ concentration	replicate	0.19	0.19	1.38	[1.22, 1.54]	16.89	p < .001
<b>GST activity</b>								
<i>3 days</i>	gst ~ concentration	replicate	0.44	0.41	1.16	[1.03, 1.30]	17.36	p < .001
<i>5 days</i>	gst ~ concentration	replicate	0.46	0.34	0.92	[0.86, 0.99]	27.72	p < .001
<i>7 days</i>	gst ~ concentration	replicate	0.57	0.51	0.58	[0.50, 0.66]	14.36	p < .001
<i>14 days</i>	gst ~ concentration	replicate	0.51	0.45	0.98	[0.89, 1.08]	20.85	p < .001
<i>28 days</i>	gst ~ concentration	replicate	0.45	0.43	0.72	[0.67, 0.77]	28.48	p < .001
<b>MDA concentration</b>								
<i>3 days</i>	mda ~ concentration	replicate	0.47	0.47	1.27	[1.24, 1.31]	81.36	p < .001
<i>5 days</i>	mda ~ concentration	replicate	0.67	0.59	1.44	[1.32, 1.56]	24.84	p < .001
<i>7 days</i>	mda ~ concentration	replicate	0.61	0.61	0.91	[0.89, 0.93]	85.34	p < .001
<i>14 days</i>	mda ~ concentration	replicate	0.65	0.61	1.26	[1.18, 1.35]	29.7	p < .001
<i>28 days</i>	mda ~ concentration	replicate	0.80	0.80	1.55	[1.50, 1.59]	66.78	p < .001
<b>AChE activity</b>								
<i>3 days</i>	ache ~ concentration	replicate	0.47	0.47	0.53	[0.48, 0.58]	19.88	p < .001
<i>5 days</i>	ache ~ concentration	replicate	0.63	0.62	0.42	[0.36, 0.48]	13.34	p < .001
<i>7 days</i>	ache ~ concentration	replicate	0.62	0.61	0.43	[0.36, 0.49]	13.1	p < .001
<i>14 days</i>	ache ~ concentration	replicate	0.47	0.47	0.63	[0.58, 0.67]	28.57	p < .001
<i>28 days</i>	ache ~ concentration	replicate	0.34	0.34	0.63	[0.56, 0.71]	16.71	p < .001

**Table S2.** Results from One-way ANOVA performed on LMM model.

	<b>F(6,56)</b>	<b>p</b>	<b><math>\eta^2</math></b>	<b>95% CI</b>
<b>Protein</b>				
<i>3 days</i>	5.37	$p < .001$	0.37	[0.15, 1.00]
<i>5 days</i>	10.83	$p < .001$	0.54	[0.36, 1.00]
<i>7 days</i>	13.88	$p < .001$	0.6	[0.44, 1.00]
<i>14 days</i>	16.09	$p < .001$	0.63	[0.48, 1.00]
<i>28 days</i>	8.74	$p < .001$	0.48	[0.29, 1.00]
<b>Glycogen</b>				
<i>3 days</i>	15.71	$p < .001$	0.63	[0.48, 1.00]
<i>5 days</i>	2.44	0.036	0.21	[0.08, 1.00]
<i>7 days</i>	7.74	$p < .001$	0.45	[0.25, 1.00]
<i>14 days</i>	9.64	$p < .001$	0.51	[0.32, 1.00]
<i>28 days</i>	19.28	$p < .001$	0.67	[0.54, 1.00]
<b>Total lipids</b>		$p < .001$		
<i>3 days</i>	5.34		0.36	[0.15, 1.00]
<i>5 days</i>	0.19	0.978	0.02	[0.00, 1.00]
<i>7 days</i>	11.27	$p < .001$	0.55	[0.37, 1.00]
<i>14 days</i>	6.06	$p < .001$	0.39	[0.18, 1.00]
<i>28 days</i>	2.08	0.07	0.18	[0.00, 1.00]
<b>CAT activity</b>				
<i>3 days</i>	4.57	$p < .001$	0.33	[0.11, 1.00]
<i>5 days</i>	12.31	$p < .001$	0.57	[0.40, 1.00]
<i>7 days</i>	15.34	$p < .001$	0.62	[0.47, 1.00]
<i>14 days</i>	13.07	$p < .001$	0.58	[0.42, 1.00]
<i>28 days</i>	8.48	$p < .001$	0.48	[0.28, 1.00]
<b>SOD activity</b>				
<i>3 days</i>	3.24	0.008	0.26	[0.05, 1.00]

<i>5 days</i>	2.61	0.027	0.22	[0.02, 1.00]
<i>7 days</i>	8.47	p < .001	0.48	[0.28, 1.00]
<i>14 days</i>	5.53	p < .001	0.37	[0.16, 1.00]
<i>28 days</i>	2.48	0.034	0.21	[0.01, 1.00]
<b>GST activity</b>				
<i>3 days</i>	7.32	p < .001	0.44	[0.24, 1.00]
<i>5 days</i>	5.61	p < .001	0.38	[0.16, 1.00]
<i>7 days</i>	11.06	p < .001	0.54	[0.36, 1.00]
<i>14 days</i>	8.65	p < .001	0.48	[0.29, 1.00]
<i>28 days</i>	7.83	p < .001	0.46	[0.26, 1.00]
<b>MDA concentration</b>				
<i>3 days</i>	9.25	p < .001	0.50	[0.31, 1.00]
<i>5 days</i>	15.87	p < .001	0.63	[0.48, 1.00]
<i>7 days</i>	16.23	p < .001	0.63	[0.49, 1.00]
<i>14 days</i>	16.42	p < .001	0.64	[0.49, 1.00]
<i>28 days</i>	41.59	p < .001	0.82	[0.74, 1.00]
<b>AChE activity</b>				
<i>3 days</i>	9.32	p < .001	0.50	[0.31, 1.00]
<i>5 days</i>	16.8	p < .001	0.64	[0.50, 1.00]
<i>7 days</i>	16.05	p < .001	0.63	[0.48, 1.00]
<i>14 days</i>	9.17	p < .001	0.50	[0.30, 1.00]
<i>28 days</i>	5.36	p < .001	0.36	[0.15, 1.00]