Supplementary Tables: Applying behavioral studies to the ecotoxicology of corals: a case study on *Acropora millepora*

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Supplementary Tables

Supplementary Table 1: Estimated marginal means (EMM), standard error (SE), degrees of freedom (df) and upper and lower confidence levels (CL; 95%) of the <u>swimming velocity</u> in each treatment (Control, Nanoparticles, Antiadhesive, DCOIT) on the coated PMMA tiles. Intervals (EMM, SE, CL) were back-transformed from the sqrt-scale.

Treatment	EMM	Standard error	df	Lower CL	Upper CL
Control	89.8	6.3	8	75.9	104.9
Antiadhesive	55	4.6	8	44.9	66.2
Nanoparticles	46.4	3.4	8	39	54.5
DCOIT	36.2	3.1	8	29.3	43.7

Supplementary Table 2: Estimated marginal means (EMM), standard error (SE), degrees of freedom (df) and upper and lower confidence levels (CL; 95%) of the <u>swimming activity</u> in each treatment (Control, Nanoparticles, Antiadhesive, DCOIT) on the coated PMMA tiles. Intervals (EMM, SE, CL) were back-transformed from the log-scale.

Treatment	EMM	Standard error	df	Lower CL	Upper CL
Control	49.6	9.4	8	32	77
Antiadhesive	6.2	2.2	8	2.7	13.9
Nanoparticles	5.8	1.6	8	3	11
DCOIT	0.7	0.2	8	0.4	1.3

Supplementary Table 3: Pairwise statistical results of <u>swimming velocity</u> data on the coated PMMA tiles based on estimated marginal means. Tests were performed on the sqrt-scale. Note that the estimated contrasts are still on the sqrt-scale. The p-value was adjusted for multiple comparisons (family of 4 estimates) with the Tukey method. Significant codes indicate: $* < 0.05$, $** < 0.01$, $*** < 0.001$. All statistical analyses were performed in R version 4.1.1 (R Core Team, 2021) using the 'tidyverse' (Wickham et al., 2019), 'nlme' (Pinheiro et al., 2021), 'car' (Fox and Weisberg, 2019) and 'emmeans' (Lenth, 2021) package.

Compared treatment pair	Estimated contrast	Standard error	df	t ratio	p-value
Control / Antiadhesive	2.1	0.4	116	5.13231	< 0.001 ***
Control / Nanoparticles	2.7	0.4	116	7.49747	< 0.001 ***
Control / DCOIT	3.5	0.4	116	9.534846	< 0.001 ***
Antiadhesive / Nanoparticles	0.6	0.3	116	1.800691	0.278
Antiadhesive / DCOIT	1.4	0.3	116	4.07811	< 0.001 ***
Nanoparticles / DCOIT	0.8	0.3	116	2.759482	0.034 *

Supplementary Table 4: Pairwise statistical results of <u>swimming activity</u> data (based on "moving") on the coated PMMA tiles based on estimated marginal means. Tests were performed on the log-scale. Note that the estimated contrasts are back-transformed from the log-scale. The p-value was adjusted for multiple comparisons (family of 4 estimates) with the Tukey method. Significant codes indicate: * < 0.05, ** < 0.01, *** < 0.001. All statistical analyses were performed in R version 4.1.1 (R Core Team, 2021) using the 'tidyverse' (Wickham et al., 2019), 'nlme' (Pinheiro et al., 2021), 'car' (Fox and Weisberg, 2019) and 'emmeans' (Lenth, 2021) package.

Compared treatment pair	Estimated contrast	Standard error	df	t ratio	p-value
Control / Antiadhesive	7.9	2.8	116	5.812	< 0.001 ***
Control / Nanoparticles	8.5	2.4	116	7.418	< 0.001 ***
Control / DCOIT	61.4	15.2	116	16.624	< 0.001 ***
Antiadhesive / Nanoparticles	1.1	0.4	116	0.177	0.998
Antiadhesive / DCOIT	7.8	3	116	5.396	< 0.001 ***
Nanoparticles / DCOIT	7.3	2.3	116	6.211	< 0.001 ***

References

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