Applying Artificial Neural Networks to Oxidative Stress Biomarkers in Forager Honey Bees (*Apis mellifera*) for Ecological Assessment

Gianandrea La Porta [1,*,†], Gabriele Magara [1,†], Enzo Goretti [1], Barbara Caldaroni [1], Ambrosius Josef Martin Dörr [1], Roberta Selvaggi [1], Matteo Pallottini [1], Tiziano Gardi [2], Beniamino T. Cenci-Goga [3], David Cappelletti [1] and Antonia Concetta Elia [1,*]

Table S2. Correlation coefficients (r) between oxidative stress biomarkers and environmental variables.

var1	var2	r	p
SOD	land type	0.098	0.728
SOD	altitude	-0.100	0.714
SOD	temperature	0.450	0.091
SOD	rain	-0.370	0.172
SOD	Cd	0.450	0.097
SOD	Pb	-0.310	0.262
SOD	Zn	0.420	0.119
SOD	Cr	0.580	0.024
SOD	Ni	-0.120	0.675
SOD	Cu	0.390	0.148
SOD	Mn	0.730	0.003
SOD	Fe	0.360	0.192
CAT	land type	0.450	0.094
CAT	altitude	-0.140	0.611
CAT	temperature	0.670	0.006
CAT	rain	-0.280	0.314
CAT	Cd	-0.089	0.751
CAT	Pb	-0.300	0.283
CAT	Zn	0.600	0.021
CAT	Cr	0.450	0.093
CAT	Ni	-0.036	0.899
CAT	Cu	0.046	0.873
CAT	Mn	0.760	0.001
CAT	Fe	0.600	0.021
GPx	land type	0.110	0.703
GPx	altitude	-0.021	0.944
GPx	temperature	0.230	0.403
GPx	rain	-0.020	0.945
GPx	Cd	0.079	0.781
GPx	Pb	-0.360	0.184

GPx	Zn	-0.120	0.676
GPx	Cr	-0.032	0.909
GPx	Ni	-0.310	0.264
GPx	Cu	-0.200	0.466
GPx	Mn	0.140	0.611
GPx	Fe	-0.075	0.793
GST	land type	0.140	0.617
GST	altitude	-0.014	0.964
GST	temperature	0.540	0.036
GST	rain	-0.450	0.096
GST	Cd	0.077	0.785
GST	Pb	-0.260	0.351
GST	Zn	0.150	0.602
GST	Cr	0.670	0.006
GST	Ni	0.460	0.085
GST	Cu	0.270	0.320
GST	Mn	0.410	0.130
GST	Fe	0.530	0.044
GR	land type	0.250	0.361
GR	altitude	-0.390	0.152
GR	temperature	-0.260	0.353
GR	rain	0.190	0.507
GR	Cd	0.190	0.507
GR	Pb	0.310	0.262
GR	Zn	0.120	0.667
GR	Cr	-0.039	0.889
GR	Ni	-0.640	0.011
GR	Cu	-0.460	0.086
GR	Mn	-0.260	0.354
GR	Fe	-0.580	0.025
AChE	land type	0.020	0.943
AChE	altitude	-0.270	0.327
AChE	temperature	-0.300	0.276
AChE	rain	0.047	0.869
AChE	Cd	0.410	0.130
AChE	Pb	-0.270	0.337
AChE	Zn	-0.340	0.216
AChE	Cr	-0.130	0.642
AChE	Ni	-0.025	0.929
AChE	Cu	0.064	0.822
AChE	Mn	-0.250	0.375
AChE	Fe	-0.270	0.320