

ANOVA tables:

Latitudinal variation in CT_{max} across populations

Model: CT_{max} ~ population

population	χ^2	Deg. freedom	p-value
	126.07	9	< 2.2 x 10 ⁻¹⁶

Plasticity of CT_{max} in the SD and BR populations

Model: CT_{max} ~ population x dev_temp x acc_treat

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	281719	1	1.9 x 10 ⁶	< 2.2 x 10 ⁻¹⁶
population	3	1	18.8	2.4 x 10 ⁻⁵
dev_temp	13	1	93.5	< 2.2 x 10 ⁻¹⁶
acc_treat	16	2	54.9	< 2.2 x 10 ⁻¹⁶
pop x d_t	1	1	9.9	1.9 x 10 ⁻³
pop x a_t	0	2	0.9	0.40
d_tx a_t	6	2	21.5	4.3 x 10 ⁻⁹
pop x d_tx a_t	1	2	3.6	0.03
residuals	25	180		

Plasticity of CT_{max} in the SC and PE populations

Model: CT_{max} ~ population x dev_temp x acc_temp

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	1771.70	1	6.4 x 10 ³	< 2.2 x 10 ⁻¹⁶
population	0.45	1	1.63	0.20
dev_temp	3.17	1	11.49	9.5 x 10 ⁻⁴
acc_temp	16.14	1	58.54	5.7 x 10 ⁻¹²
pop x d_t	0.01	1	0.05	0.83
pop x a_t	0.40	1	1.44	0.23
d_tx a_t	4.48	1	16.24	9.9 x 10 ⁻⁵
pop x d_tx a_t	0.08	1	0.28	0.60
residuals	32.81	119		

Plasticity of ATP synthesis rates (full model)

Model: $\log(\text{atp}) \sim \text{population} \times \text{dev_acc_temp} \times \text{assay_temp}$

	χ^2	Deg. freedom	p-value
(intercept)	236.7	1	$< 2.2 \times 10^{-16}$
population	16.4	1	5.1×10^{-5}
dev_acc_temp	182.1	1	$< 2.2 \times 10^{-16}$
assay_temp	132.8	5	$< 2.2 \times 10^{-16}$
pop x da_t	2.5	1	0.12
pop x a_t	1.6	5	0.90
da_t x a_t	8.5	5	0.13
pop x da_t x a_t	1.3	5	0.94

Plasticity of ATP synthesis rates (reduced model)

Model: $\log(\text{atp}) \sim \text{population} + \text{dev_acc_temp} + \text{assay_temp}$

	χ^2	Deg. freedom	p-value
(intercept)	236.7	1	$< 2.2 \times 10^{-16}$
population	16.7	1	4.4×10^{-5}
dev_acc_temp	185.1	1	$< 2.2 \times 10^{-16}$
assay_temp	135.0	5	$< 2.2 \times 10^{-16}$

Plasticity of 25°C-normalized ATP synthesis rates

Model: norm_atp ~ population x dev_acc_temp x assay_temp

	χ^2	Deg. freedom	p-value
(intercept)	1057.8	1	$< 2.2 \times 10^{-16}$
population	13.0	1	3.1×10^{-4}
dev_acc_temp	115.1	1	$< 2.2 \times 10^{-16}$
assay_temp	766.8	3	$< 2.2 \times 10^{-16}$
pop x da_t	2.6	1	0.11
pop x a_t	3.2	3	0.37
da_t x a_t	9.5	3	0.02
pop x da_t x a_t	9.5	3	0.02

Plasticity of hspb1 expression in the SD population

Model: $\log(hspb1) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	24.16	1	719.34	$< 2.2 \times 10^{-16}$
dev_acc_temp	0.02	1	0.49	0.49
heat_shock_treat	20.74	2	308.73	$< 2.2 \times 10^{-16}$
da_t x hs_t	0.44	2	6.49	5.4×10^{-3}
residuals	0.84	25		

Plasticity of hsp70 expression in the SD population

Model: $\log(hsp70) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	10.48	1	381.65	$< 2.2 \times 10^{-16}$
dev_acc_temp	0.64	1	23.31	4.8×10^{-5}
heat_shock_treat	10.78	2	196.36	$< 2.2 \times 10^{-16}$
da_t x hs_t	0.20	2	3.62	0.04
residuals	0.74	27		

Plasticity of mt-atp6 expression in the SD population

Model: $\log(mt\text{-}atp6) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	0.13	1	22.91	5.9×10^{-5}
dev_acc_temp	0.86	1	154.23	2.0×10^{-12}
heat_shock_treat	0.10	2	8.80	1.2×10^{-3}
da_t x hs_t	0.41	2	36.49	2.8×10^{-8}
residuals	0.14	26		

Plasticity of hspb1 expression in the BR population

Model: $\log(hspb1) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	81.77	1	1534.99	$< 2.2 \times 10^{-16}$
dev_acc_temp	3.88	1	72.89	2.1×10^{-9}
heat_shock_treat	54.80	2	514.40	$< 2.2 \times 10^{-16}$
da_t x hs_t	1.09	2	10.23	4.4×10^{-4}
residuals	1.55	29		

Plasticity of hsp70 expression in the BR population

Model: $\log(hsp70) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	33.71	1	980.09	$< 2.2 \times 10^{-16}$
dev_acc_temp	2.82	1	81.89	6.1×10^{-10}
heat_shock_treat	23.47	2	341.18	$< 2.2 \times 10^{-16}$
da_t x hs_t	0.58	2	8.41	1.3×10^{-3}
residuals	1.00	29		

Plasticity of mt-atp6 expression in the BR population

Model: $\log(mt\text{-}atp6) \sim \text{dev_acc_temp} \times \text{heat_shock_treat}$

	Sum of squares	Deg. freedom	F-value	p-value
(intercept)	1.19	1	38.44	9.2×10^{-7}
dev_acc_temp	1.77	1	57.18	2.5×10^{-8}
heat_shock_treat	0.29	2	4.69	0.02
da_t x hs_t	0.30	2	4.83	0.02
residuals	0.90	29		