

Table 1.
Determinants of *cdi* expression Experiment A

Call:

```
lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ Plate + Control,
    data = studydesigna)
```

Residuals:

Min	1Q	Median	3Q	Max
-0.003321	-0.001326	-0.000231	0.001117	0.005916

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0039343	0.0003965	9.923	1.78e-15 ***
PlateB	0.0002269	0.0005207	0.436	0.66417
PlateC	-0.0015111	0.0005207	-2.902	0.00482 **
ControlControl_160	-0.0017664	0.0006114	-2.889	0.00500 **
ControlControl_9	0.0044380	0.0006114	7.259	2.52e-10 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.00193 on 78 degrees of freedom
(1 observation deleted due to missingness)

Multiple R-squared: 0.5173, Adjusted R-squared: 0.4926

Determinants of *cdi* expression Experiment B

Call:

```
lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ Plate + Control,
    data = studydesignb)
```

Residuals:

Min	1Q	Median	3Q	Max
-0.0032843	-0.0011427	-0.0001337	0.0013193	0.0034943

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0036045	0.0003286	10.968	< 2e-16 ***
PlateE	0.0010256	0.0004366	2.349	0.021309 *
PlateF	-0.0005231	0.0004366	-1.198	0.234397
ControlControl_160	-0.0020523	0.0005165	-3.973	0.000156 ***
ControlControl_9	0.0065048	0.0005165	12.593	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.001633 on 79 degrees of freedom
Multiple R-squared: 0.7262, Adjusted R-squared: 0.7123
F-statistic: 52.38 on 4 and 79 DF, p-value: < 2.2e-16

F-statistic: 20.9 on 4 and 78 DF, p-value: 9.743e-12

GrandmotherID9_4	1.993e-03	1.290e-03	1.546	0.12679
GrandmotherID9_5	NA	NA	NA	NA

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.001579 on 69 degrees of freedom
Multiple R-squared: 0.7764, Adjusted R-squared: 0.7311
F-statistic: 17.12 on 14 and 69 DF, p-value: < 2.2e-16

Determinants of *cdi* expression Experiment A and B combined

Call:

lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ Experiment +
Plate + Control, data = studydesign_ab)

Residuals:

	Min	1Q	Median	3Q	Max
	-0.0042229	-0.0012463	-0.0001406	0.0011827	0.0050139

Coefficients: (1 not defined because of singularities)

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0038021	0.0003616	10.516	< 2e-16 ***
ExperimentB	-0.0005938	0.0004901	-1.212	0.22744
PlateB	0.0002317	0.0004901	0.473	0.63706
PlateC	-0.0015064	0.0004901	-3.074	0.00249 **
PlateD	0.0005231	0.0004856	1.077	0.28298
PlateE	0.0015487	0.0004856	3.189	0.00172 **
PlateF	NA	NA	NA	NA
ControlControl_160	-0.0019082	0.0004066	-4.694	5.76e-06 ***
ControlControl_9	0.0054725	0.0004066	13.461	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.001817 on 159 degrees of freedom

(1 observation deleted due to missingness)

Multiple R-squared: 0.6206, Adjusted R-squared: 0.6039

F-statistic: 37.16 on 7 and 159 DF, p-value: < 2.2e-16

Determinants of *cdi* expression among cousins explained by Grandmother ID

Call:

lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ Experiment +
Plate + GrandmotherID, data = cdi_setAB_test)

Residuals:

	Min	1Q	Median	3Q	Max
	-0.0030594	-0.0010731	-0.0000169	0.0009268	0.0034575

Coefficients: (2 not defined because of singularities)

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	4.885e-03	5.617e-04	8.696	5.07e-14 ***
ExperimentB	-1.077e-03	7.709e-04	-1.397	0.16535
PlateB	2.140e-04	4.957e-04	0.432	0.66677
PlateC	-1.281e-03	4.957e-04	-2.584	0.01114 *
PlateD	2.565e-04	4.888e-04	0.525	0.60079
PlateE	1.148e-03	4.888e-04	2.349	0.02068 *
PlateF	NA	NA	NA	NA
GrandmotherID15_B	-1.749e-03	6.310e-04	-2.772	0.00660 **
GrandmotherID20_	-2.946e-04	6.457e-04	-0.456	0.64915
GrandmotherID22_	-1.993e-03	6.457e-04	-3.086	0.00259 **

GrandmotherID34_	-6.397e-04	6.457e-04	-0.991	0.32416
GrandmotherID36_	-3.392e-04	6.310e-04	-0.538	0.59199
GrandmotherID39_	1.476e-05	6.310e-04	0.023	0.98138
GrandmotherID6_	-2.109e-03	6.457e-04	-3.267	0.00147 **
GrandmotherID7_	-4.483e-04	6.310e-04	-0.710	0.47905
GrandmotherID8_	NA	NA	NA	NA

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Table 2.

Adjusted p-value after Tukey Test (Determinants of *cdi* expression among cousins explained by Grandmother ID

Tukey multiple comparisons of means
95% family-wise confidence level

Fit: aov(formula = grandmother_corr)

\$Experiment

	diff	lwr	upr	p adj
B-A	0.0002729953	-0.000288933	0.0008349236	0.3376159

\$Plate

	diff	lwr	upr	p adj
B-A	2.670467e-04	-0.0011704893	1.704583e-03	0.9944024
C-A	-1.227846e-03	-0.0026653823	2.096897e-04	0.1396734
D-A	-5.374255e-04	-0.0019749615	9.001105e-04	0.8862266
E-A	3.543160e-04	-0.0010832200	1.791852e-03	0.9796763
F-A	-7.939749e-04	-0.0022315109	6.435611e-04	0.5981907
C-B	-1.494893e-03	-0.0029138794	-7.590667e-05	0.0327649
D-B	-8.044722e-04	-0.0022234585	6.145142e-04	0.5703896
E-B	8.726929e-05	-0.0013317171	1.506256e-03	0.9999742
F-B	-1.061022e-03	-0.0024800080	3.579648e-04	0.2603232
D-C	6.904209e-04	-0.0007285655	2.109407e-03	0.7194194
E-C	1.582162e-03	0.0001631760	3.001149e-03	0.0195966
F-C	4.338714e-04	-0.0009851150	1.852858e-03	0.9487051
E-D	8.917415e-04	-0.0005272449	2.310728e-03	0.4547915
F-D	-2.565495e-04	-0.0016755358	1.162437e-03	0.9950692
F-E	-1.148291e-03	-0.0025672773	2.706955e-04	0.1841580

\$GrandmotherID

	diff	lwr	upr	p adj
15_B-15_A	-2.266551e-03	-4.352390e-03	-1.807116e-04	0.0220415
20_-15_A	-2.914099e-04	-2.377249e-03	1.794429e-03	0.9999864
22_-15_A	-1.989867e-03	-4.075706e-03	9.597273e-05	0.0747335
34_-15_A	-6.364523e-04	-2.722292e-03	1.449387e-03	0.9924638
36_-15_A	-8.566950e-04	-2.942534e-03	1.229144e-03	0.9449060
39_-15_A	-5.026921e-04	-2.588532e-03	1.583147e-03	0.9987413
6_-15_A	-2.106225e-03	-4.192064e-03	-2.038514e-05	0.0457686
7_-15_A	-9.657149e-04	-3.051554e-03	1.120125e-03	0.8905850
8_-15_A	-5.174522e-04	-2.603292e-03	1.568387e-03	0.9984206
20_-15_B	1.975141e-03	-6.485009e-05	4.015132e-03	0.0661735

22_-15_B	2.766843e-04	-1.763307e-03	2.316676e-03	0.9999895
34_-15_B	1.630099e-03	-4.098925e-04	3.670090e-03	0.2388298
36_-15_B	1.409856e-03	-6.301352e-04	3.449847e-03	0.4405956
39_-15_B	1.763859e-03	-2.761323e-04	3.803850e-03	0.1517309
6_-15_B	1.603265e-04	-1.879665e-03	2.200318e-03	0.9999999
7_-15_B	1.300836e-03	-7.391551e-04	3.340827e-03	0.5584321
8_-15_B	1.749099e-03	-2.908923e-04	3.789090e-03	0.1599754
22_-20_	-1.698457e-03	-3.738448e-03	3.415344e-04	0.1908050
34_-20_	-3.450424e-04	-2.385034e-03	1.694949e-03	0.9999306
36_-20_	-5.652851e-04	-2.605276e-03	1.474706e-03	0.9963059
39_-20_	-2.112822e-04	-2.251273e-03	1.828709e-03	0.9999990
6_-20_	-1.814815e-03	-3.854806e-03	2.251766e-04	0.1257375
7_-20_	-6.743050e-04	-2.714296e-03	1.365686e-03	0.9866795
8_-20_	-2.260422e-04	-2.266033e-03	1.813949e-03	0.9999982
34_-22_	1.353414e-03	-6.865768e-04	3.393406e-03	0.5009180
36_-22_	1.133172e-03	-9.068195e-04	3.173163e-03	0.7363626
39_-22_	1.487175e-03	-5.528166e-04	3.527166e-03	0.3625166
6_-22_	-1.163579e-04	-2.156349e-03	1.923633e-03	1.0000000
7_-22_	1.024152e-03	-1.015839e-03	3.064143e-03	0.8339458
8_-22_	1.472415e-03	-5.675767e-04	3.512406e-03	0.3769101
36_-34_	-2.202427e-04	-2.260234e-03	1.819748e-03	0.9999986
39_-34_	1.337602e-04	-1.906231e-03	2.173751e-03	1.0000000
6_-34_	-1.469772e-03	-3.509763e-03	5.702190e-04	0.3795146
7_-34_	-3.292626e-04	-2.369254e-03	1.710729e-03	0.9999533
8_-34_	1.190002e-04	-1.920991e-03	2.158991e-03	1.0000000
39_-36_	3.540029e-04	-1.685988e-03	2.393994e-03	0.9999138
6_-36_	-1.249530e-03	-3.289521e-03	7.904617e-04	0.6146522
7_-36_	-1.090199e-04	-2.149011e-03	1.930971e-03	1.0000000
8_-36_	3.392429e-04	-1.700748e-03	2.379234e-03	0.9999398
6_-39_	-1.603532e-03	-3.643524e-03	4.364587e-04	0.2594949
7_-39_	-4.630228e-04	-2.503014e-03	1.576968e-03	0.9992180
8_-39_	-1.476005e-05	-2.054751e-03	2.025231e-03	1.0000000
7_-6_	1.140510e-03	-8.994815e-04	3.180501e-03	0.7291068
8_-6_	1.588772e-03	-4.512188e-04	3.628764e-03	0.2714539
8_-7_	4.482627e-04	-1.591728e-03	2.488254e-03	0.9993971

Table 3.

Effect of mother *cdi* expression to *cdi* daughter expression

Call:

```
lm(formula = DaughterExpression ~ Experiment + Plate + GrandmotherID +
    MotherExpression, data = cdi_expression_testonly)
```

Residuals:

Min	1Q	Median	3Q	Max
-0.003064	-0.001082	-0.000030	0.000949	0.003456

Coefficients: (2 not defined because of singularities)

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	4.880e-03	8.017e-04	6.087	1.99e-08 ***
ExperimentB	-1.062e-03	8.915e-04	-1.191	0.23640

```

PlateB      2.119e-04 5.036e-04 0.421 0.67475
PlateC      -1.325e-03 5.477e-04 -2.420 0.01727 *
PlateD      2.576e-04 4.934e-04 0.522 0.60272
PlateE      1.155e-03 5.020e-04 2.301 0.02338 *
PlateF      NA      NA      NA      NA
GrandmotherID15_B -1.749e-03 6.367e-04 -2.747 0.00711 **
GrandmotherID20_ -2.544e-04 6.987e-04 -0.364 0.71647
GrandmotherID22_ -1.934e-03 6.697e-04 -2.888 0.00472 **
GrandmotherID34_ -5.897e-04 6.725e-04 -0.877 0.38260
GrandmotherID36_ -3.318e-04 6.443e-04 -0.515 0.60770
GrandmotherID39_ 2.591e-05 6.535e-04 0.040 0.96845
GrandmotherID6_ -2.065e-03 6.855e-04 -3.013 0.00326 **
GrandmotherID7_ -4.376e-04 6.521e-04 -0.671 0.50365
GrandmotherID8_   NA      NA      NA      NA
MotherExpression -8.199e-03 1.083e-01 -0.076 0.93979
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

Residual standard error: 0.00156 on 103 degrees of freedom
 (2 observations deleted due to missingness)
 Multiple R-squared: 0.3098, Adjusted R-squared: 0.216
 F-statistic: 3.303 on 14 and 103 DF, p-value: 0.0002271

Table 4.

Effect of Polyphemus insertion Experiment A only

Call:
`lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ poly_mother,`
`data = Polyphemus_expA)`

Residuals:

Min	1Q	Median	3Q	Max
-0.0027548	-0.0013739	-0.0006923	0.0015869	0.0032718

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0038408	0.0008383	4.582	0.000307 ***
poly_mother1_	0.0001364	0.0009864	0.138	0.891761

 Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.001874 on 16 degrees of freedom
 (2 observations deleted due to missingness)
 Multiple R-squared: 0.001193, Adjusted R-squared: -0.06123
 F-statistic: 0.01912 on 1 and 16 DF, p-value: 0.8918

Effect of Polyphemus insertion Experiment A and Experiment B

Call:
`lm(formula = 2^(DaughterRP49_CT - DaughterCDI_CT) ~ Experiment +`
`Plate + poly_mother, data = polyphemus)`

Residuals:

Min	1Q	Median	3Q	Max
-0.0027548	-0.0013707	-0.0003983	0.0015302	0.0032718

Coefficients: (1 not defined because of singularities)

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0038408	0.0007543	5.092	1.52e-05 ***
ExperimentB	-0.0002938	0.0008581	-0.342	0.734
PlateD	NA	NA	NA	NA
poly_mother1_	0.0001364	0.0008876	0.154	0.879

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.001687 on 32 degrees of freedom

(5 observations deleted due to missingness)

Multiple R-squared: 0.01528, **Adjusted R-squared:** -0.04627

F-statistic: 0.2483 on 2 and 32 DF, **p-value:** 0.7816