UCLA O SPF

Cecum vs PC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2     Pr(>F)
Sequencing_Run   2    35.110 17.5550  28.183 0.17802    0.0011 **
Line             3    91.680 30.5599  49.061 0.46485 9.999e-05 ***
Sex              1     0.138  0.1380   0.222 0.00070    0.9803
Site             1    15.480 15.4797  24.851 0.07849 9.999e-05 ***
Residuals       88    54.815  0.6229          0.27793 9.999e-05 ***
Total           95   197.222                  1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PC vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2     Pr(>F)
Sequencing_Run   2    13.106  6.553   7.304 0.07020    0.0481 *
Line             3    64.196 21.399  23.852 0.34387 9.999e-05 ***
Sex              1     0.873  0.873   0.974 0.00468    0.7519
Site             1    34.946 34.946  38.953 0.18719 9.999e-05 ***
Residuals       82    73.566  0.897          0.39406 9.999e-05 ***
Total           89   186.687                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cecum vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)
```

```
                  Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
Sequencing_Run   2    36.565 18.2824 22.8004 0.19488    0.0003 ***
Line             3    68.373 22.7909 28.4231 0.36441 9.999e-05 ***
Sex              1     0.367  0.3666  0.4572 0.00195    0.9243
Site             1    16.572 16.5720 20.6673 0.08832 9.999e-05 ***
Residuals       82    65.751  0.8018         0.35044 9.999e-05 ***
Total           89   187.627                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

UCLA V SPF

Cecum vs PC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                  Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
Sequencing_Run   1    29.741 29.7410 24.1868 0.31428 9.999e-05 ***
Sex              1     0.269  0.2689  0.2187 0.00284    0.9258
Site             1    11.749 11.7491  9.5549 0.12415 9.999e-05 ***
Residuals       43    52.874  1.2296         0.55873 9.999e-05 ***
Total           46    94.634                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cecum vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                  Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
Sequencing_Run   1     9.447  9.4465  6.5193 0.10148    0.0106 *
Sex              1     1.224  1.2240  0.8448 0.01315    0.6695
Site             1    21.554 21.5541 14.8751 0.23156 9.999e-05 ***
Residuals       42    60.858  1.4490         0.65381    0.0002 ***
Total           45    93.083                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PC vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2     Pr(>F)
Sequencing_Run   1    18.423 18.4234 16.0533 0.21184     0.0012 **
Sex              1     1.893  1.8929  1.6494 0.02177     0.4656
Site             1    21.896 21.8957 19.0790 0.25176 9.999e-05 ***
Residuals       39    44.758  1.1476         0.51464 9.999e-05 ***
Total           42    86.970                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

CS SPF

Cecum vs PC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
Sequencing_Run   1    14.316 14.3163 17.4472 0.44546 0.008899 **
Sex              1     7.913  7.9134  9.6440 0.24623 0.191281
Site             1     0.062  0.0622  0.0758 0.00194 0.581642
Residuals       12     9.847  0.8206         0.30638 0.006399 **
Total           15    32.139                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cecum vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
Sequencing_Run   1    13.820 13.8198  13.961 0.43003 9.999e-05 ***
Sex              1     3.212  3.2121   3.245 0.09995    0.5052
Site             1     3.227  3.2269   3.260 0.10041    0.0141 *
Residuals       12    11.878  0.9899         0.36961    0.0038 **
Total           15    32.137                 1.00000
```

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

PC vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2     Pr(>F)
Sequencing_Run   1    13.487 13.4873 13.0959 0.42008 9.999e-05 ***
Sex              1     4.672  4.6718  4.5362 0.14551   0.36266
Site             1     1.589  1.5888  1.5427 0.04949   0.07399 .
Residuals       12    12.359  1.0299         0.38493   0.00500 **
Total           15    32.107                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

HUM Gavage

Cecum vs PC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2 Pr(>F)
Sequencing_Run   1    12.602 12.6015 12.1464 0.36524 0.0293 *
Sex              1     7.369  7.3691  7.1030 0.21359 0.1316
Site             1     1.044  1.0439  1.0062 0.03026 0.2433
Residuals       13    13.487  1.0375         0.39091 0.0036 **
Total           16    34.502                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cecum vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2    Pr(>F)
```

```
Sequencing_Run  2   10.2079   5.1040   5.5572 0.33185 0.172883
Sex             1   10.5949  10.5949  11.5359 0.34443 0.015798 *
Site            1    0.7735   0.7735   0.8422 0.02515 0.681232
Residuals      10    9.1843   0.9184          0.29857 0.006099 **
Total          14   30.7607                   1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PC vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2 Pr(>F)
Sequencing_Run  2    8.1857  4.0929  4.1707 0.28237 0.2935
Sex             1   11.2065 11.2065 11.4196 0.38658 0.0016 **
Site            1    0.7646  0.7646  0.7791 0.02637 0.7318
Residuals       9    8.8320  0.9813         0.30467 0.0104 *
Total          13   28.9889                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

SPF Gavage

Cecum vs PC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2  Pr(>F)
Sequencing_Run  1    10.605 10.6047  6.1503 0.28583 0.05999 .
Sex             1     2.169  2.1692  1.2580 0.05847 0.63324
Site            1     0.187  0.1874  0.1087 0.00505 0.68013
Residuals      14    24.140  1.7243         0.65065 0.18298
Total          17    37.101                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cecum vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2  Pr(>F)
Sequencing_Run  2     9.022  4.5109  3.2220 0.25049 0.45975
Sex             1     9.762  9.7622  6.9728 0.27105 0.07309 .
Site            1     0.431  0.4313  0.3080 0.01197 0.42776
Residuals      12    16.801  1.4000         0.46648 0.10519
Total          16    36.016                 1.00000
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PC vs DC

```
Permutation: free
Number of permutations: 0

Terms added sequentially (first to last)

                Df SumsOfSqs MeanSqs F.Model      R2 Pr(>F)
Sequencing_Run  2    11.797  5.8984  3.6288 0.33457 0.2065
Sex             1     3.769  3.7692  2.3189 0.10690 0.4498
Site            1     0.188  0.1877  0.1155 0.00532 0.7835
Residuals      12    19.505  1.6255         0.55320 0.2608
Total          16    35.259                 1.00000
```