PCA Ind map and density plots before correction by Group (dex/veh) Col. Density dex dex veh veh Individuals - PCA 400 -Dim2 (5.4%) -400 **-**500 1000 -500 Dim1 (8.8%) Density

# ANOVA results for Plate before batch correction

```
SPC1
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 286550 71637 1.0953 0.3584
                    398 26029952 65402
Residuals
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value
prin.comp$Sample_Plate 4 5694470 1423618 54.937 < 2.2e-16 ***
Residuals
                     398 10313565 25913
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
$PC3
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value
prin.comp$Sample_Plate 4 3852286 963072 106.08 < 2.2e-16 ***
                    398 3613400
                                  9079
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample Plate 4 131078 32770 1.937 0.1035
                    398 6733352 16918
Residuals
SPC5
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 721105 180276 22.523 < 2.2e-16 ***
Residuals
                     398 3185660
                                   8004
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
$PC6
Analysis of Variance Table
Response: pc
                      Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Plate 4 104104 26026.0 2.9885 0.01884 *
                    398 3466079 8708.7
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
```

# ANOVA results for Slide before batch correction

```
SPC1
Analysis of Variance Table
Response: pc
                                        Df Sum Sq Mean Sq F value Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 1980144 39603 0.5728 0.9912
                                       352 24336358 69137
Residuals
Analysis of Variance Table
Response: pc
                                        Df Sum Sq Mean Sq F value
as.factor(as.character(prin.comp$Slide)) 50 8260145 165203 7.5055 < 2.2e-16
                                       352 7747890 22011
Residuals
as.factor(as.character(prin.comp$Slide)) ***
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
Analysis of Variance Table
Response: pc
                                       Df Sum Sq Mean Sq F value
as.factor(as.character(prin.comp$Slide)) 50 5680492 113610 22.401 < 2.2e-16
Residuals
                                       352 1785194
                                                   5072
as.factor(as.character(prin.comp$Slide)) ***
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
Analysis of Variance Table
Response: pc
                                       Df Sum Sq Mean Sq F value
                                                                   Pr(>F)
as.factor(as.character(prin.comp$Slide)) 50 1780830 35617 2.4662 9.843e-07
Residuals
                                       352 5083600 14442
as.factor(as.character(prin.comp$Slide)) ***
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
Analysis of Variance Table
Response: pc
                                        Df Giim Ga Mean Ga F traline
                                                                  Dr/5F1
```

# **ANOVA** results for Array before batch correction

```
SPC1
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 302818 43260 0.6569 0.7086
            395 26013684 65857
Residuals
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value
prin.comp$Array 7 3899786 557112 18.174 < 2.2e-16 ***
              395 12108249 30654
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
$PC3
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value
prin.comp$Array 7 1135191 162170 10.119 1.162e-11 ***
            395 6330496 16027
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 526815 75259 4.6906 4.54e-05 ***
Residuals 395 6337615 16045
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
SPC5
Analysis of Variance Table
Response: pc
               Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Array 7 157642 22520.3 2.3727 0.02193 *
Residuals 395 3749123 9491.5
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
SPC6
Analysis of Variance Table
Pagnonga: no
```

# **ANOVA results for Sample Group before batch correction**

```
SPC1
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 11870882 11870882 329.53 < 2.2e-16 ***
                   401 14445620 36024
Residuals
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 0.1 ... 1
SPC2
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample Group 1 48374 48374 1.2155 0.2709
                    401 15959661 39800
Residuals
$PC3
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 35873 35873 1.9362 0.1649
Residuals 401 7429813 18528
SPC4
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value
                                               Pr(>F)
prin.comp$Sample_Group 1 213020 213020 12.842 0.0003805 ***
Residuals
                    401 6651410 16587
Signif. codes: 0 ...***... 0.001 ...**... 0.01 ...*... 0.05 ...... 1
SPC5
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 12826 12825.9 1.3208 0.2511
Residuals
                    401 3893940 9710.6
$PC6
Analysis of Variance Table
Response: pc
                     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$Sample_Group 1 19211 19211.3 2.1695 0.1416
                   401 3550972 8855.3
Residuals
```

# ANOVA results for Sex before batch correction

```
SPC1
Analysis of Variance Table
Response: pc
            Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 6021 6021 0.0918 0.7621
Residuals 401 26310481 65612
Analysis of Variance Table
Response: pc
            Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 10884 10884 0.2728 0.6017
Residuals 401 15997151 39893
SPC3
Analysis of Variance Table
Response: pc
            Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 35596 35596 1.9211 0.1665
Residuals 401 7430091 18529
SPC4
Analysis of Variance Table
Response: pc
             Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 11256 11256 0.6587 0.4175
Residuals 401 6853174 17090
SPC5
Analysis of Variance Table
Response: pc
     Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 20761 20760.8 2.1423 0.1441
Residuals 401 3886005 9690.8
SPC6
Analysis of Variance Table
Response: pc
            Df Sum Sq Mean Sq F value Pr(>F)
prin.comp$sex 1 1818 1818.5 0.2044 0.6515
Residuals 401 3568365 8898.7
```