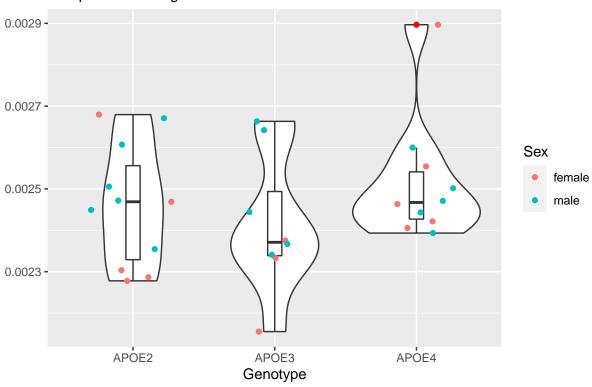
## Proportional Volume Distributions by Region (Right Hemisphere)

## Anna MacFarlane and Jasmine King

### 3/2/2021

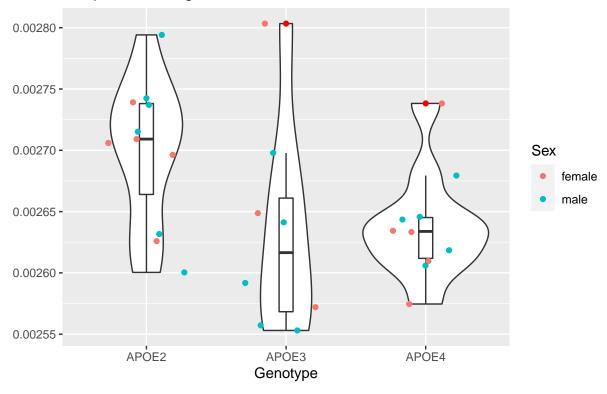
Right Hemisphere Regions
Interpeduncular Nucleus
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 4.51e-08 2.255e-08 0.956 0.397
## Residuals 26 6.13e-07 2.358e-08

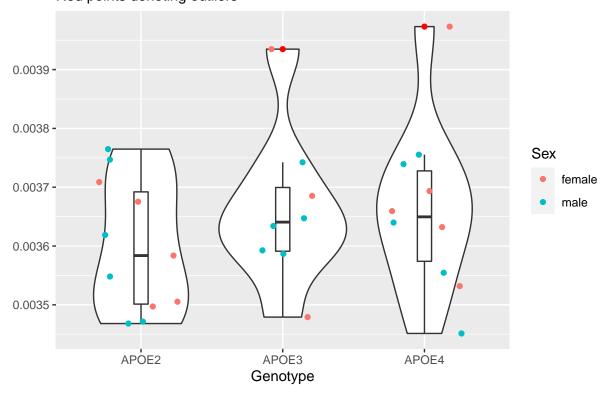
#### **Cerebellar Cortex**

#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 2.785e-08 1.393e-08    3.507 0.0448 *
## Residuals    26 1.032e-07 3.971e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

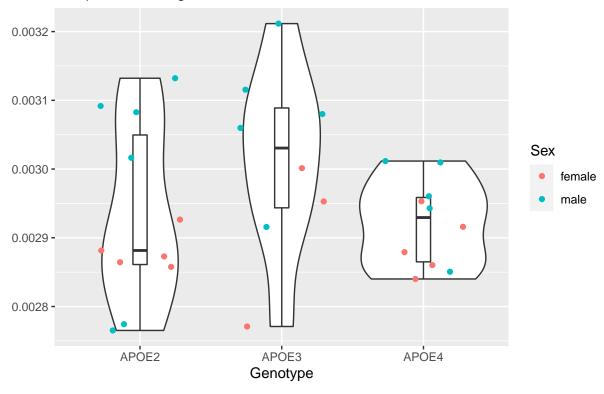
# Dentate (Lateral) Nucleus of Cerebellum Red points denoting outliers



## Beno Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.79e-08 1.396e-08 0.833 0.446
## Residuals 26 4.36e-07 1.677e-08

## Interposed Nucleus of Cerebellum

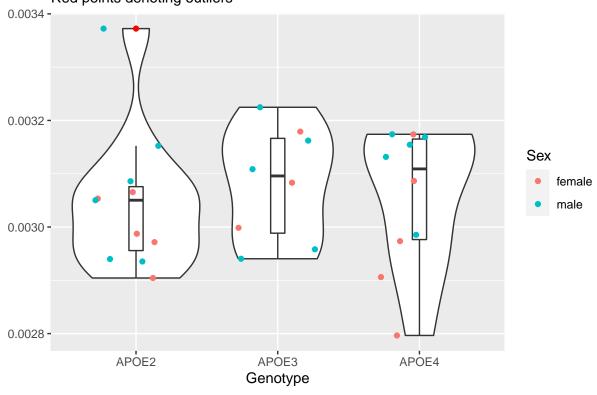
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.290e-08 2.144e-08 1.695 0.203

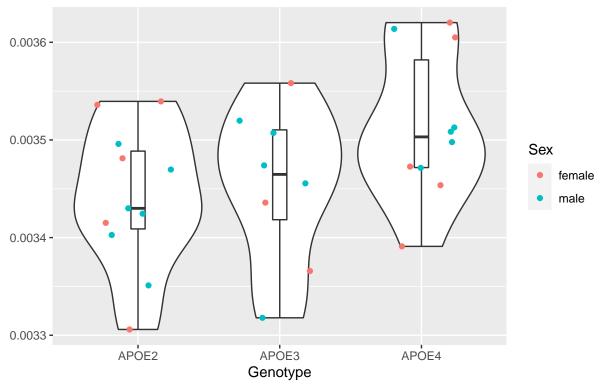
## Residuals 26 3.288e-07 1.265e-08

### Fastigial Medial Dorsolateral Nucleus of Cerebellum Red points denoting outliers



Mean Sq F value Pr(>F) .938e-09 0.186 0.831 ## Sum Sq 2 5.900e-09 2.938e-09 ## geno ## Residuals 26 4.101e-07 1.577e-08

## Fastigial Medial Nucleus of Cerebellum Red points denoting outliers

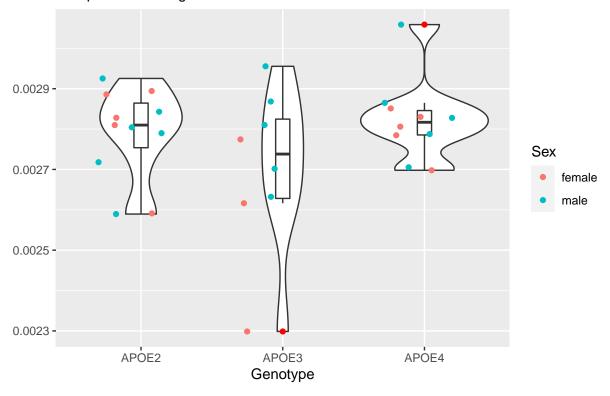


```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.116e-08 1.558e-08    2.698 0.0862 .
## Residuals    26 1.502e-07 5.775e-09
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

#"' $\{r\ VII,\ echo=FALSE\}\ \#ggplot(data=new,\ aes(factor(geno),\ VII)) + \#geom\_violin() + \#geom\_boxplot(width=0.1,\ outlier.color="red") + \#geom\_jitter(height=0,\ width=0.3) + \#labs(x="Genotype",\ \#y="",\ \#title="Ventral Lateral Lemniscus Nucleus",\ \#subtitle="Red points denoting outliers")$ 

#res.aov <- aov(VII ~ geno, data = new) #summary(res.aov) #"'

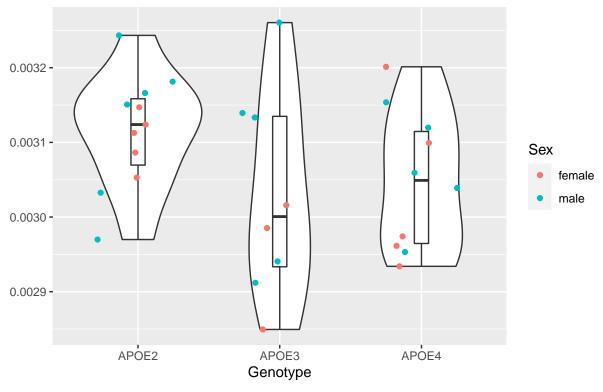
## Parabrachial Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 6.040e-08 3.018e-08 1.562 0.229

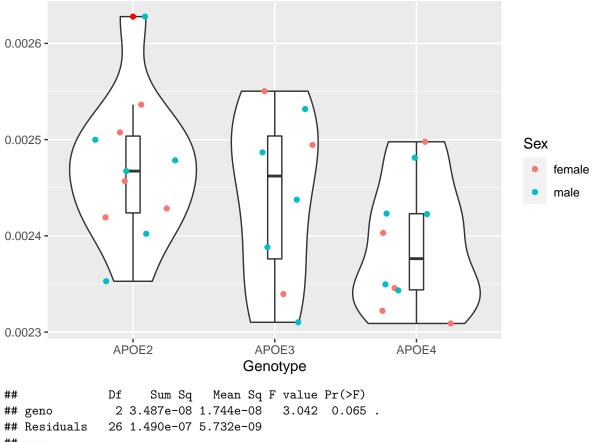
## Residuals 26 5.024e-07 1.932e-08

### Parabrachial Medial Nucleus and Koelliker Fuse Nucleus Red points denoting outliers



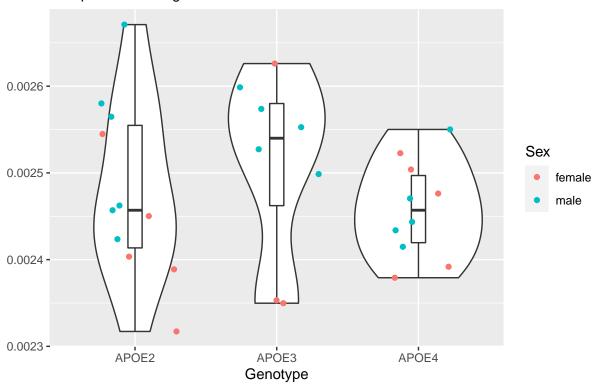
Mean Sq F value Pr(>F) ## Sum Sq 2 3.973e-08 1.986e-08 1.924 0.166 ## geno ## Residuals 26 2.685e-07 1.033e-08

### Parvicellular Reticular Nucleus and Principal Sensory Trigeminal Nucleus Red points denoting outliers



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

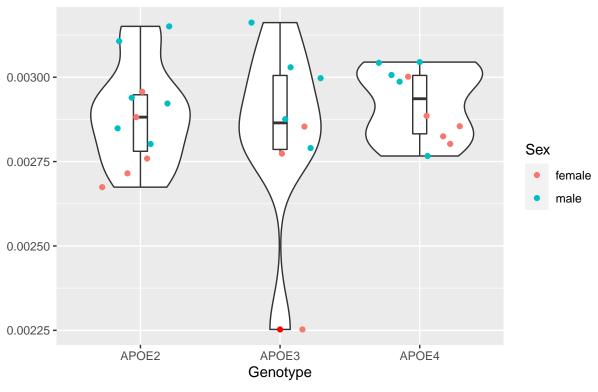
Central Gray
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.178e-08 5.891e-09 0.729 0.492

## Residuals 26 2.100e-07 8.076e-09

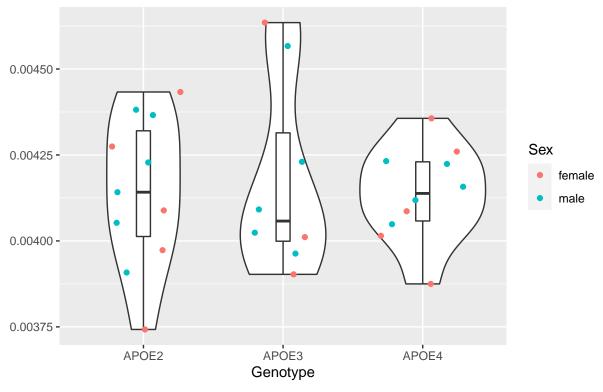
# Pedunculotegmental Medial Paralemniscial and Supratrigemnial Nuclei Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.830e-08 1.417e-08 0.436 0.651

## Residuals 26 8.448e-07 3.249e-08

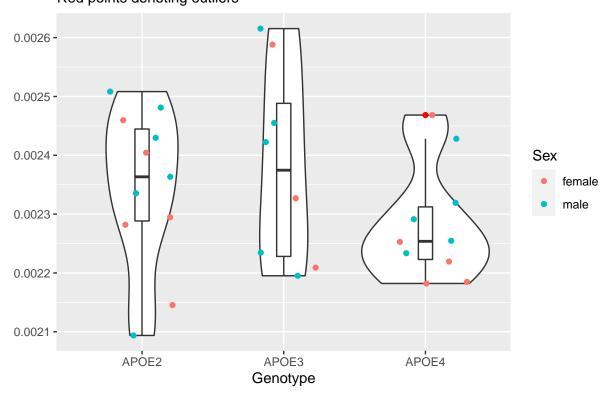
# Motor Root of Trigeminal Nerve Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.200e-09 4.090e-09 0.089 0.915

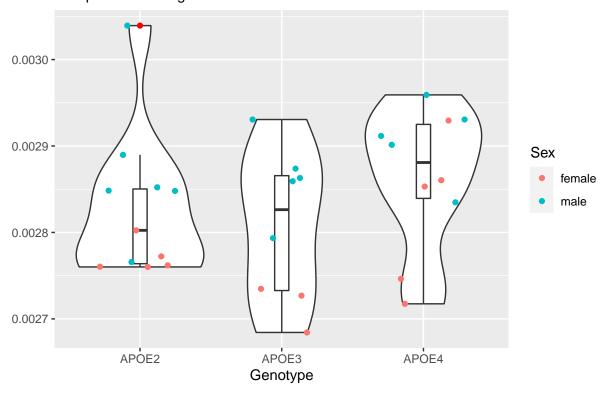
## Residuals 26 1.189e-06 4.574e-08

# Trigeminal Motor Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 4.450e-08 2.225e-08 1.265 0.299
## Residuals 26 4.574e-07 1.759e-08

## Pontine Reticular Nucleus Red points denoting outliers

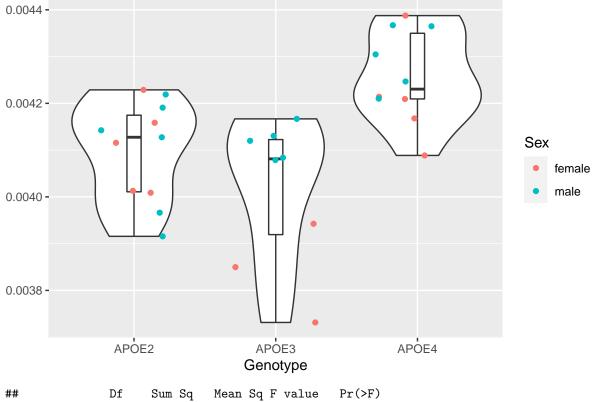


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.503e-08 7.514e-09 1.078 0.355

## Residuals 26 1.812e-07 6.970e-09

## Raphe Nucleus

#### Red points denoting outliers



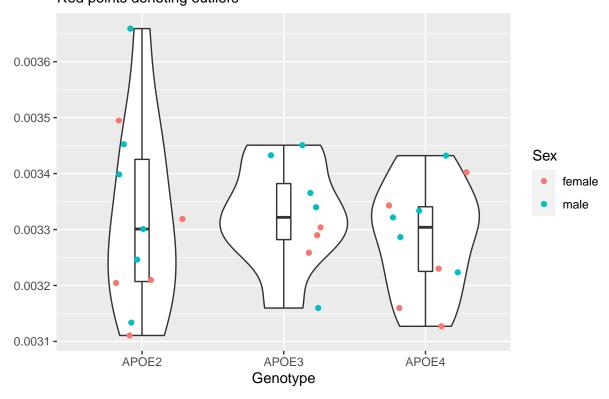
```
## geno 2 2.794e-07 1.397e-07 9.87 0.000647 ***

## Residuals 26 3.680e-07 1.415e-08

## ---

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

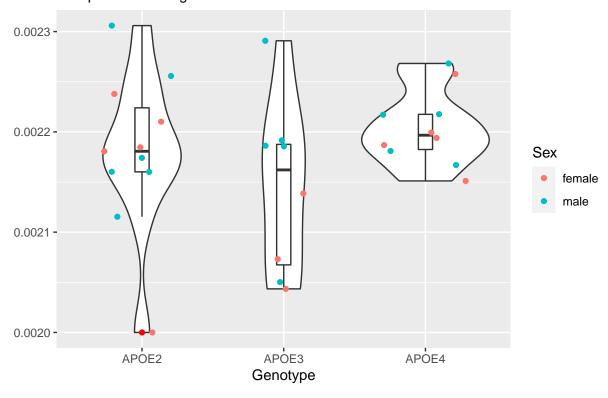
# Trigeminal Sensory Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.900e-09 4.444e-09 0.268 0.767

## Residuals 26 4.316e-07 1.660e-08

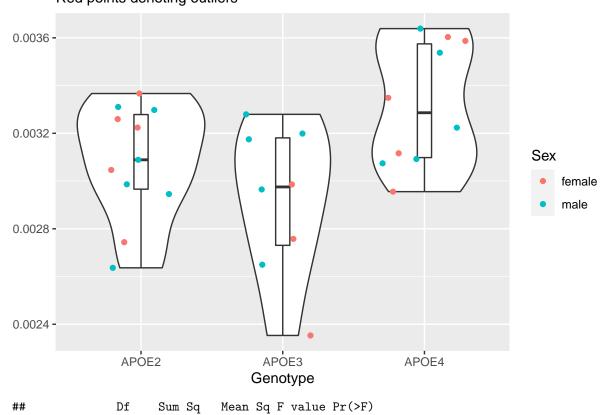
# Dorsal Tegmentum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.554e-08 7.770e-09 1.59 0.223

## Residuals 26 1.270e-07 4.886e-09

### Tegmental Nucleus Red points denoting outliers



```
## geno 2 7.249e-07 3.625e-07 5.041 0.0141 *

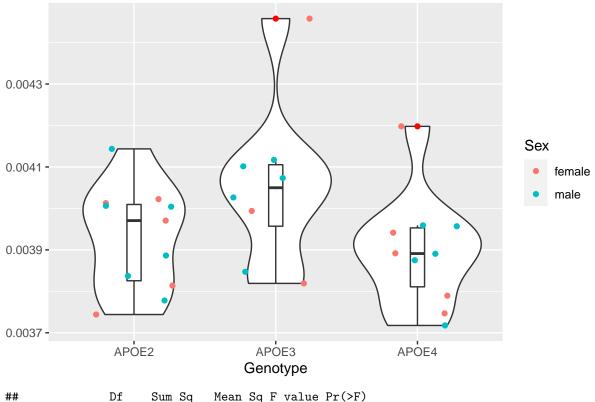
## Residuals 26 1.870e-06 7.190e-08

## ---

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

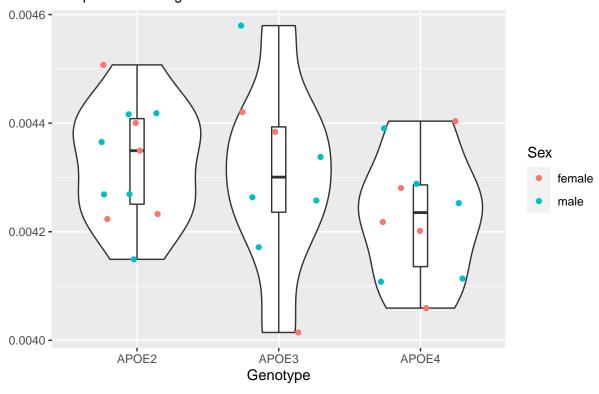
### **Cochlear Nucleus**

#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.205e-07 6.026e-08    2.635 0.0908 .
## Residuals    26 5.948e-07 2.288e-08
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

### Pontine Nucleus Red points denoting outliers

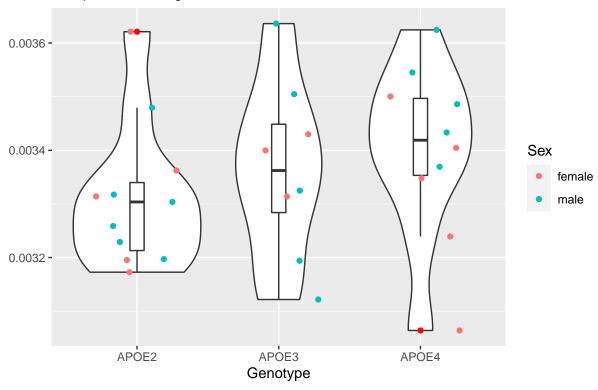


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 5.070e-08 2.535e-08 1.507 0.24

## Residuals 26 4.372e-07 1.682e-08

## Reticulotegmental Nucleus of Pons

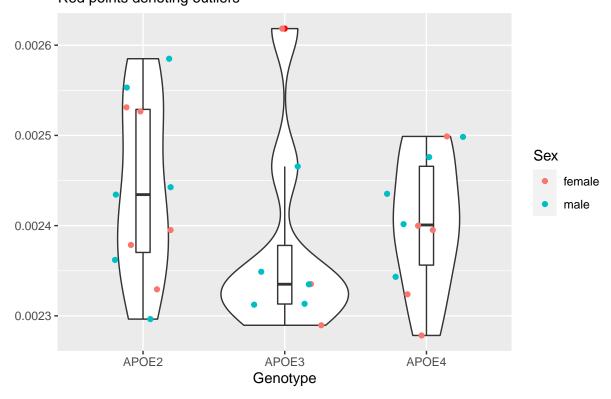
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 4.090e-08 2.043e-08 0.877 0.428

## Residuals 26 6.055e-07 2.329e-08

### Olivary Complex Red points denoting outliers

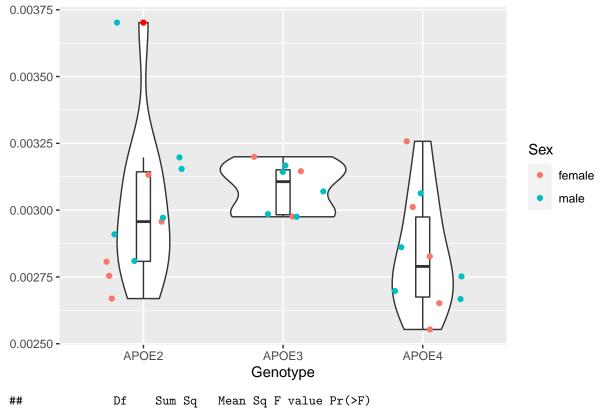


```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.835e-08 9.176e-09 1.034 0.37
## Residuals 26 2.307e-07 8.873e-09
```

#"' $\{r \ PnRt, \ echo = FALSE\} \ \#ggplot(data = new, \ aes(factor(geno), \ PnRt)) + \# geom\_violin() + \# geom\_boxplot(width = 0.1, \ outlier.color = "red") + # geom\_jitter(height = 0, \ width = 0.3) + # labs(x = "Genotype", # y = "", # title = "Pontine Reticular Nucleus", # subtitle = "Red points denoting outliers")$ 

#res.aov <- aov(PnRt ~ geno, data = new) #summary(res.aov) #"

### Spinal Trigeminal Nucleus Red points denoting outliers



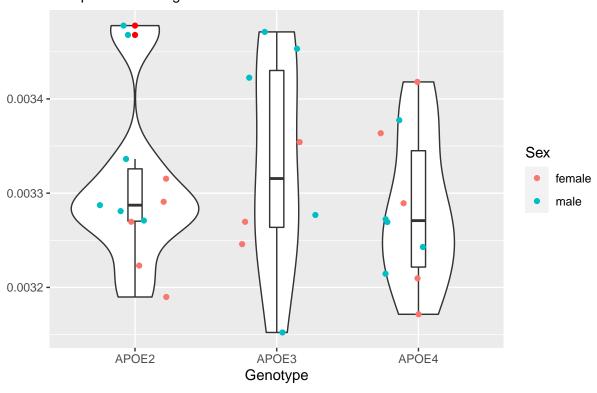
```
## geno 2 2.999e-07 1.499e-07 2.959 0.0695 .

## Residuals 26 1.317e-06 5.067e-08

## ---

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

Vestibular Nuclei Red points denoting outliers

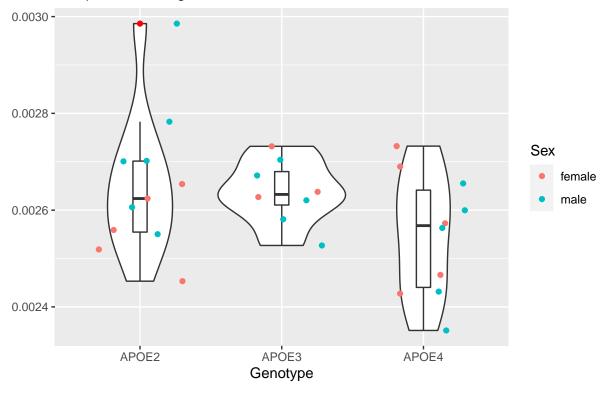


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.041e-08 5.204e-09 0.593 0.56

## Residuals 26 2.282e-07 8.778e-09

## Gigantocellular Reticular Nucleus

### Red points denoting outliers

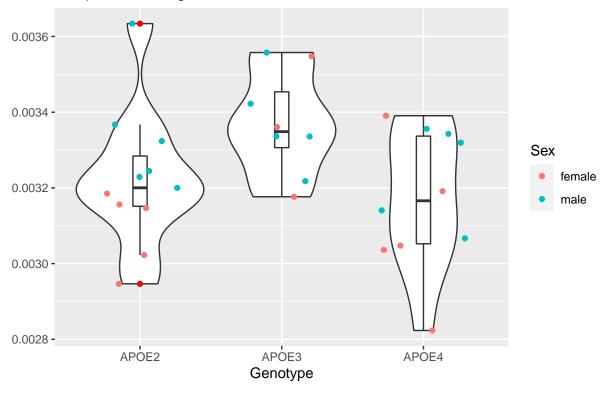


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 5.980e-08 2.990e-08 2.019 0.153

## Residuals 26 3.852e-07 1.481e-08

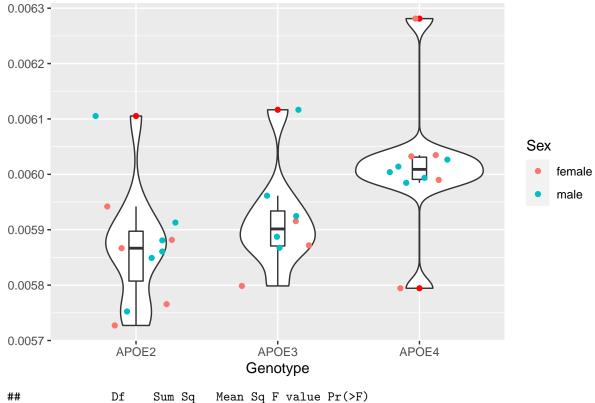
### **Cuneate Nucleus**

### Red points denoting outliers



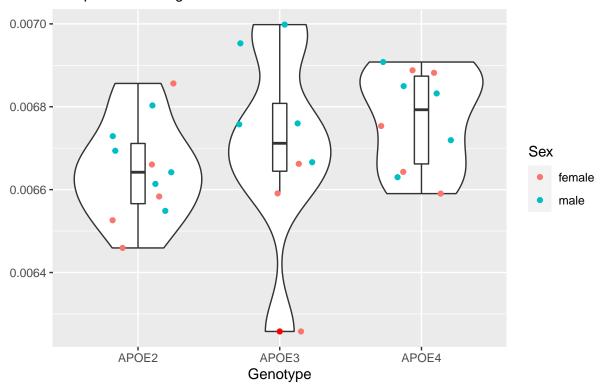
```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.830e-07 9.15e-08    3.123 0.0609 .
## Residuals    26 7.619e-07 2.93e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

## Anterior Commisure Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.170e-07 5.849e-08    5.206 0.0125 *
## Residuals    26 2.921e-07 1.123e-08
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

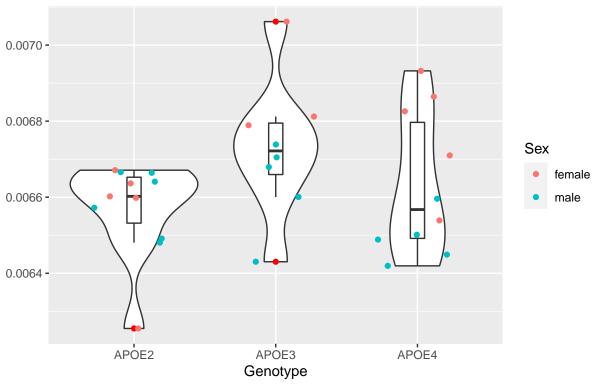
Optic Tracts
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 7.880e-08 3.940e-08 1.605 0.22

## Residuals 26 6.382e-07 2.455e-08

Fimbria
Red points denoting outliers

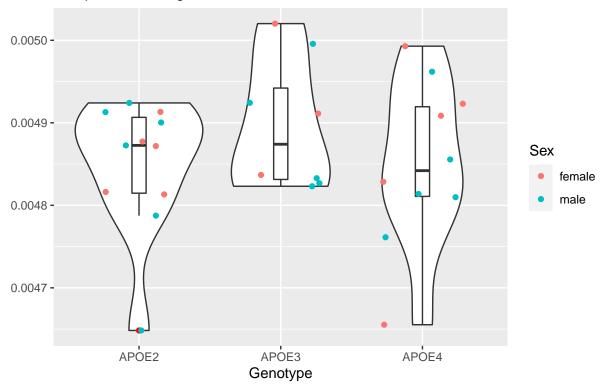


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.133e-07 5.666e-08 2.113 0.141

## Residuals 26 6.970e-07 2.681e-08

## Corpus Callosum

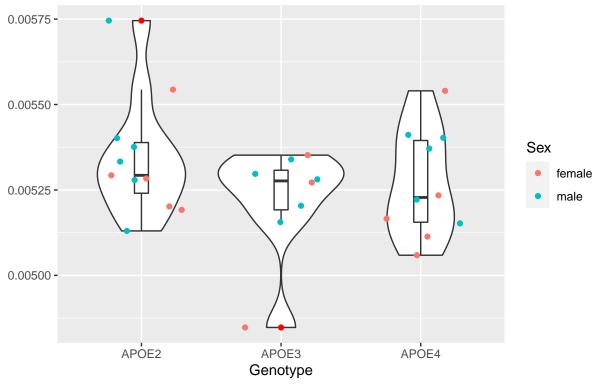
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.253e-08 6.265e-09 0.816 0.453

## Residuals 26 1.997e-07 7.680e-09

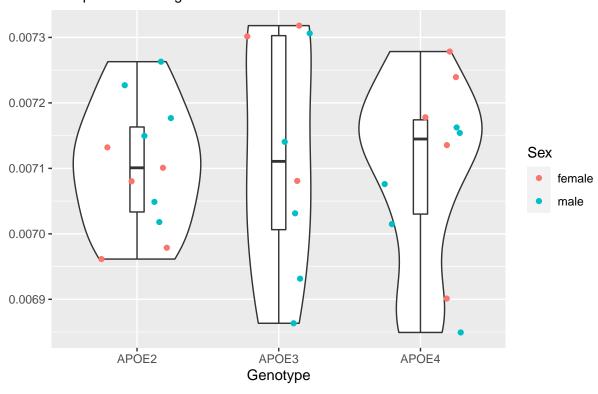
Fornix Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.610e-08 3.803e-08 1.392 0.266

## Residuals 26 7.102e-07 2.732e-08

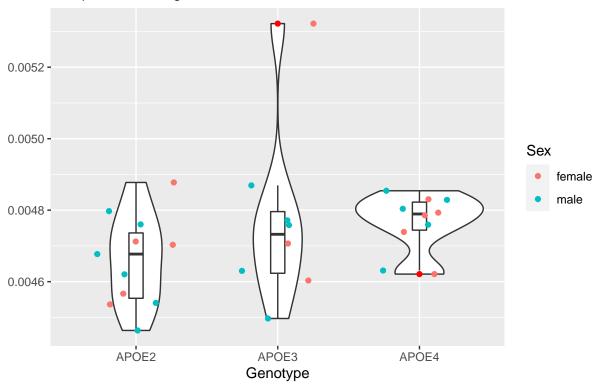
Stria Terminalis
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.500e-09 1.262e-09 0.067 0.935

## Residuals 26 4.892e-07 1.882e-08

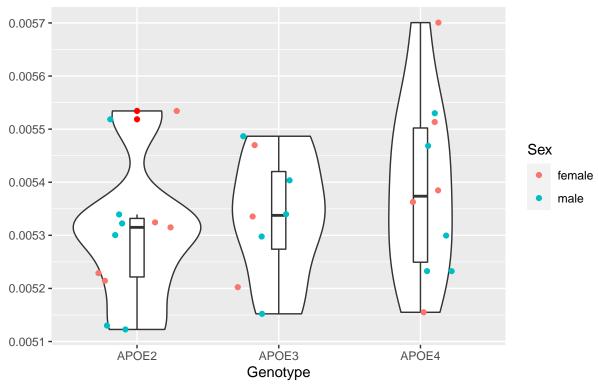
Cingulum
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 7.890e-08 3.944e-08 1.557 0.23

## Residuals 26 6.585e-07 2.533e-08

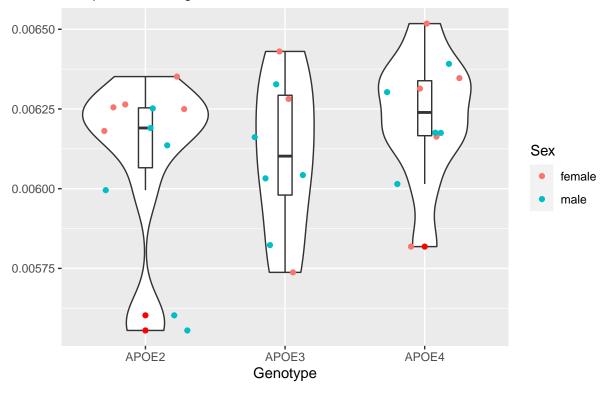
## Lateral Olfactory Tract Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.680e-08 1.842e-08 0.908 0.416

## Residuals 26 5.275e-07 2.029e-08

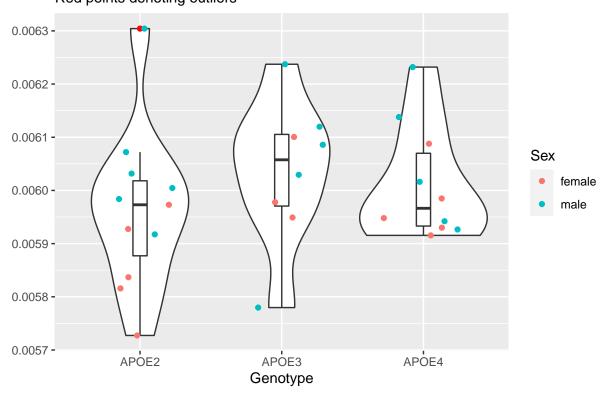
## Ventral Hippocampal Commissure Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.005e-07 5.025e-08 0.869 0.431

## Residuals 26 1.504e-06 5.784e-08

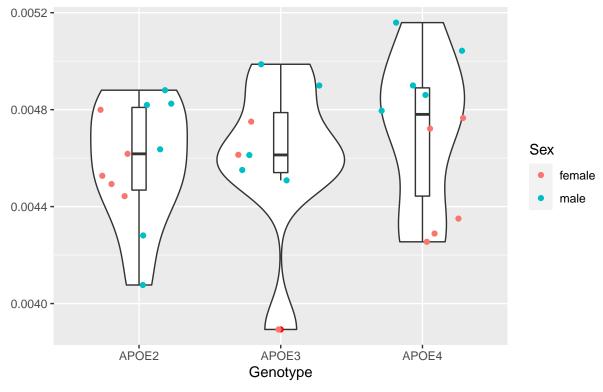
# Internal Capsule Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.620e-08 1.310e-08 0.731 0.491

## Residuals 26 4.657e-07 1.791e-08

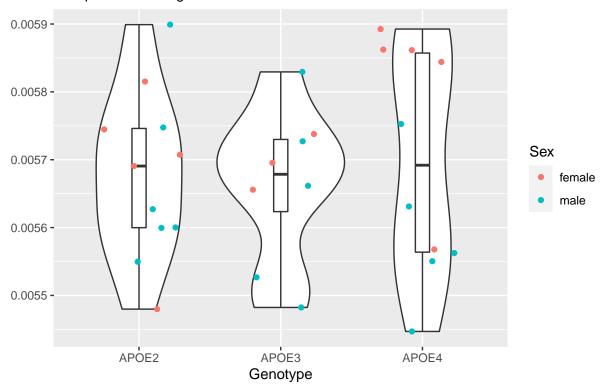
### Fasciculus Retroflexus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.021e-07 5.104e-08 0.577 0.569

## Residuals 26 2.301e-06 8.849e-08

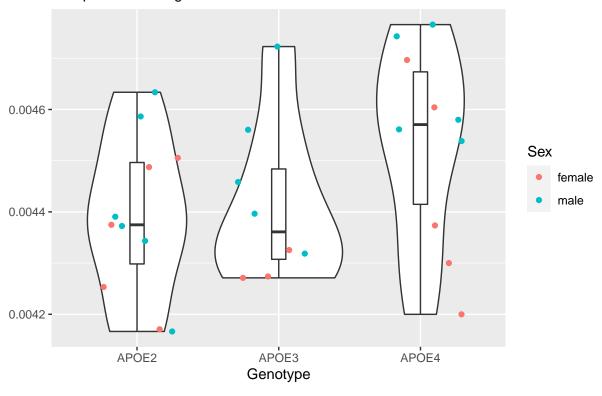
Stria Medularis Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.900e-09 2.434e-09 0.132 0.877

## Residuals 26 4.788e-07 1.842e-08

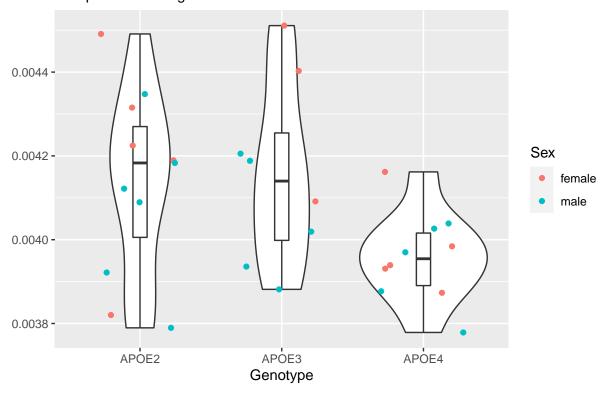
### Mammillothalamic Tract Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.237e-07 6.187e-08 2.174 0.134

## Residuals 26 7.400e-07 2.846e-08

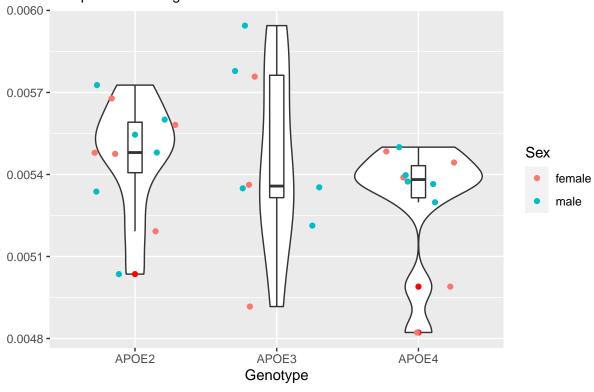
### Posterior Commissure Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 2.274e-07 1.137e-07    3.207 0.0569 .
## Residuals    26 9.217e-07 3.545e-08
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

# Brachium of Superior Colliculus

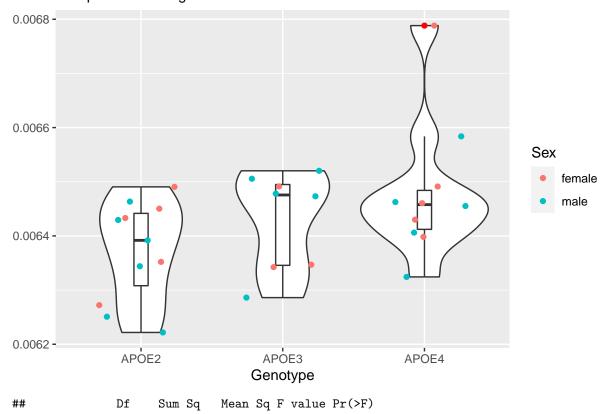
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.623e-07 8.113e-08 1.25 0.303

## Residuals 26 1.688e-06 6.491e-08

### Cerebral Peduncle Red points denoting outliers



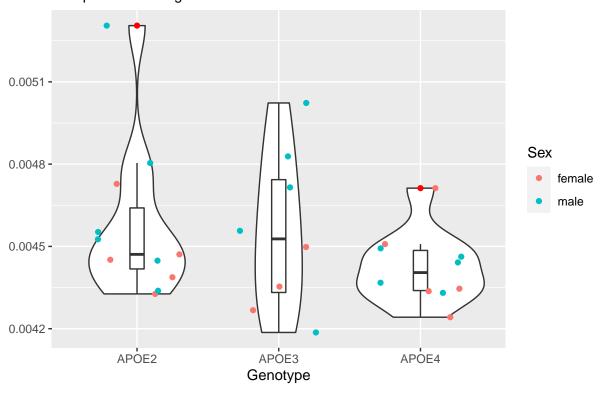
```
## geno 2 6.061e-08 3.030e-08 2.74 0.0832 .

## Residuals 26 2.875e-07 1.106e-08

## ---

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

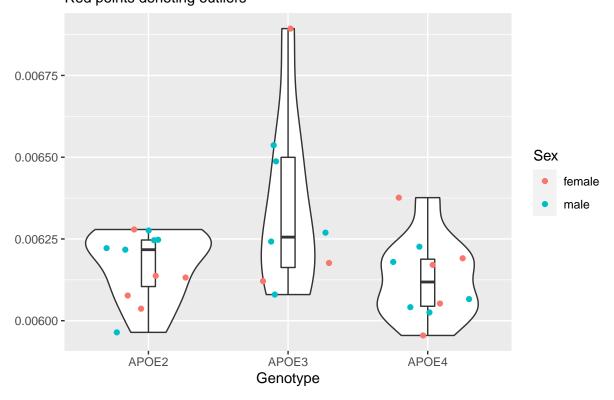
### Lateral Lemniscus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.357e-07 6.784e-08 1.142 0.335

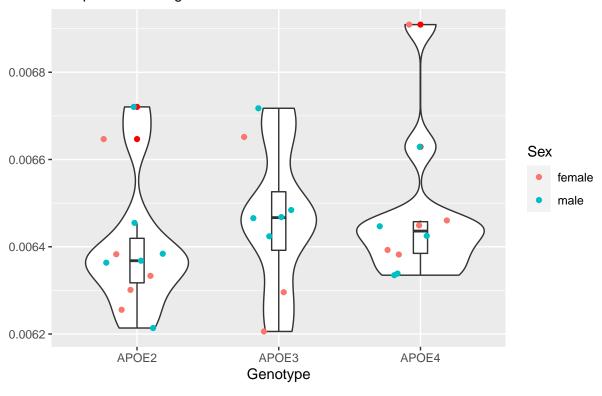
## Residuals 26 1.544e-06 5.939e-08

### Spinal Trigeminal Nerve Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 2.447e-07 1.223e-07    4.127 0.0278 *
## Residuals    26 7.706e-07 2.964e-08
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

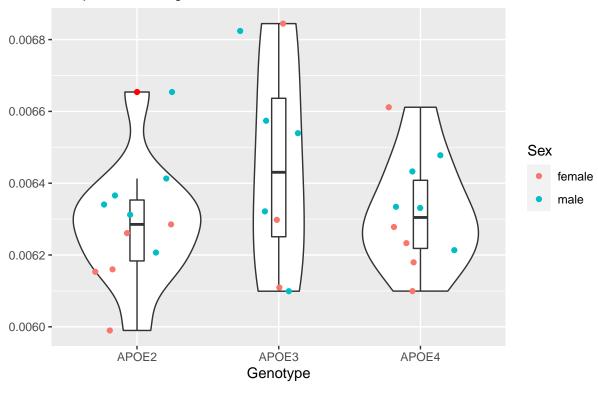
# Pyramidal Tract Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 3.310e-08 1.656e-08 0.61 0.551

## Residuals 26 7.057e-07 2.714e-08

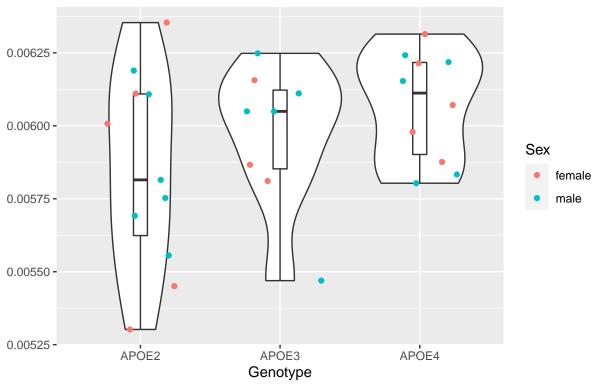
### Vestibulocochlear Nerve Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.357e-07 6.785e-08 1.605 0.22

## Residuals 26 1.099e-06 4.228e-08

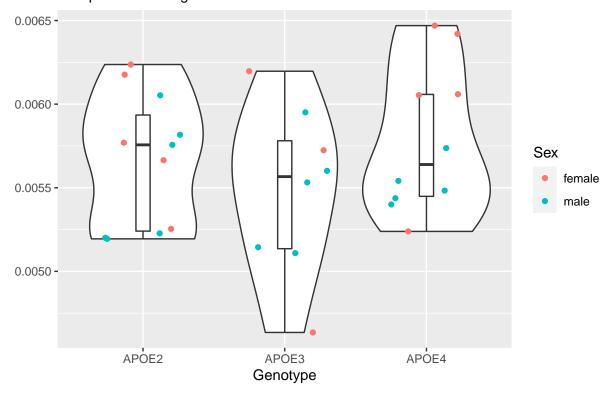
Facial Nerve Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.588e-07 1.294e-07 1.817 0.183

## Residuals 26 1.852e-06 7.124e-08

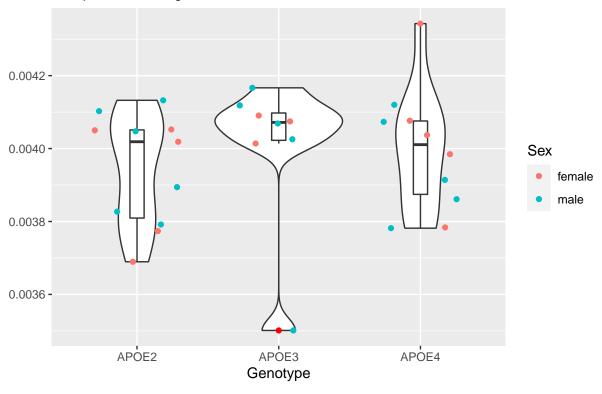
### Longitudinal Fasciculus of Pons Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 3.950e-07 1.974e-07 1.007 0.379

## Residuals 26 5.097e-06 1.960e-07

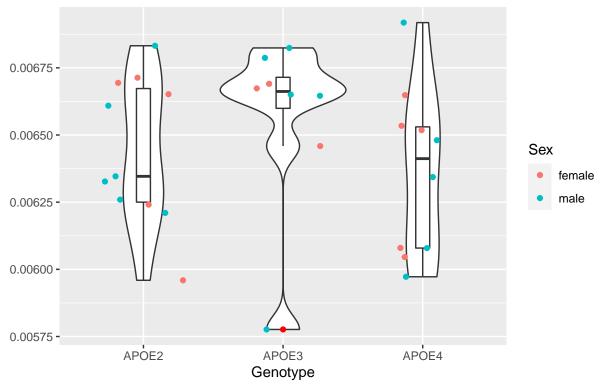
### Medial Longitudinal Fasciculus and Tectospinal Tract Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.360e-08 1.182e-08 0.38 0.687

## Residuals 26 8.082e-07 3.108e-08

## Spinocerebellar Tract Red points denoting outliers

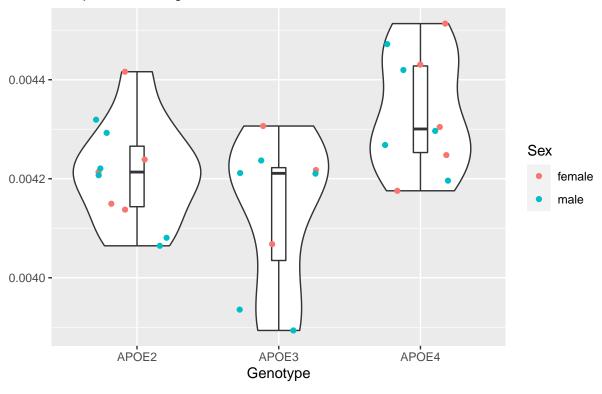


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.811e-07 9.055e-08 0.978 0.389

## Residuals 26 2.407e-06 9.260e-08

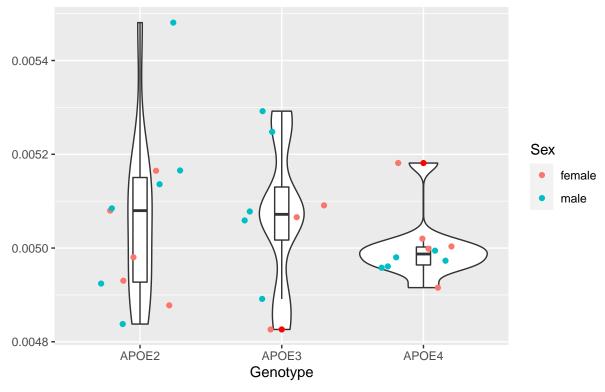
## Medial Lemniscus

### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.802e-07 9.010e-08    5.923 0.00759 **
## Residuals    26 3.955e-07 1.521e-08
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
```

### Ventral Spinocerebellar Tract Red points denoting outliers

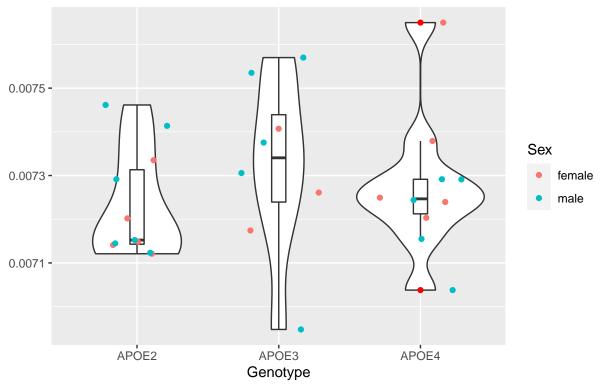


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.830e-08 1.416e-08 0.672 0.519

## Residuals 26 5.478e-07 2.107e-08

### Middle Cerebellar Peduncle

### Red points denoting outliers

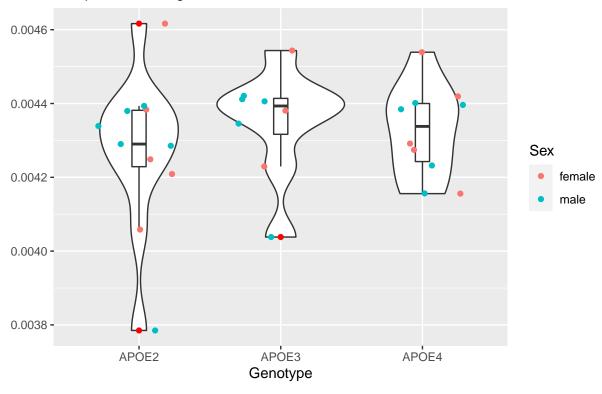


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 3.910e-08 1.953e-08 0.761 0.477

## Residuals 26 6.674e-07 2.567e-08

# Superior Cerebellar Peduncle

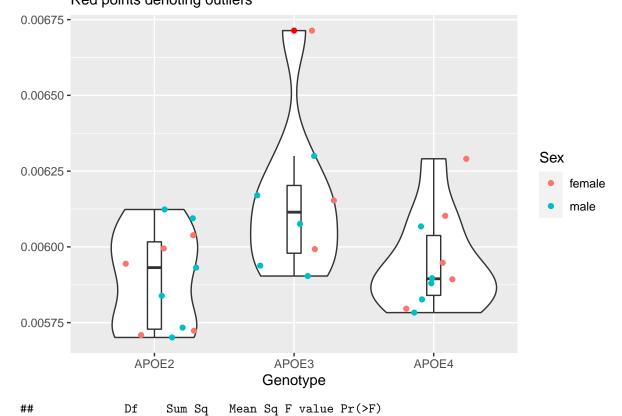
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.930e-08 1.465e-08 0.508 0.608

## Residuals 26 7.503e-07 2.886e-08

### Inferior Cerebellar Peduncle Red points denoting outliers



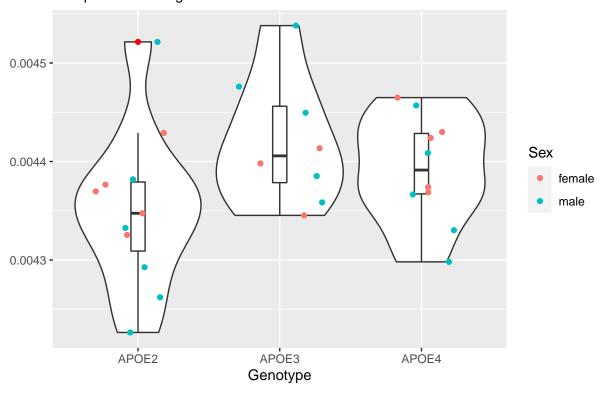
```
## geno 2 3.386e-07 1.693e-07 4.566 0.02 *

## Residuals 26 9.641e-07 3.708e-08

## ---

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

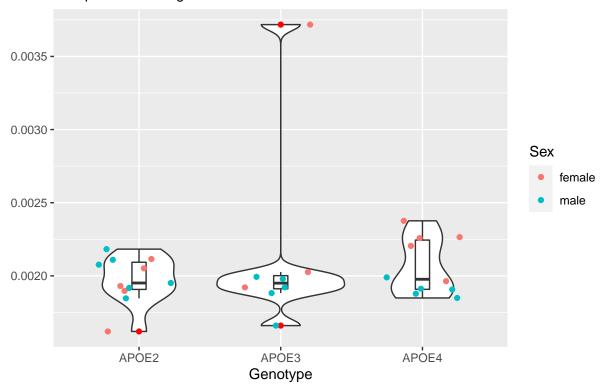
# Cerebellar White Matter Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.303e-08 1.151e-08 2.488 0.103

## Residuals 26 1.203e-07 4.628e-09

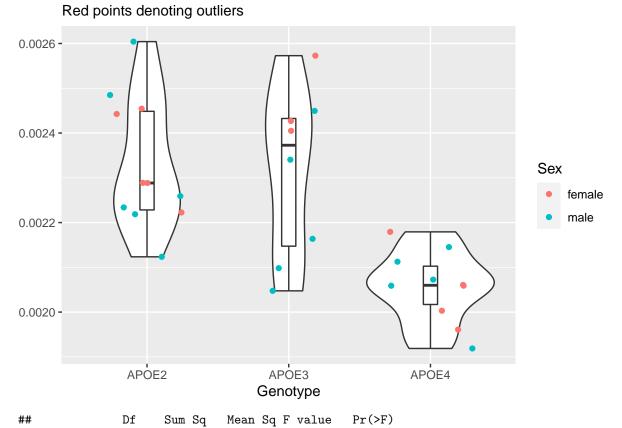
### Lateral Ventricle Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.280e-07 6.413e-08 0.472 0.629

## Residuals 26 3.532e-06 1.359e-07

# Cingulate Cortex Area 25



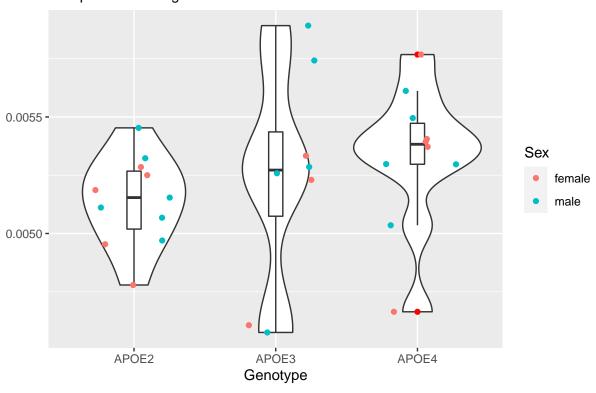
```
## geno 2 4.622e-07 2.311e-07 11.64 0.000245 ***

## Residuals 26 5.162e-07 1.985e-08

## ---

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

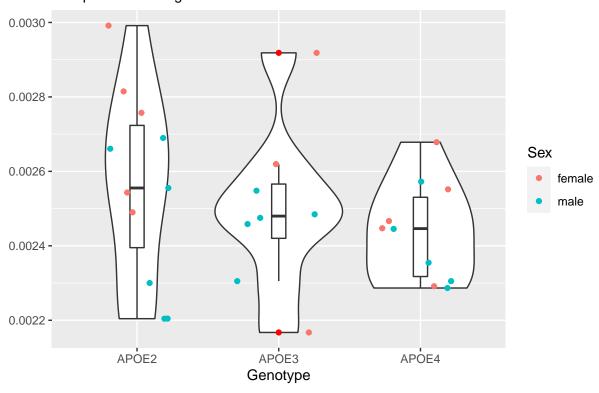
### Dorsal Acustic Stria Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.986e-07 9.930e-08 0.942 0.403

## Residuals 26 2.740e-06 1.054e-07

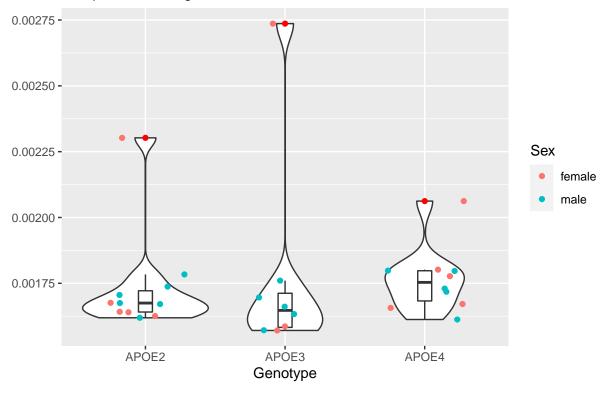
### Postsubiculum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.190e-08 4.094e-08 0.931 0.407

## Residuals 26 1.144e-06 4.400e-08

### Ventricular System 4th Ventricle Red points denoting outliers

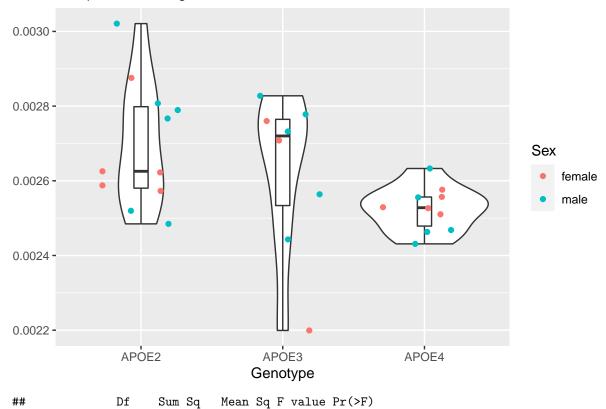


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 9.100e-09 4.540e-09 0.074 0.929

## Residuals 26 1.601e-06 6.158e-08

## Microcellular Tegmental Nucleus

### Red points denoting outliers



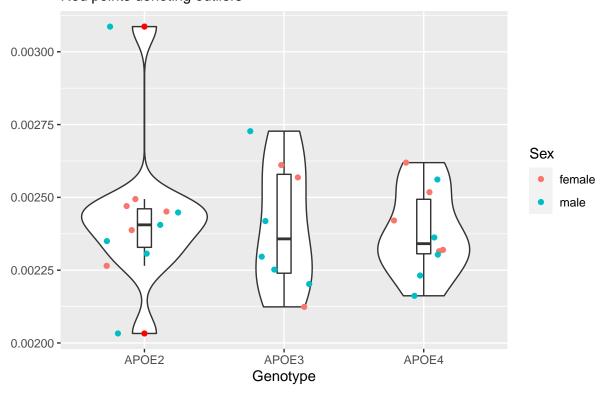
```
## geno 2 1.566e-07 7.831e-08 3.24 0.0554 .

## Residuals 26 6.284e-07 2.417e-08

## ---

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

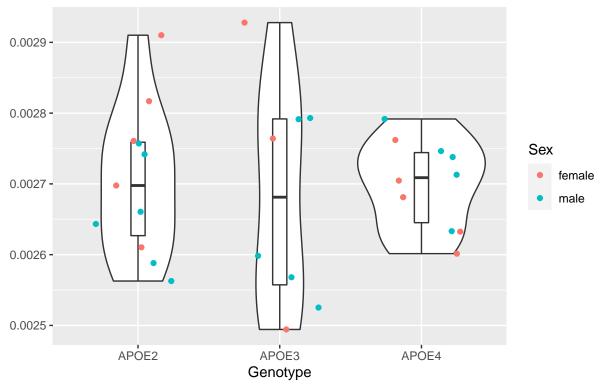
### Pretectal Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.110e-08 5.570e-09 0.124 0.884

## Residuals 26 1.169e-06 4.497e-08

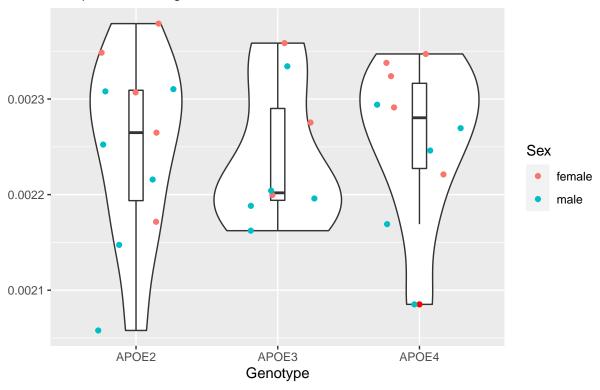
### Latero Dorsal Thalamic Nucleus Ventro Lateral Red points denoting outliers



Mean Sq F value Pr(>F) .173e-09 0.096 0.909 Sum Sq ## 2 2.300e-09 1.173e-09 ## geno ## Residuals 26 3.168e-07 1.218e-08

### Latero Posterior Nuclei of Thalamus

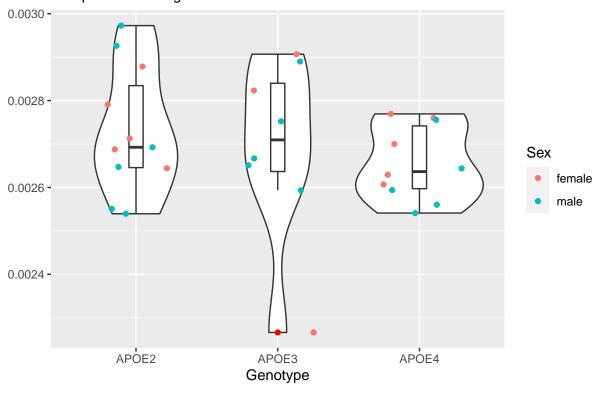
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.560e-09 7.820e-10 0.107 0.899

## Residuals 26 1.897e-07 7.297e-09

# Anterior Thalamic Nuclei Red points denoting outliers

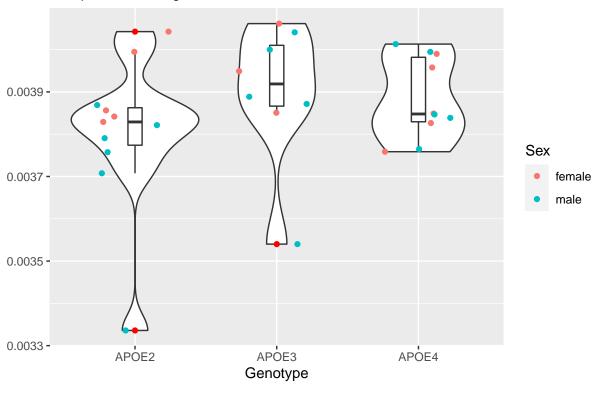


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.950e-08 1.477e-08 0.669 0.521

## Residuals 26 5.737e-07 2.207e-08

# Red Nucleus Magnocellular

### Red points denoting outliers

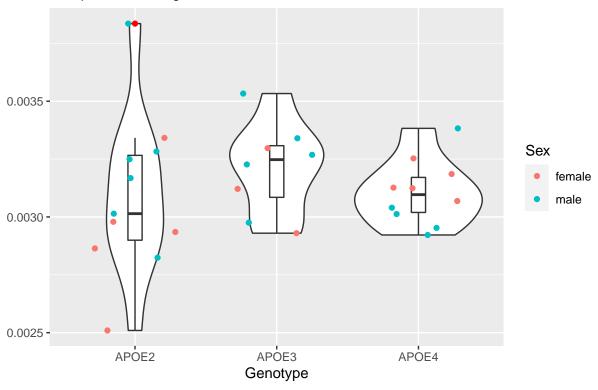


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 5.290e-08 2.644e-08 1.131 0.338

## Residuals 26 6.081e-07 2.339e-08

### Pararubral Nucleus

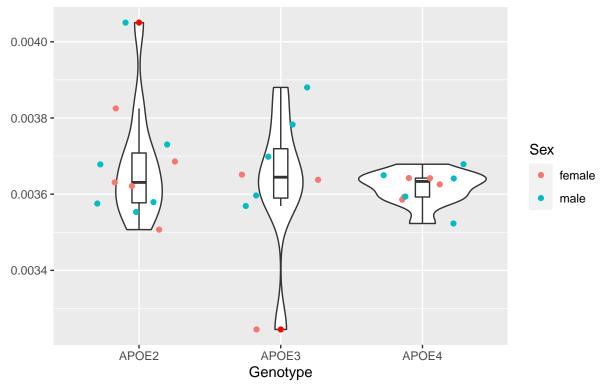
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.510e-08 3.754e-08 0.595 0.559

## Residuals 26 1.639e-06 6.305e-08

Retro Rubral Fluid Red points denoting outliers

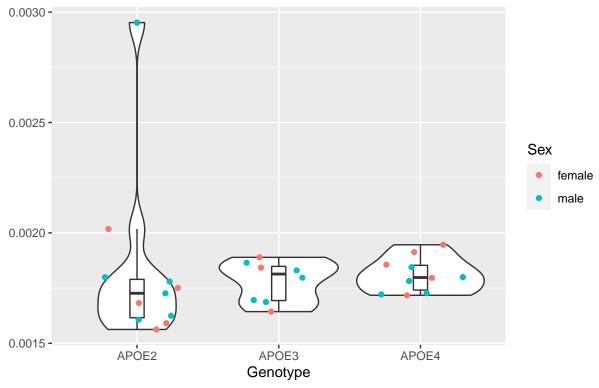


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.940e-08 9.721e-09 0.51 0.606

## Residuals 26 4.956e-07 1.906e-08

# Cerebrospinal Fluid

### Red points denoting outliers

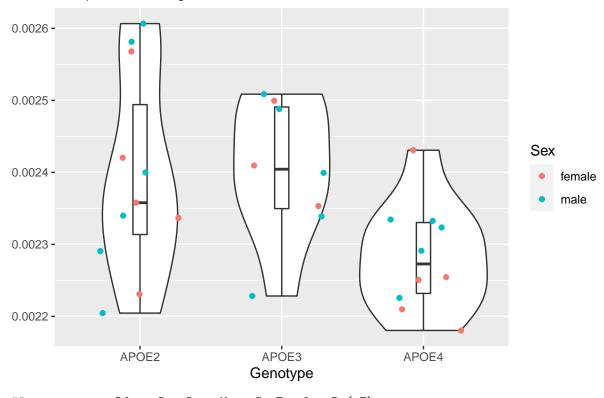


## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 9.600e-09 4.810e-09 0.075 0.928

## Residuals 26 1.675e-06 6.442e-08

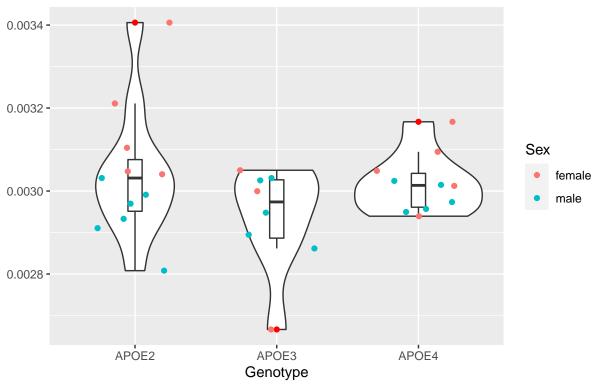
## Intermediate Reticular Nucleus

### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 8.648e-08 4.324e-08    3.668 0.0395 *
## Residuals    26 3.065e-07 1.179e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

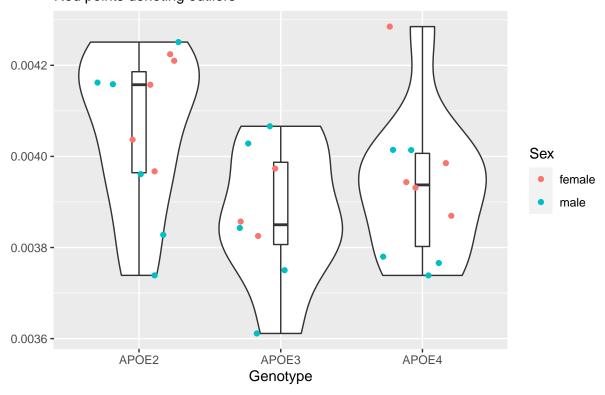
# Posterior Dorsal Paraventricular Medial Parvicellular Posterior Lateral Hy Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 5.560e-08 2.782e-08 1.736 0.196

## Residuals 26 4.167e-07 1.602e-08

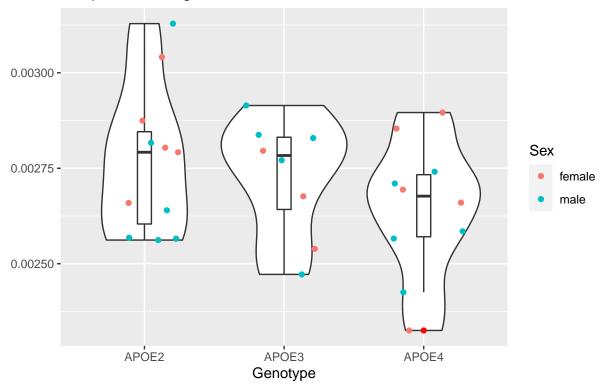
Prerubral Forel
Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.897e-07 9.484e-08    3.611 0.0413 *
## Residuals    26 6.828e-07 2.626e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

# PVG of Hypothalamus

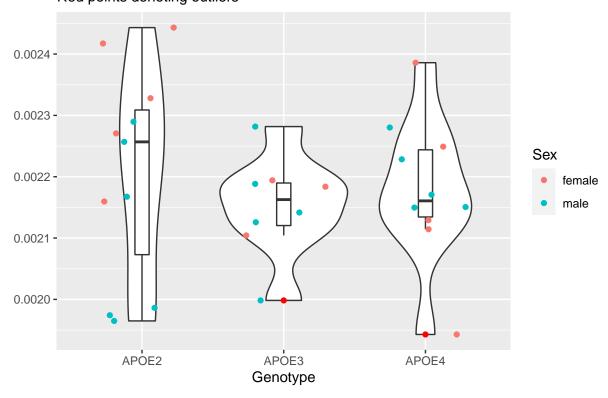
### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.110e-08 4.055e-08 1.282 0.294

## Residuals 26 8.223e-07 3.163e-08

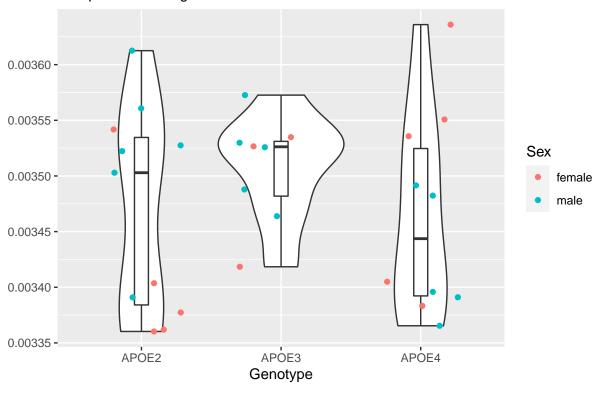
### Basal Lateral Amygdala Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.310e-08 6.532e-09 0.365 0.698

## Residuals 26 4.654e-07 1.790e-08

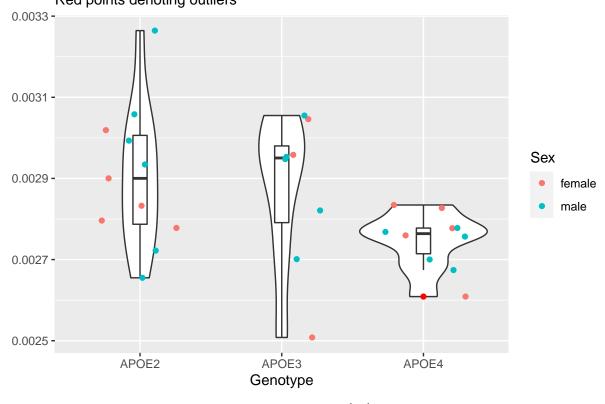
Brain Stem Rest Red points denoting outliers



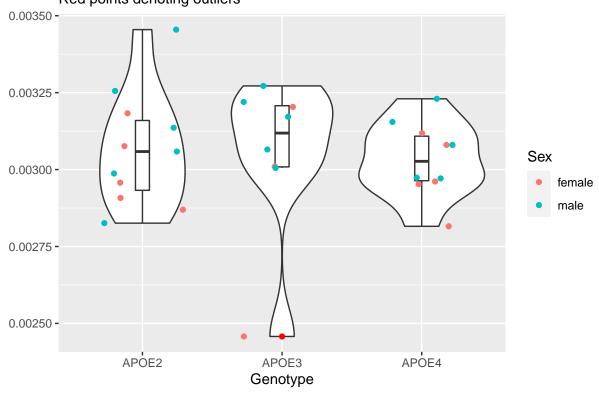
## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 9.850e-09 4.923e-09 0.739 0.487

## Residuals 26 1.732e-07 6.663e-09

#### Precuneiform Nucleus Red points denoting outliers



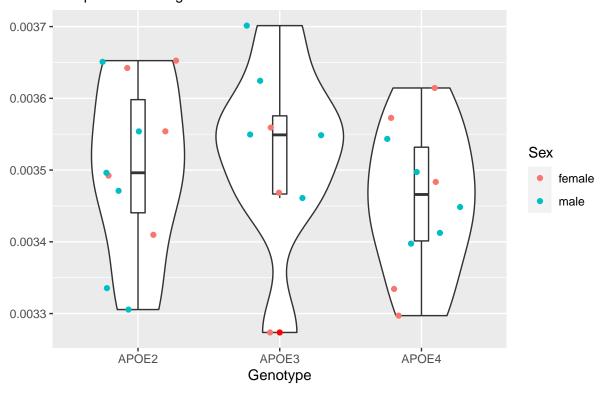
### Cuneiform Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 5.000e-09 2.510e-09 0.069 0.934

## Residuals 26 9.478e-07 3.645e-08

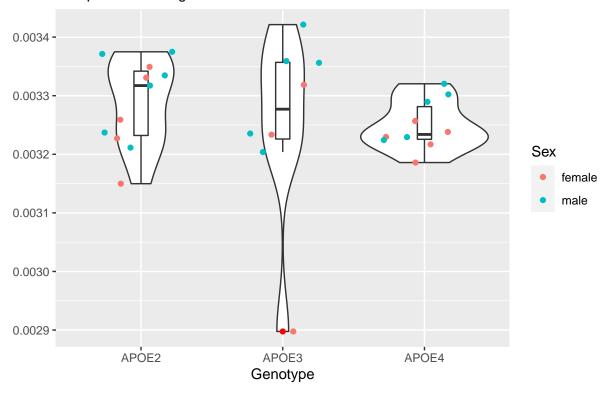
### Midbrain Linear Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.990e-08 9.93e-09 0.73 0.491

## Residuals 26 3.535e-07 1.36e-08

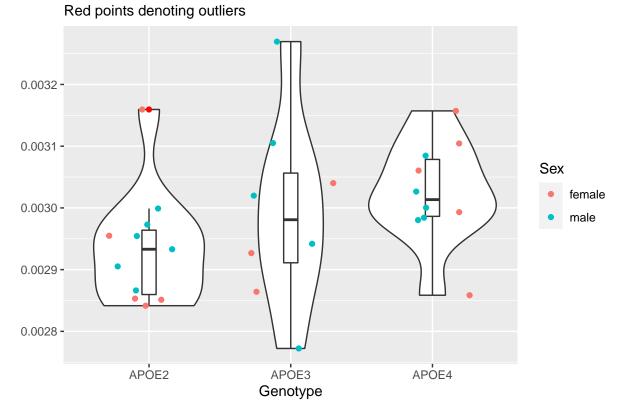
# Midbrain Reticular Nucleus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 9.140e-09 4.572e-09 0.466 0.633

## Residuals 26 2.553e-07 9.819e-09

# Red Nucleus Parvicellular

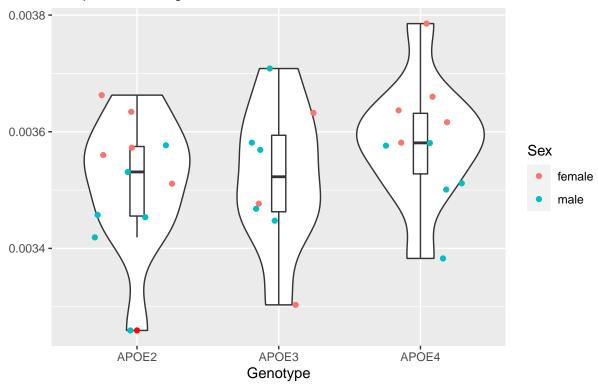


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.305e-08 2.152e-08 1.802 0.185

## Residuals 26 3.105e-07 1.194e-08

## Substania Nigra

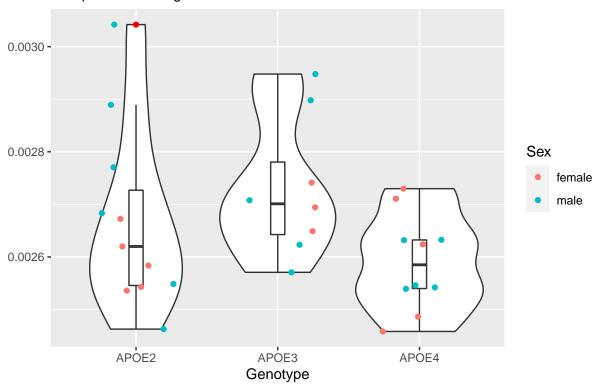
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.920e-08 1.459e-08 1.113 0.344

## Residuals 26 3.409e-07 1.311e-08

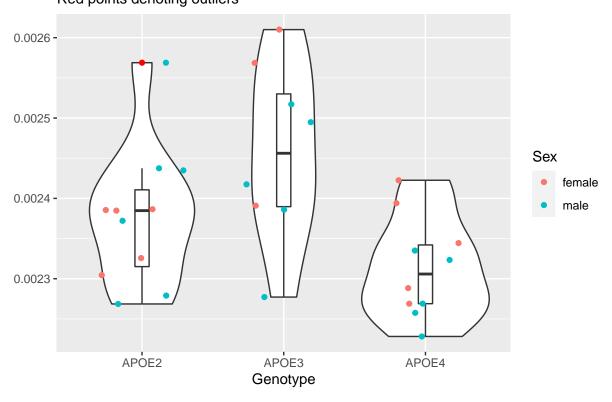
# Inferior Colliculus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.770e-08 4.383e-08 2.31 0.119

## Residuals 26 4.933e-07 1.897e-08

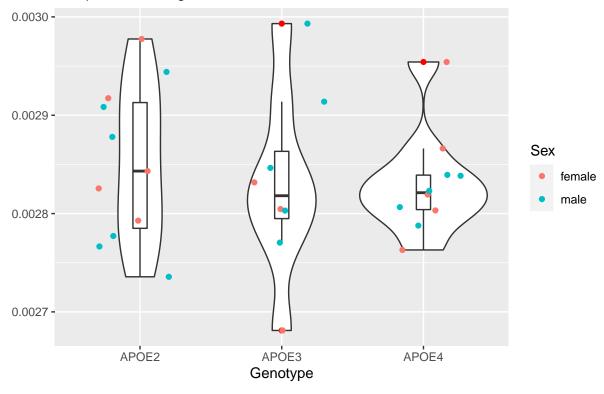
# Superior Colliculus Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 9.299e-08 4.65e-08    6.281 0.00595 **
## Residuals    26 1.925e-07 7.40e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

## Deep Mesencephalic Nuclei

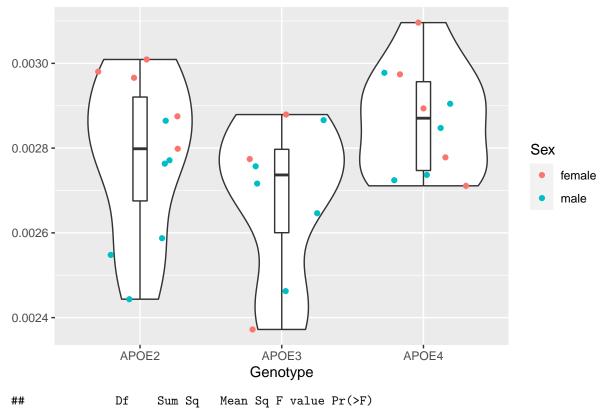
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.070e-09 1.533e-09 0.268 0.767

## Residuals 26 1.486e-07 5.717e-09

# Subbrachial Nucleus and Peripeduncular Nucleus Red points denoting outliers



```
## geno 2 1.443e-07 7.215e-08 2.57 0.0958 .

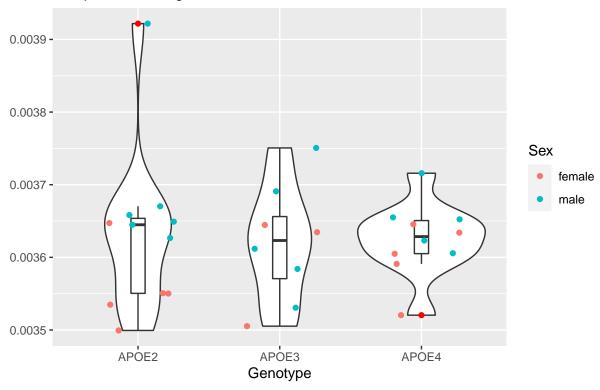
## Residuals 26 7.299e-07 2.807e-08

## ---

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

#### Reticular Nucleus of Thalamus

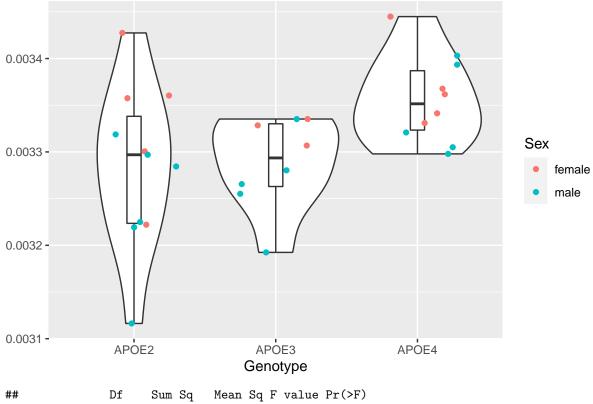
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 8.100e-10 4.070e-10 0.054 0.948

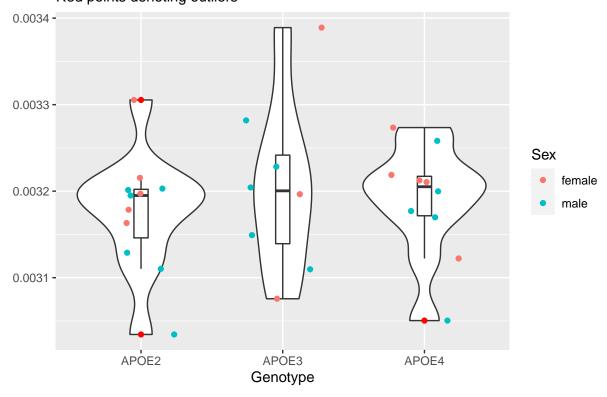
## Residuals 26 1.959e-07 7.533e-09

Zona Incerta Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.308e-08 1.654e-08    3.908 0.0328 *
## Residuals    26 1.100e-07 4.233e-09
## ---
## Signif. codes:    0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

#### Lateral Geniculate Nucleus Red points denoting outliers

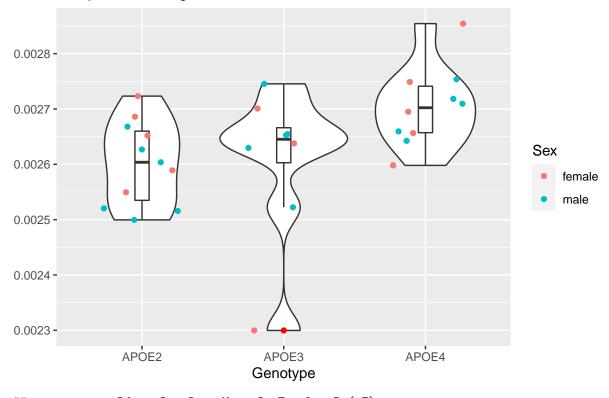


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.810e-09 1.906e-09 0.32 0.729

## Residuals 26 1.547e-07 5.949e-09

#### Medial Geniculate Nucleus

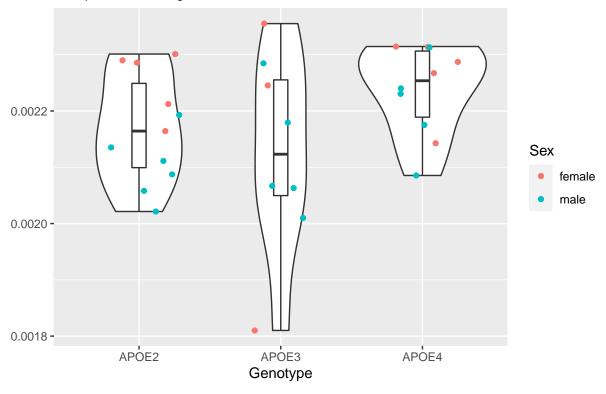
#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 6.491e-08 3.246e-08 3.535 0.0439 *
## Residuals    26 2.387e-07 9.180e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

#### Latero Dorsal Nucleus of Thalamus

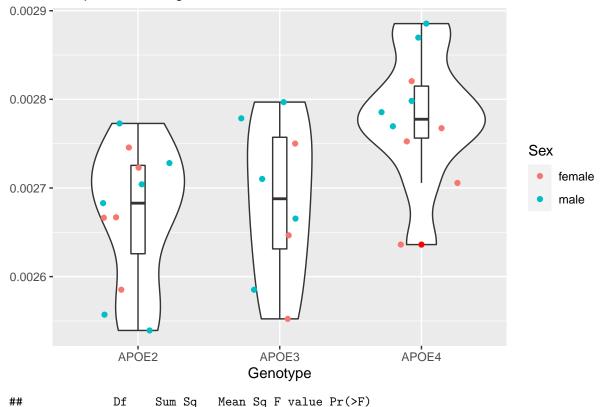
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 5.630e-08 2.817e-08 2.002 0.155

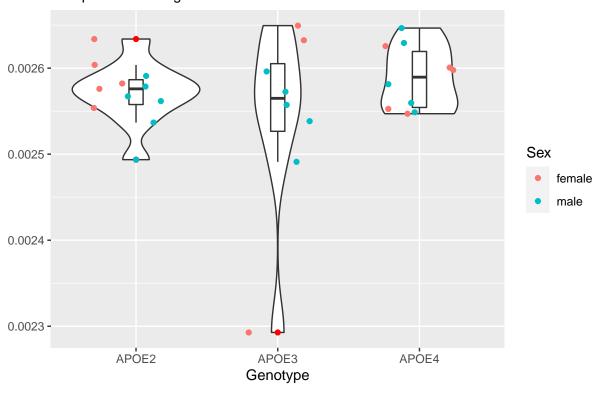
## Residuals 26 3.659e-07 1.407e-08

#### Ventral Thalamic Nuclei Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 6.983e-08 3.492e-08 5.508 0.0101 *
## Residuals    26 1.648e-07 6.340e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' ' 1
```

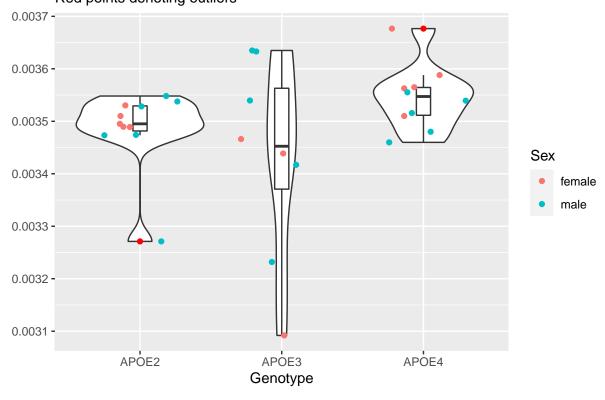
Thalamus Rest Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.015e-08 5.076e-09 1.159 0.329

## Residuals 26 1.139e-07 4.379e-09

### Ventral Tegmental Area Red points denoting outliers

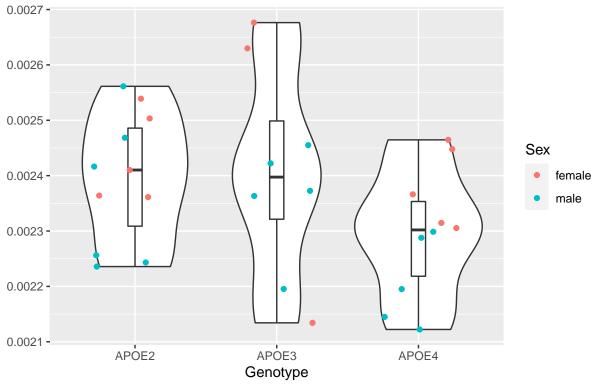


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 5.790e-08 2.895e-08 2.205 0.13

## Residuals 26 3.414e-07 1.313e-08

## Anterior Pretectal Nucleus

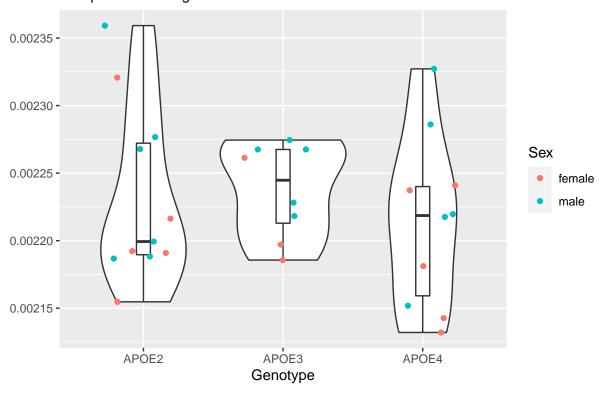
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.360e-08 3.681e-08 1.903 0.169

## Residuals 26 5.029e-07 1.934e-08

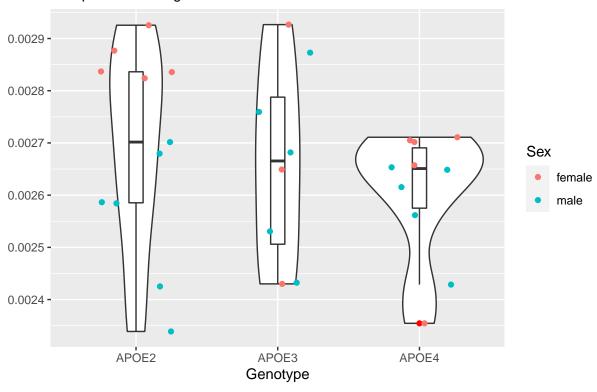
## Periaquaductal Grey Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.950e-09 1.476e-09 0.444 0.646

## Residuals 26 8.643e-08 3.324e-09

# Ventral Pallidum Red points denoting outliers

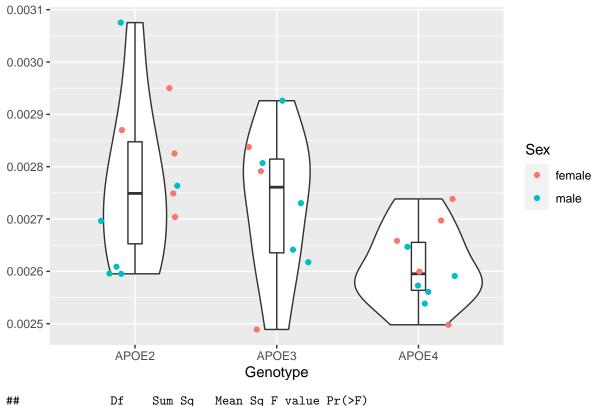


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.170e-08 2.085e-08 0.725 0.494

## Residuals 26 7.482e-07 2.878e-08

#### Bed Nucleus of the Stria Terminalis

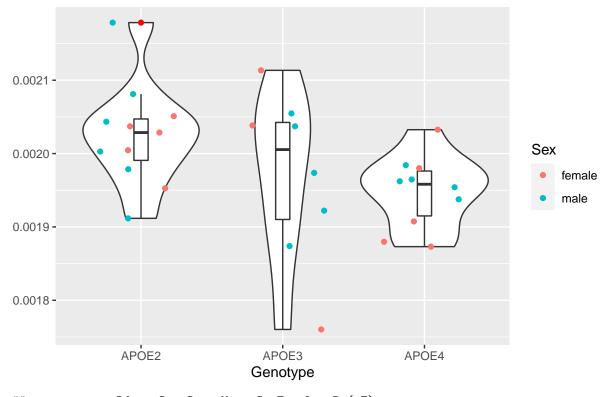
#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.366e-07 6.832e-08    4.193 0.0264 *
## Residuals    26 4.237e-07 1.630e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

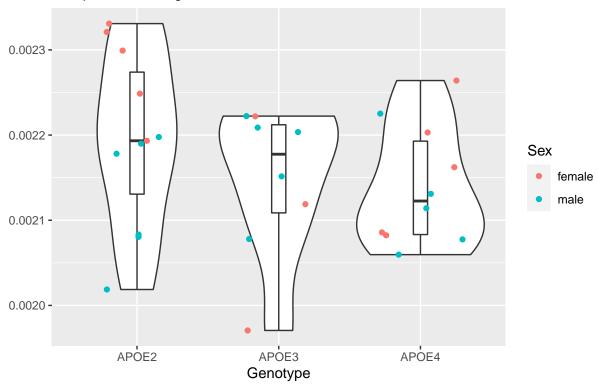
# Acumbens

#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.256e-08 1.628e-08    2.589 0.0943 .
## Residuals    26 1.635e-07 6.288e-09
## ---
## Signif. codes:    0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

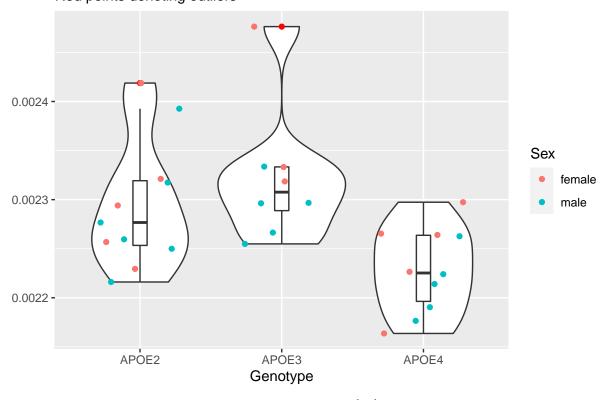
Amygdala Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.815e-08 9.074e-09 1.153 0.331

## Residuals 26 2.046e-07 7.868e-09

Striatum
Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)

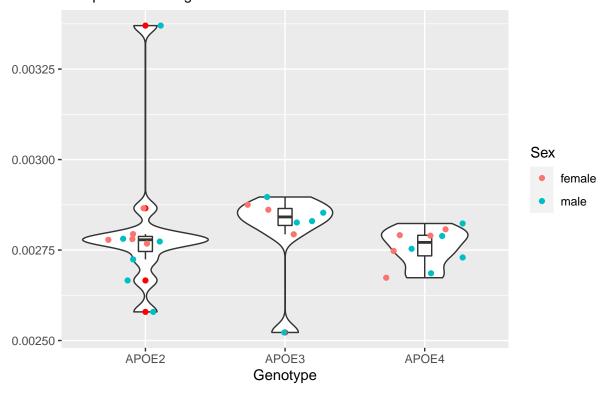
## geno 2 4.278e-08 2.139e-08 6.061 0.00691 **

## Residuals 26 9.175e-08 3.529e-09

## ---

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

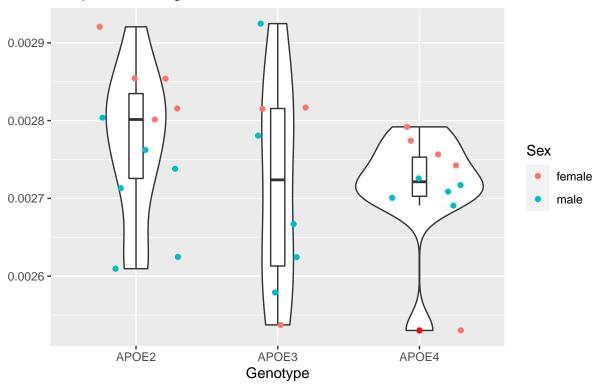
Globus Pallidus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.520e-08 7.623e-09 0.376 0.69

## Residuals 26 5.271e-07 2.027e-08

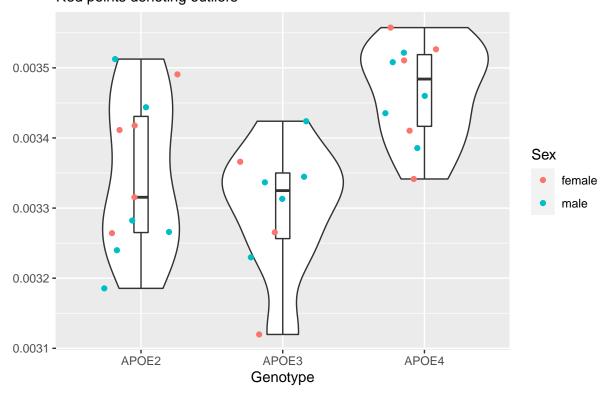
Septum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.210e-08 1.105e-08 1.071 0.357

## Residuals 26 2.683e-07 1.032e-08

#### Subthalamic Nucleus Red points denoting outliers



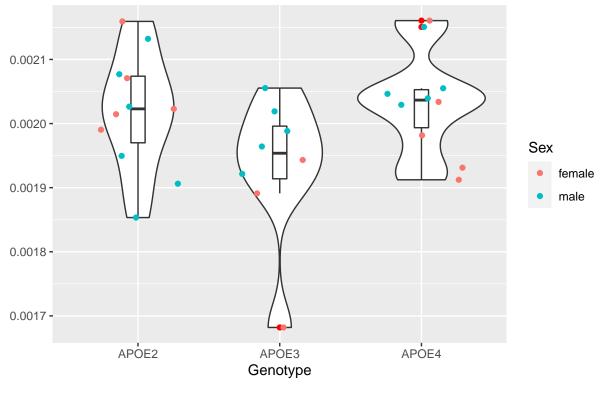
```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.353e-07 6.763e-08    7.664 0.00242 **
## Residuals    26 2.294e-07 8.820e-09
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

#"' $\{r \text{ Preopt, echo} = \text{FALSE}\}\ \#\text{ggplot}(\text{data} = \text{new, aes}(\text{factor}(\text{geno}), \text{ Preopt})) + \#\text{geom\_violin}() + \#\text{geom\_boxplot}(\text{width} = 0.1, \text{ outlier.color} = \text{"red"}) + \#\text{geom\_jitter}(\text{height} = 0, \text{ width} = 0.3, \text{ aes}(\text{color} = \text{Sex})) + \#\text{labs}(x = \text{"Genotype"}, \#y = \text{""}, \#\text{title} = \text{"Preoptic Telencephalon"}, \#\text{subtitle} = \text{"Red points denoting outliers"})$ 

 $\#\mathrm{res.aov} < \text{-} \ \mathrm{aov}(\mathrm{Preopt} \sim \mathrm{geno}, \ \mathrm{data} = \mathrm{new}) \ \#\mathrm{summary}(\mathrm{res.aov}) \ \#\text{```}$ 

### Hypothalamus

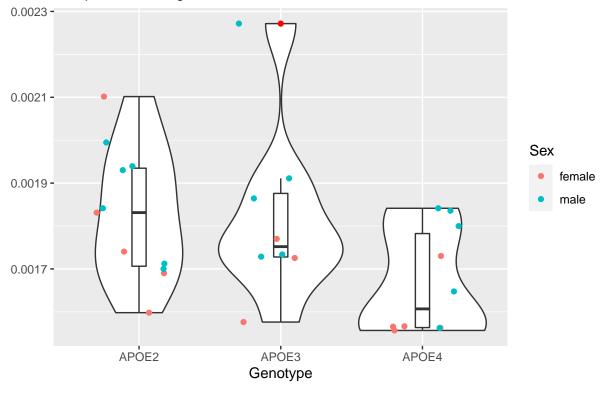
#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 5.114e-08 2.557e-08    2.838 0.0768 .
## Residuals    26 2.342e-07 9.009e-09
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

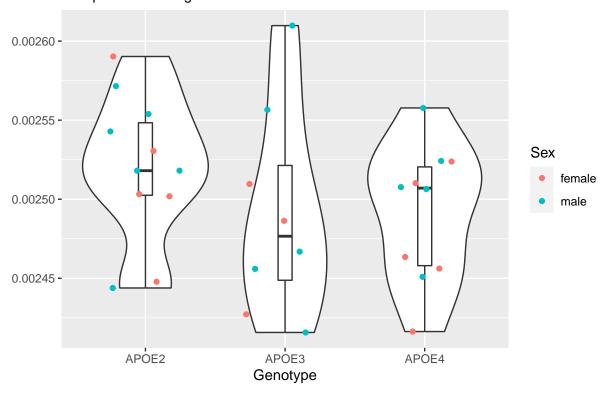
## Amygdalopiriform Transition Area

#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 1.624e-07 8.120e-08    3.146 0.0597 .
## Residuals    26 6.710e-07 2.581e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

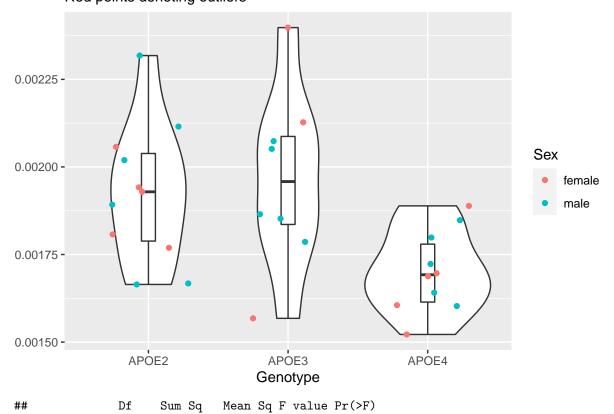
Periform Cortex Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 5.660e-09 2.830e-09 1.082 0.354

## Residuals 26 6.801e-08 2.616e-09

# Presubiculum Red points denoting outliers



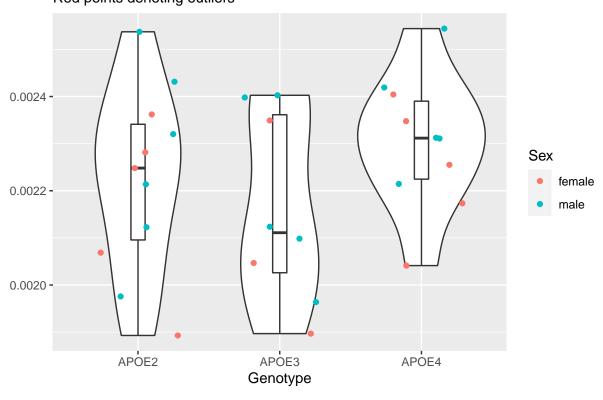
```
## geno 2 3.874e-07 1.937e-07 5.261 0.0121 *

## Residuals 26 9.574e-07 3.682e-08

## ---

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

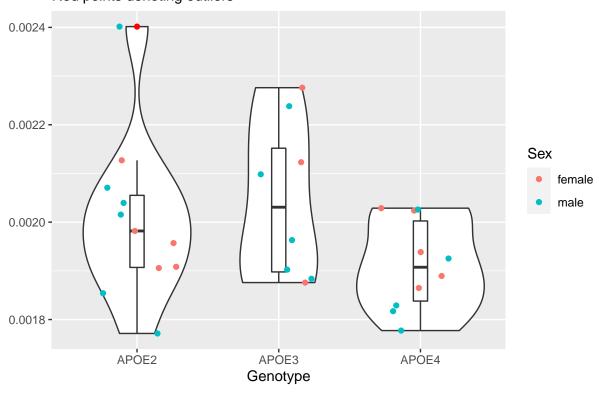
# Perirhinal Cortex Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 9.190e-08 4.593e-08 1.429 0.258

## Residuals 26 8.355e-07 3.214e-08

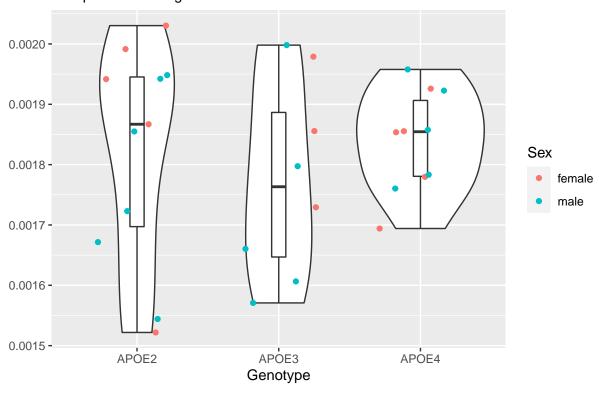
# Parasubiculum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.570e-08 4.283e-08 2.081 0.145

## Residuals 26 5.351e-07 2.058e-08

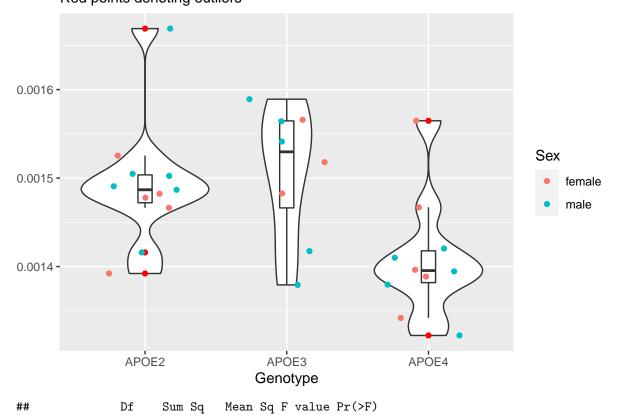
# Ectorhinal Cortex Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.930e-08 9.642e-09 0.442 0.647

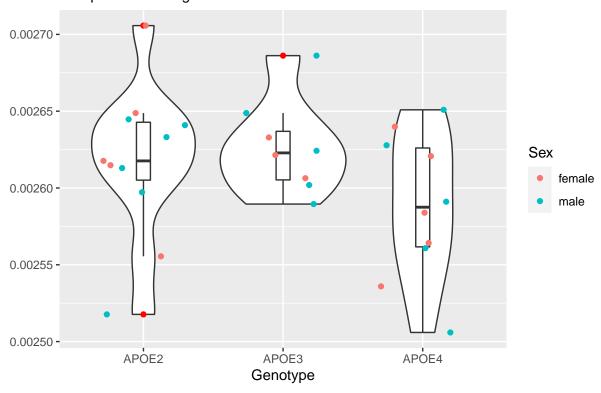
## Residuals 26 5.667e-07 2.179e-08

### Dorsal Tenia Tecta Red points denoting outliers



```
## geno 2 5.407e-08 2.704e-08 5.384 0.0111 *
## Residuals 26 1.306e-07 5.022e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

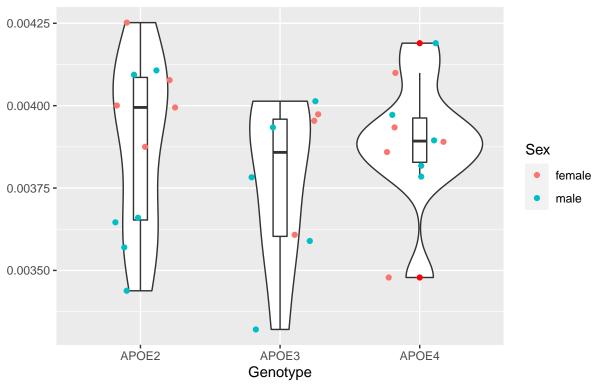
Hippocampus Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.510e-09 3.756e-09 1.91 0.168

## Residuals 26 5.112e-08 1.966e-09

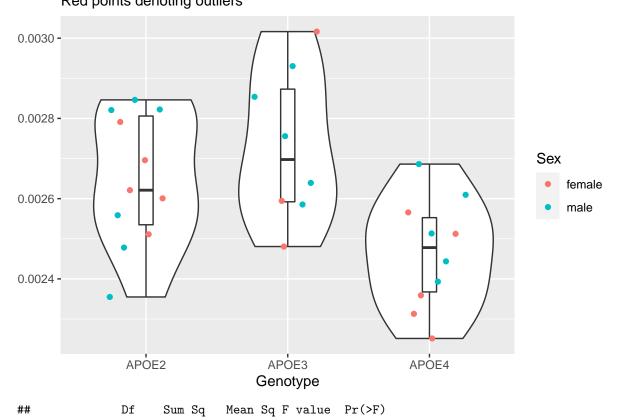
# Ventral Claustrum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.750e-08 3.876e-08 0.696 0.508

## Residuals 26 1.448e-06 5.569e-08

### Posterolateral Cortical Amygdaloid Area Red points denoting outliers



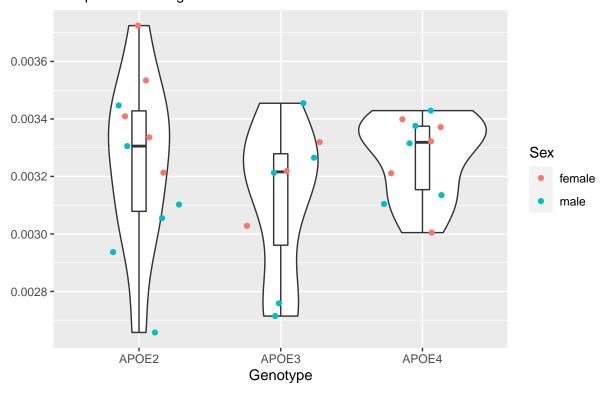
```
## geno 2 3.437e-07 1.719e-07 6.529 0.00504 **

## Residuals 26 6.844e-07 2.632e-08

## ---

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

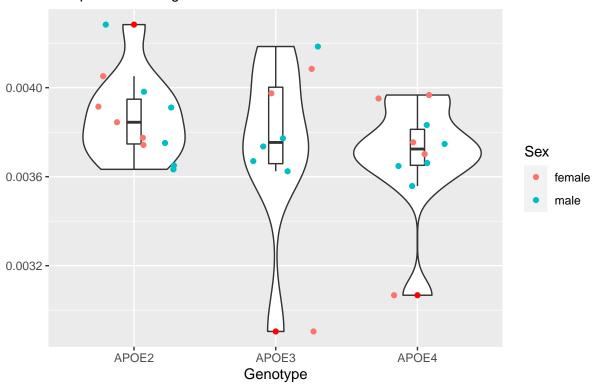
### Dorsal Claustrum Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.076e-07 5.38e-08 0.889 0.423

## Residuals 26 1.573e-06 6.05e-08

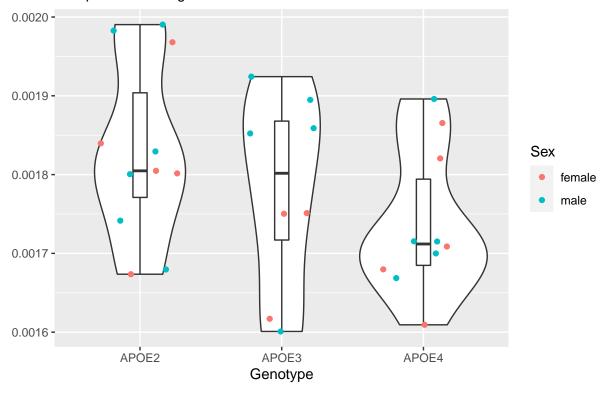
Claustrum
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 1.753e-07 8.764e-08 1.12 0.341

## Residuals 26 2.034e-06 7.824e-08

### Ventral Intermediate Entorhinal Cortex Red points denoting outliers

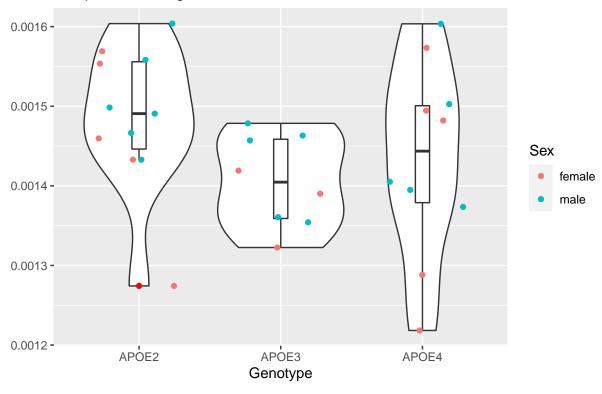


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.296e-08 2.148e-08 1.817 0.183

## Residuals 26 3.074e-07 1.182e-08

### Left Caudomedial Entorhinal Cortex

#### Red points denoting outliers

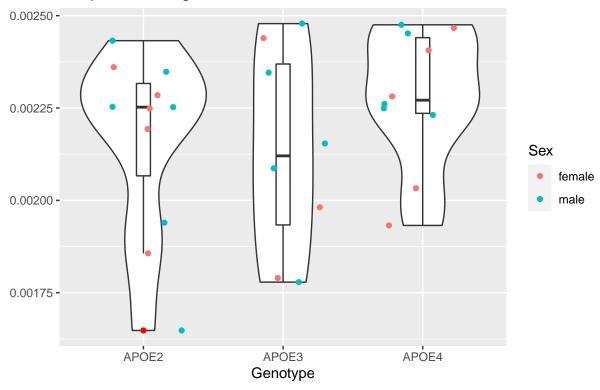


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.164e-08 1.582e-08 1.727 0.198

## Residuals 26 2.381e-07 9.159e-09

#### Left Dorsolateral Entorhinal Cortex

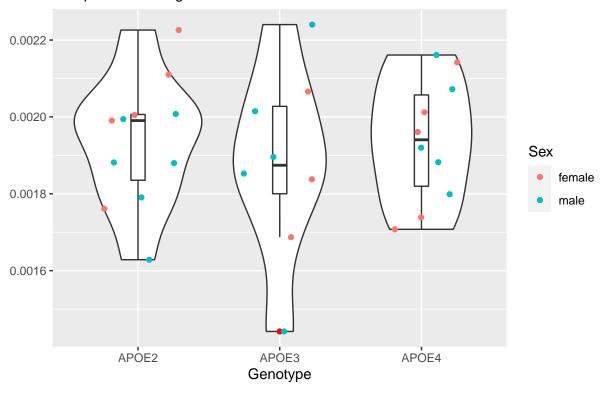
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.119e-07 5.595e-08 1.02 0.374

## Residuals 26 1.425e-06 5.483e-08

### Left Dorsal Intermediate Entorhinal Cortex Red points denoting outliers

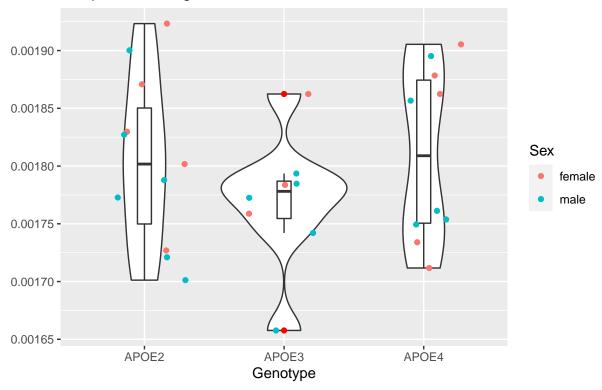


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.910e-08 9.550e-09 0.267 0.767

## Residuals 26 9.283e-07 3.571e-08

#### Left Caudomedial Entorhinal Cortex

#### Red points denoting outliers

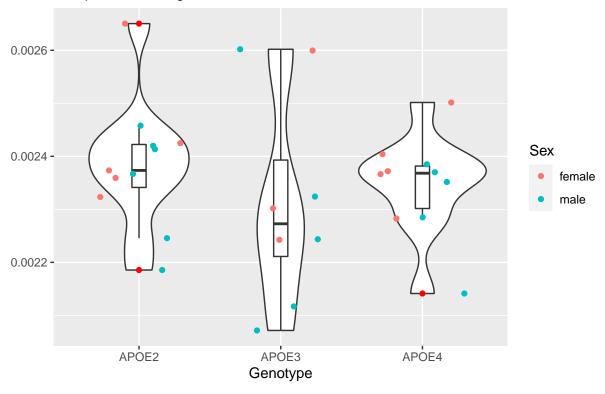


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.820e-09 4.412e-09 0.901 0.419

## Residuals 26 1.274e-07 4.899e-09

#### Left Ventral Orbital Cortex

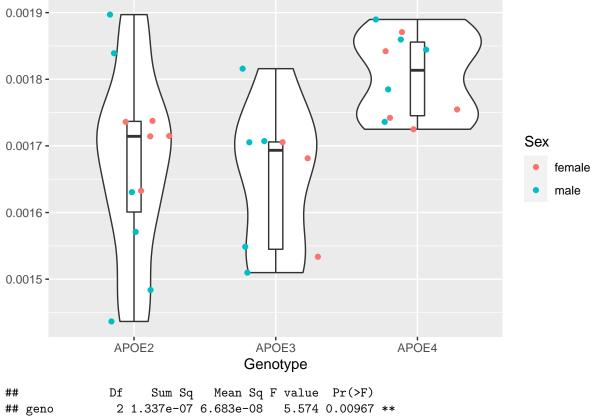
#### Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.370e-08 1.185e-08 0.621 0.545

## Residuals 26 4.963e-07 1.909e-08

# Left Secondary Visual Cortex Mediomedial Area Red points denoting outliers



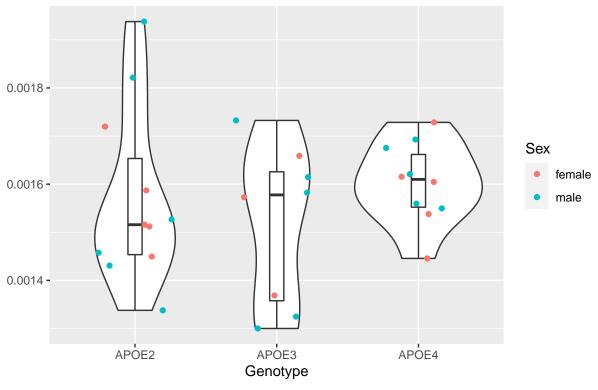
```
## geno 2 1.337e-07 6.683e-08 5.574 0.00967 **

## Residuals 26 3.117e-07 1.199e-08

## ---

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

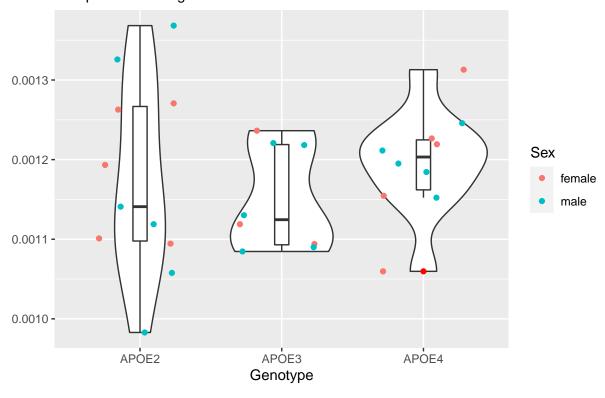
Left Secondary Visual Cortex Mediolateral Area Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.140e-08 1.57e-08 0.701 0.505

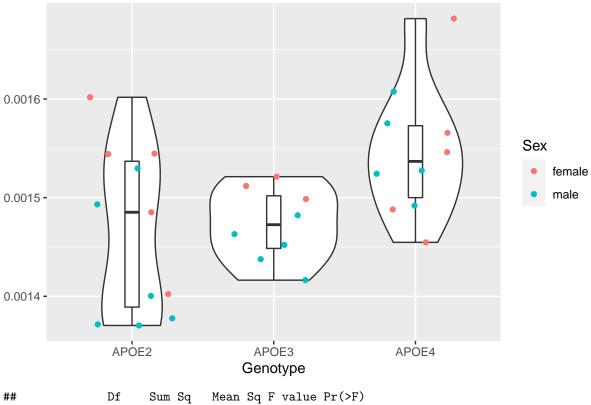
## Residuals 26 5.825e-07 2.24e-08

Left Secondary Visual Cortex Lateral Area Red points denoting outliers



Sum Sq Mean Sq F value Pr(>F) ## 2 9.85e-09 4.924e-09 0.598 0.557 ## geno ## Residuals 26 2.14e-07 8.229e-09

### Left Primary Visual Cortex Monocular Area Red points denoting outliers



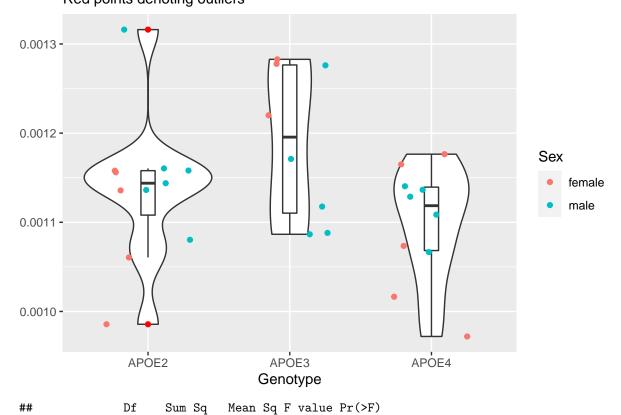
```
## geno 2 3.972e-08 1.986e-08 4.357 0.0233 *

## Residuals 26 1.185e-07 4.559e-09

## ---

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

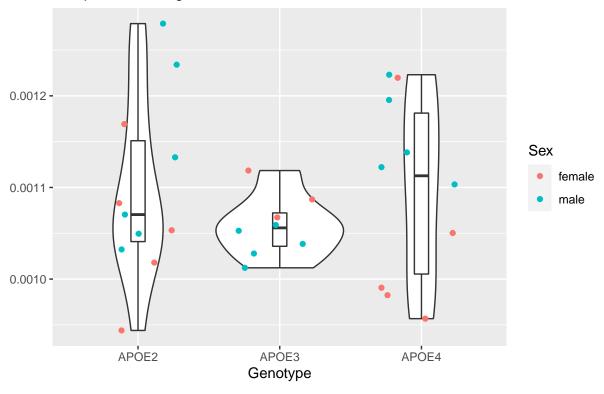
# Left Primary Visual Cortex Binocular Area Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.735e-08 1.868e-08    3.109 0.0616 .
## Residuals    26 1.562e-07 6.008e-09
## ---
## Signif. codes:    0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

### Left Primary Visual Cortex

### Red points denoting outliers

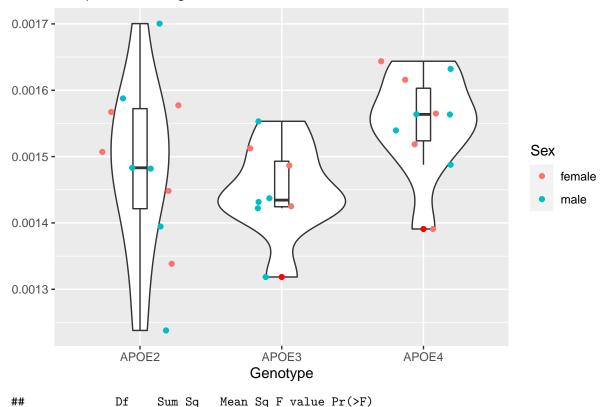


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 9.090e-09 4.546e-09 0.608 0.552

## Residuals 26 1.945e-07 7.481e-09

### Left Temporal Association Cortex

#### Red points denoting outliers



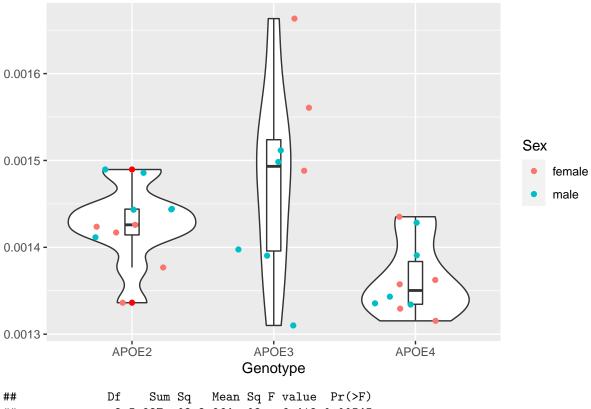
```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 5.110e-08 2.555e-08    2.651 0.0896 .
## Residuals    26 2.506e-07 9.637e-09
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```



Genotype

## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 6.100e-10 3.040e-10 0.041 0.96
## Residuals 26 1.921e-07 7.387e-09

## Left Primary Somatosensory Cortex Upper Lip Region Red points denoting outliers



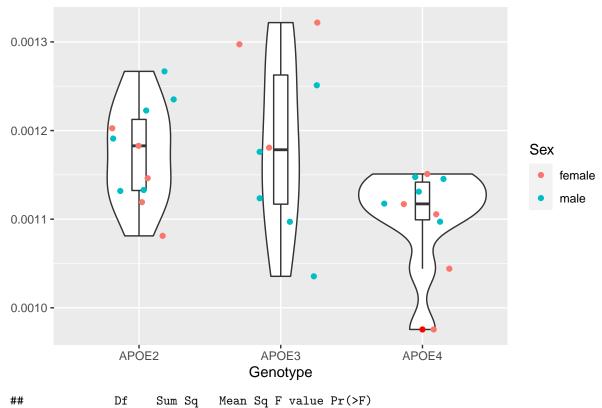
```
## geno 2 5.927e-08 2.964e-08 6.412 0.00545 **

## Residuals 26 1.202e-07 4.622e-09

## ---

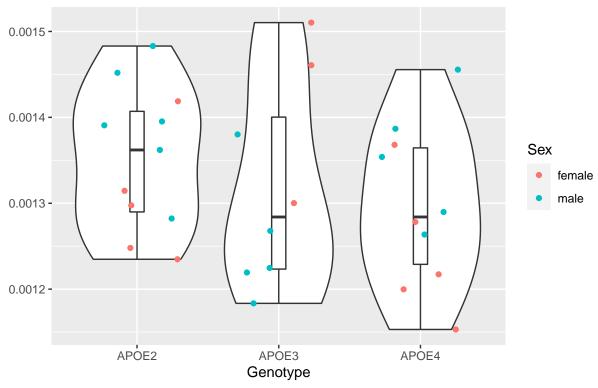
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

# Left Primary Somatosensory Cortex Trunk Region Red points denoting outliers



```
## geno 2 3.797e-08 1.899e-08 3.844 0.0345 *
## Residuals 26 1.284e-07 4.940e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

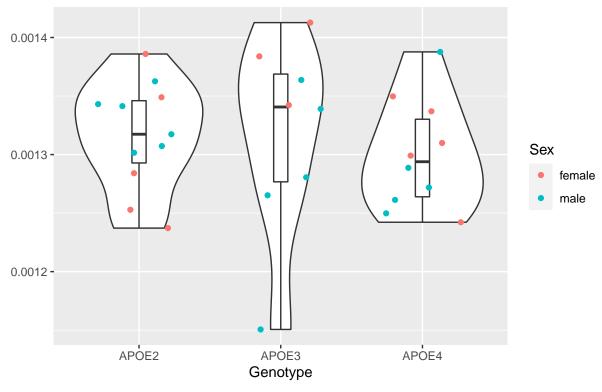
# Left Primary Somatosensory Cortex Shoulder Region Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.677e-08 8.387e-09 0.876 0.428

## Residuals 26 2.489e-07 9.573e-09

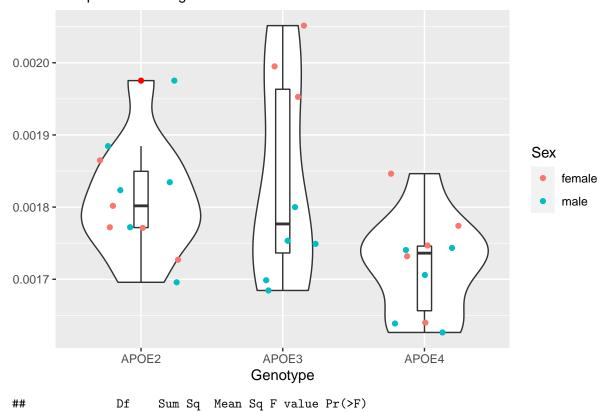
# Left Primary Somatosensory Cortex Jaw Region Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.930e-09 9.630e-10 0.28 0.758

## Residuals 26 8.956e-08 3.445e-09

# Left Primary Somatosensory Cortex Hindlimb Region Red points denoting outliers



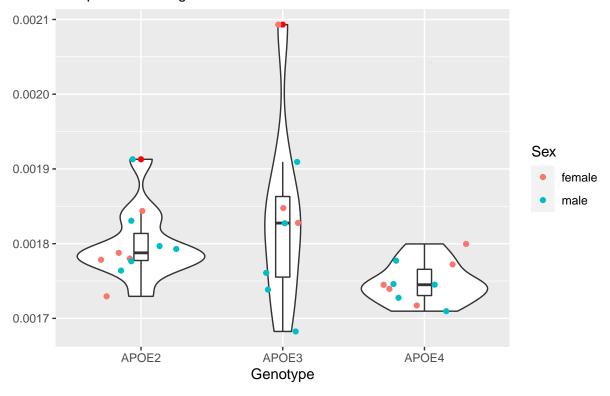
```
## geno 2 7.099e-08 3.55e-08 3.744 0.0372 *

## Residuals 26 2.465e-07 9.48e-09

## ---

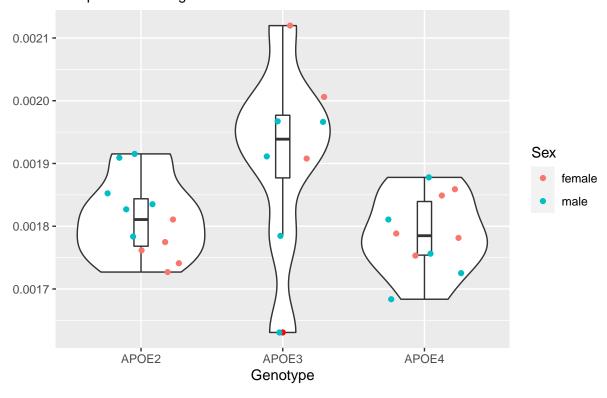
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

## Left Primary Somatosensory Cortex Forelimb Region Red points denoting outliers



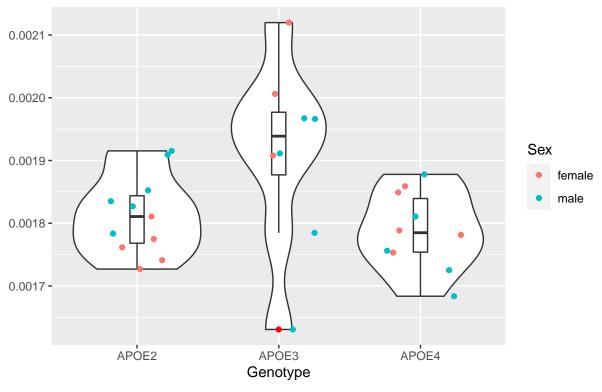
```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.544e-08 1.772e-08    3.266 0.0543 .
## Residuals    26 1.411e-07 5.425e-09
## ---
## Signif. codes:    0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

## Left Primary Somatosensory Cortex Dysgranular Zone Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 4.792e-08 2.396e-08    3.396 0.0489 *
## Residuals    26 1.834e-07 7.055e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

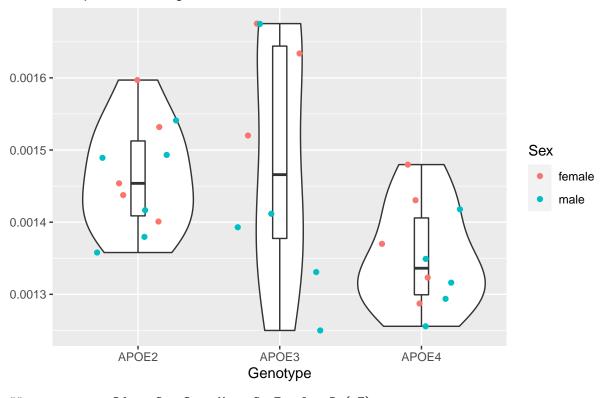
# Left Primary Somatosensory Cortex Barrel Field Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 7.397e-08 3.699e-08 4.231 0.0257 *
## Residuals 26 2.273e-07 8.740e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

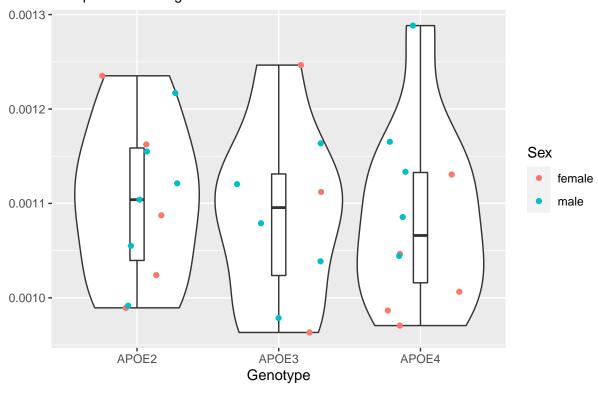
### Left Primary Somatosensory Cortex

#### Red points denoting outliers



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 9.783e-08 4.892e-08 4.392 0.0227 *
## Residuals 26 2.896e-07 1.114e-08
## ---
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
```

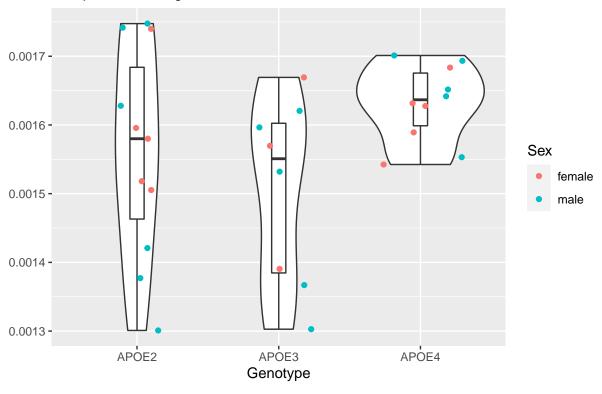
Left Parietal Cortex Posterial Area Rostral Part Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.030e-09 1.017e-09 0.121 0.886

## Residuals 26 2.179e-07 8.379e-09

### Left Medial Parietal Association Cortex Red points denoting outliers

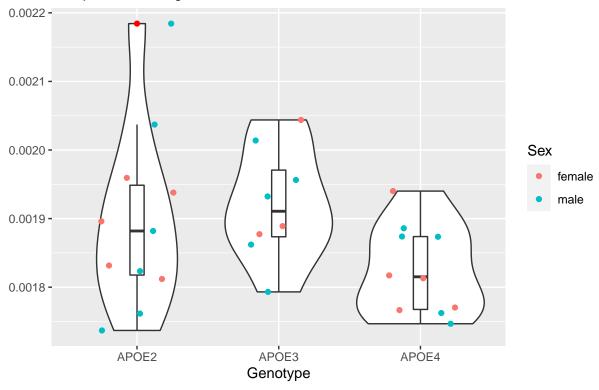


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 7.18e-08 3.591e-08 2.419 0.109

## Residuals 26 3.86e-07 1.484e-08

#### Left Medial Orbital Cortex

#### Red points denoting outliers

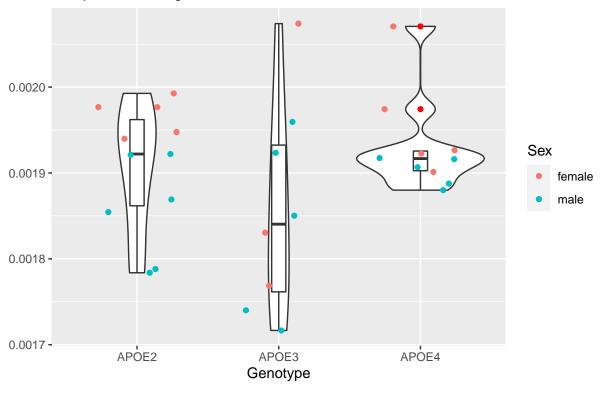


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 4.669e-08 2.334e-08 2.379 0.112

## Residuals 26 2.551e-07 9.810e-09

### Left Secondary Motor Cortex

### Red points denoting outliers

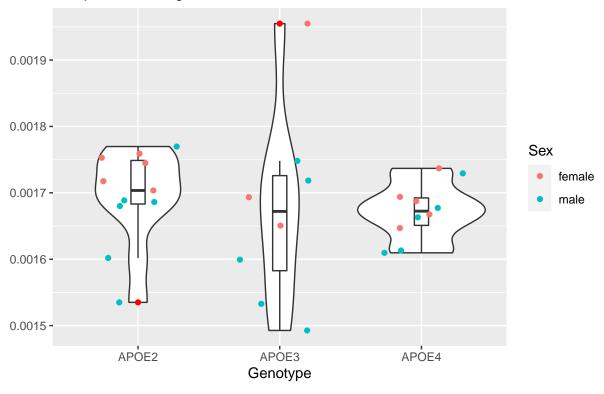


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.381e-08 1.191e-08 1.669 0.208

## Residuals 26 1.855e-07 7.134e-09

## Left Primary Motor Cortex

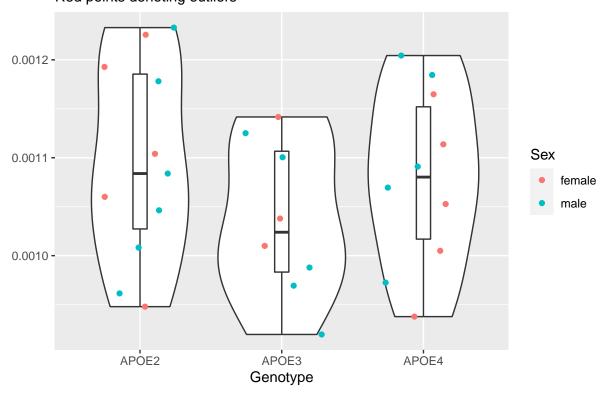
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.130e-09 1.564e-09 0.191 0.827

## Residuals 26 2.127e-07 8.181e-09

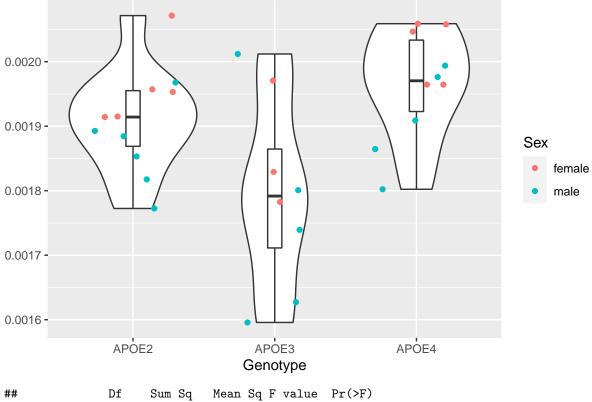
# Left Lateral Parietal Association Cortex Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.626e-08 8.13e-09 0.958 0.397

## Residuals 26 2.207e-07 8.49e-09

#### Left Lateral Orbital Cortex



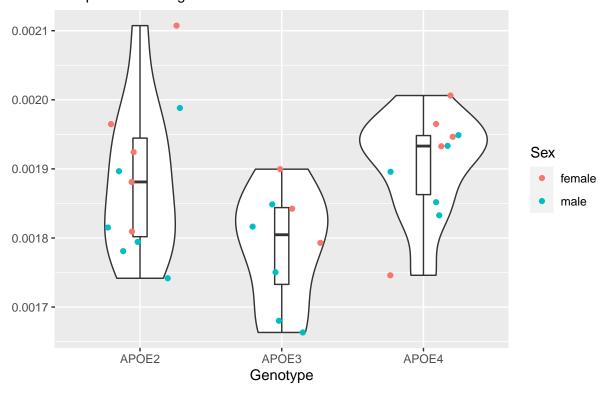
```
## geno 2 1.300e-07 6.500e-08 6.03 0.00706 **

## Residuals 26 2.803e-07 1.078e-08

## ---

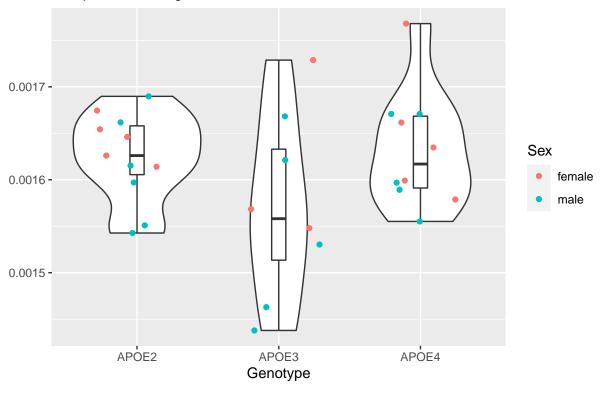
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

Left Insular Cortex
Red points denoting outliers



## **Left Frontal Assocation Cortex**

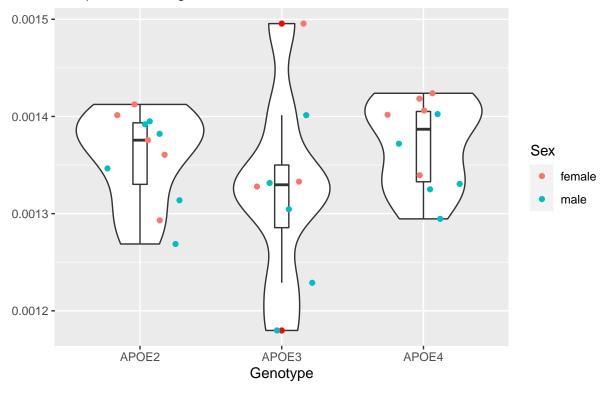
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.963e-08 9.817e-09 2.021 0.153

## Residuals 26 1.263e-07 4.856e-09

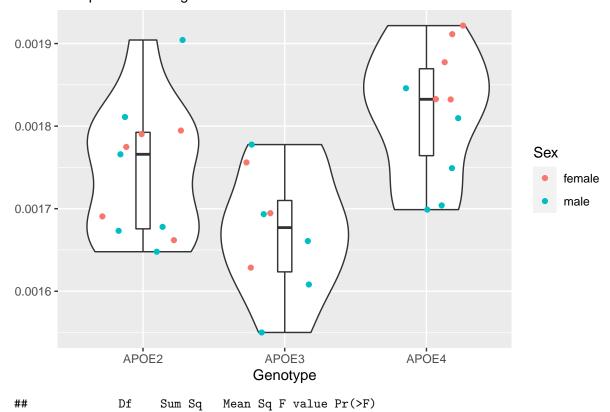
Left Frontal Cortex Area 3 Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 9.820e-09 4.912e-09 1.193 0.319

## Residuals 26 1.071e-07 4.119e-09

#### Left Dorsolateral Orbital Cortex



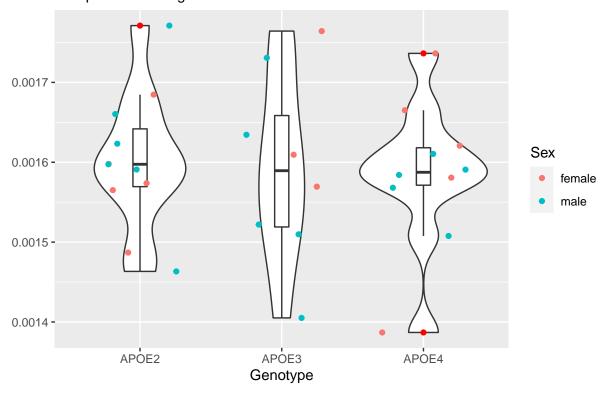
```
## geno 2 9.667e-08 4.834e-08 7.812 0.0022 **

## Residuals 26 1.609e-07 6.190e-09

## ---

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

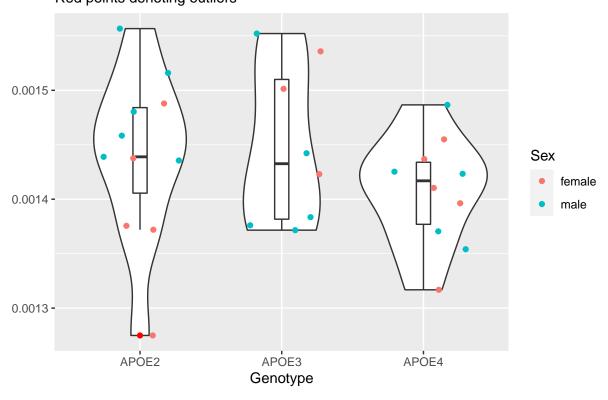
Left Secondary Auditory Cortex Ventral Part Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.38e-09 6.920e-10 0.072 0.93

## Residuals 26 2.49e-07 9.578e-09

# Left Secondary Auditory Cortex Dorsal Part Red points denoting outliers

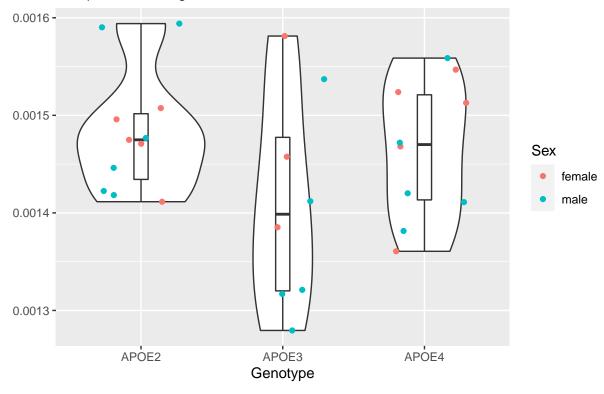


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 8.670e-09 4.333e-09 0.944 0.402

## Residuals 26 1.194e-07 4.592e-09

# Left Primary Auditory Cortex

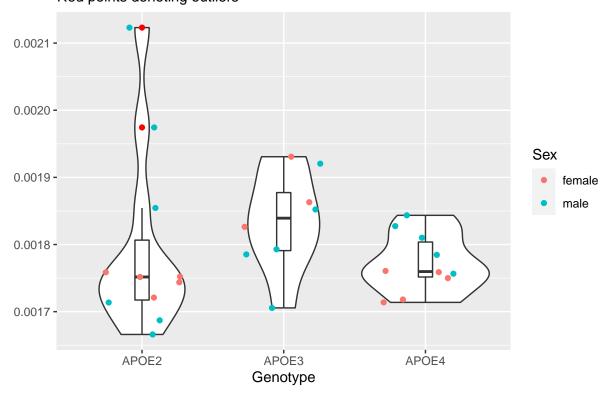
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.461e-08 1.230e-08 1.937 0.164

## Residuals 26 1.652e-07 6.352e-09

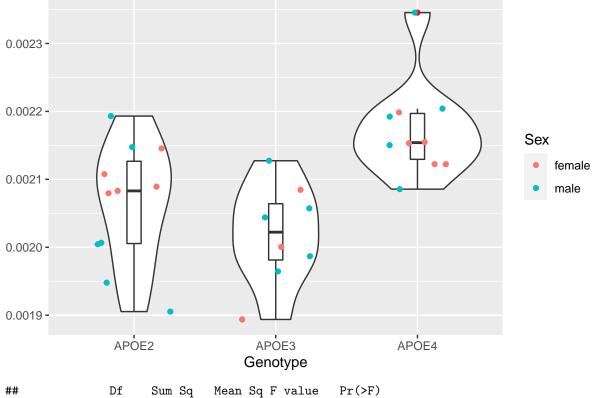
## Left Cingulate Cortex Area 32 Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 1.736e-08 8.680e-09 0.913 0.414

## Residuals 26 2.471e-07 9.504e-09

## Left Cingulate Cortex Area 30



```
## geno 2 1.153e-07 5.764e-08 9.203 0.000951 ***

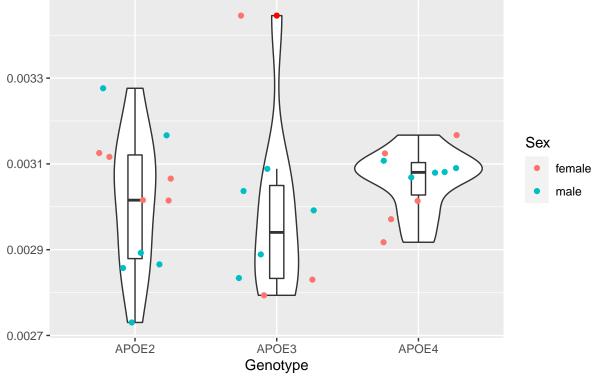
## Residuals 26 1.629e-07 6.260e-09

## ---

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

# Left Cingulate Cortex Area 29c

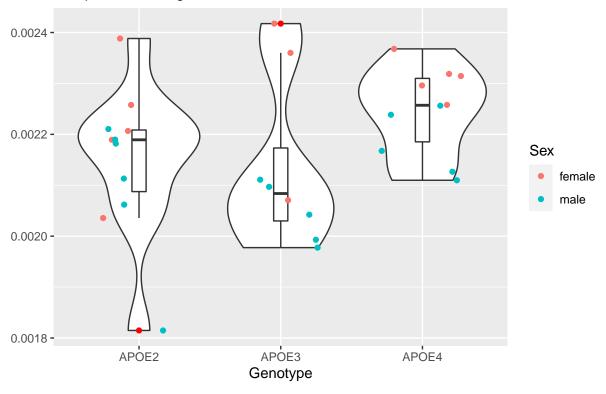
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.610e-08 1.307e-08 0.541 0.588

## Residuals 26 6.278e-07 2.415e-08

## Left Cingulate Cortex Area 29b Red points denoting outliers

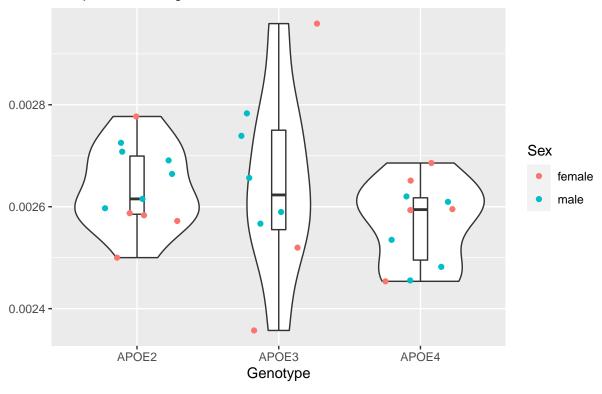


## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 6.980e-08 3.491e-08 1.928 0.166

## Residuals 26 4.707e-07 1.810e-08

## Left Cingulate Cortex Area 29a

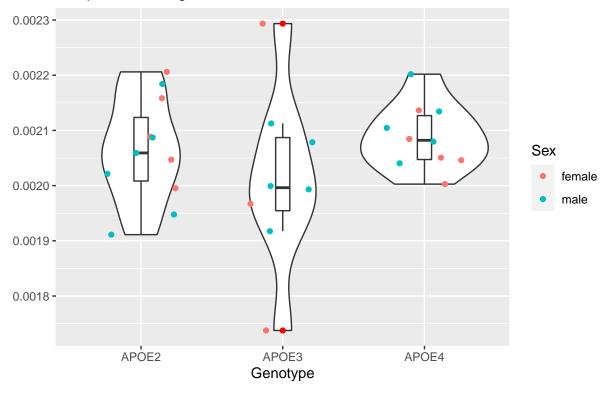
## Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 3.580e-08 1.788e-08 1.285 0.294

## Residuals 26 3.619e-07 1.392e-08

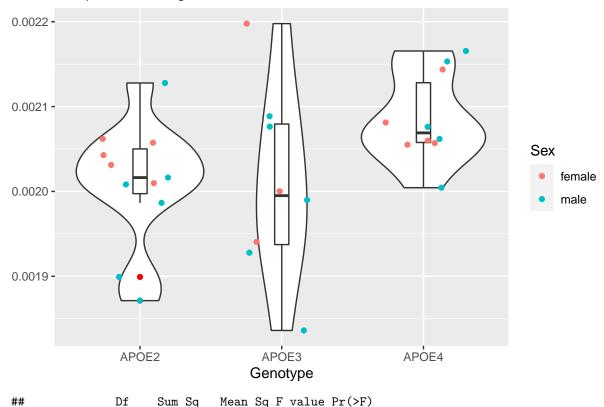
# Left Cingulate Cortex Area 24b Prime Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 2.614e-08 1.307e-08 1.135 0.337

## Residuals 26 2.994e-07 1.152e-08

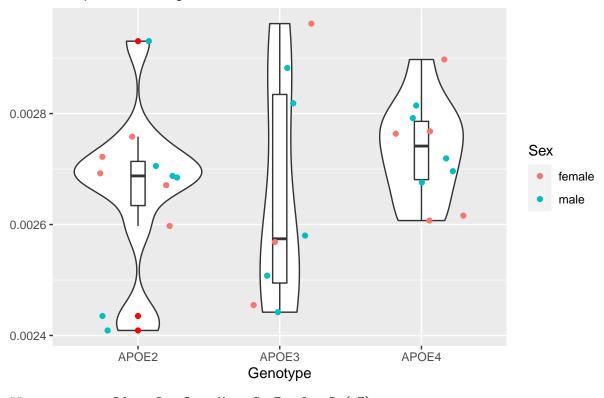
## Left Cingulate Cortex Area 24b



```
## Df Sum Sq Mean Sq F value Pr(>F)
## geno    2 3.875e-08 1.937e-08    3.061 0.064 .
## Residuals    26 1.646e-07 6.330e-09
## ---
## Signif. codes: 0 '*** 0.001 '** 0.05 '.' 0.1 ' ' 1
```

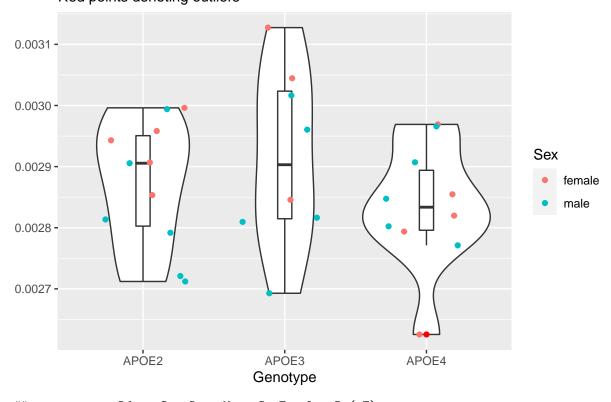
## Left Cingulate Cortex Area 24a Prime

## Red points denoting outliers



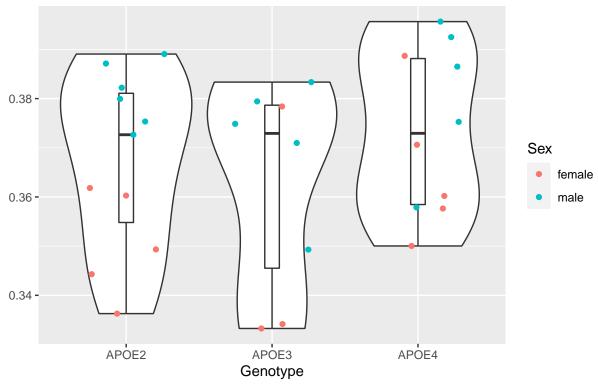
Mean Sq F value Pr(>F) ## Sum Sq 2 3.900e-08 1.950e-08 0.881 0.426 ## geno ## Residuals 26 5.751e-07 2.212e-08

Left Cingulate Cortex Area 24a Red points denoting outliers



## Beno Df Sum Sq Mean Sq F value Pr(>F)
## geno 2 2.740e-08 1.372e-08 1.034 0.37
## Residuals 26 3.448e-07 1.326e-08

Exterior
Red points denoting outliers



## Df Sum Sq Mean Sq F value Pr(>F) ## geno 2 0.000512 0.0002562 0.761 0.477

## Residuals 26 0.008750 0.0003365