

BOLA_RESULTS

KIRABO GLORIA

2023-12-20

```
##Setting working directory
setwd("C:/Users/msaim/Downloads/BOLA/FASTA FILES 202")
data <- read.table("new_allele_count.txt")
dat <- read.table("sorted_alleles.txt")
head(data)
```

```
##      V1                                     V2
## 1   6 BOLA10181|BoLA-DRB3*024:33|267
## 2   5 BOLA03100|BoLA-DRB3*001:01|554
## 3   5 BOLA03135|BoLA-DRB3*021:01|325
## 4   5 BOLA03154|BoLA-DRB3*031:01|654
## 5   4 BOLA03110|BoLA-DRB3*007:01|270
## 6   4 BOLA03242|BoLA-DRB3*031:03|270
```

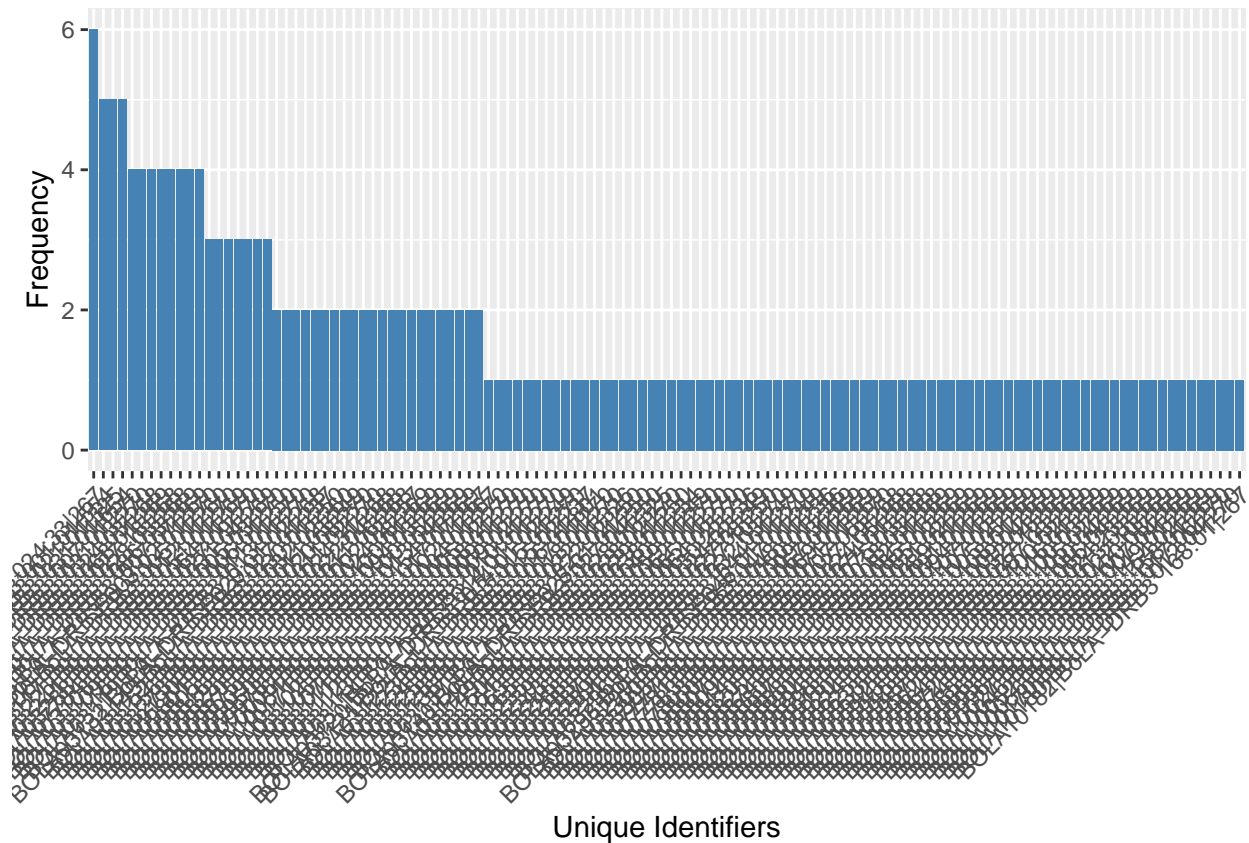
```
head(dat)
```

```
##      V1                                     V2      V3  V4      V5  V6 V7  V8
## 1  10.ab1 BOLA03100|BoLA-DRB3*001:01|554 96.552 261 1.19e-122 429 99 260
## 2  105.ab1 BOLA03100|BoLA-DRB3*001:01|554 97.414 232 1.19e-112 396 90 258
## 3  134.ab1 BOLA03100|BoLA-DRB3*001:01|554 92.562 242 1.23e-97 346 93 261
## 4  178.ab1 BOLA03100|BoLA-DRB3*001:01|554 95.935 246 1.21e-112 396 94 263
## 5   39.ab1 BOLA03100|BoLA-DRB3*001:01|554 96.063 254 1.20e-117 412 97 262
## 6  162.ab1 BOLA03102|BoLA-DRB3*002:01|267 93.902 246 1.23e-102 363 93 264
```

```
View(data)
library(ggplot2)

##Creating a dataframe
df <- data.frame(data)

# Plot using ggplot2
ggplot(df, aes(x = reorder(V2, -V1), y = V1)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  labs(x = "Unique Identifiers", y = "Frequency") +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```



##REDUCING UNIQUE IDENTIFIERS TO 45 TO CAPTURE ALL FREQUENCIES

```
top_identifiers <- head(df[order(-df$V1), ], 45)

# Plot using ggplot2
ggplot(top_identifiers, aes(x = reorder(V2, -V1), y = V1)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  labs(x = "Unique Identifiers", y = "Frequency") +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))
```


[illegible]

```
top_5 <- head(top_identifiers, 5)

# Extract values for plotting
values <- top_5$V1
labels <- top_5$V2

# Create a pie chart
pie(values, labels = labels, main = "Top 5 Allele Frequencies", col = rainbow(length(values)))
```

Top 5 Allele Frequencies

