Graphs for Amita's paper - with data from U Laval

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```r
melt_qval <- melt(qval, id = "Accession") %>% cbind(Variable = "qValue")
melt_zscore <- melt(zscore_ratio, id = "Accession") %>% cbind(Variable = "zscore_ratio")
melt_status <- melt(status, id = "Accession") %>% cbind(Variable = "status")
colnames(melt_qval)[2] <- colnames(melt_zscore)[2] <- colnames(melt_status)[2] <- "Test"

for_plots <- data.frame(melt_qval, melt_zscore %>% select(value), melt_status %>% select(value))
colnames(for_plots) <- c("Accession", "Test", "qValue", "variable", "Zscore_ratio", "Status")
for_plots$variable = NULL

Total <- Down_regulated <- Up_regulated <- c()
summary_plot <- data.frame(matrix(nrow = 0, ncol = 3))
dap <- list()
for (i in levels(for_plots$Test)) {
  dap[[i]] <- status[status[, i] == "VARIANT", "Accession"]
  Total <- length(dap[[i]])
  Up_regulated <- length(zscore_ratio[ zscore_ratio$Accession %in% dap[[i]] & zscore_ratio[, i] < -1.96
  Down_regulated <- length(zscore_ratio[ zscore_ratio$Accession %in% dap[[i]] & zscore_ratio[, i]  > 1.9
  summary_plot <- rbind(summary_plot, c(Total, Up_regulated, Down_regulated)) %>% as.data.frame()
  colnames(summary_plot) <- c("Total", "Up_regulated", "Down_regulated")

}
rownames(summary_plot) <- summary_plot$Test <- levels(for_plots$Test)
```
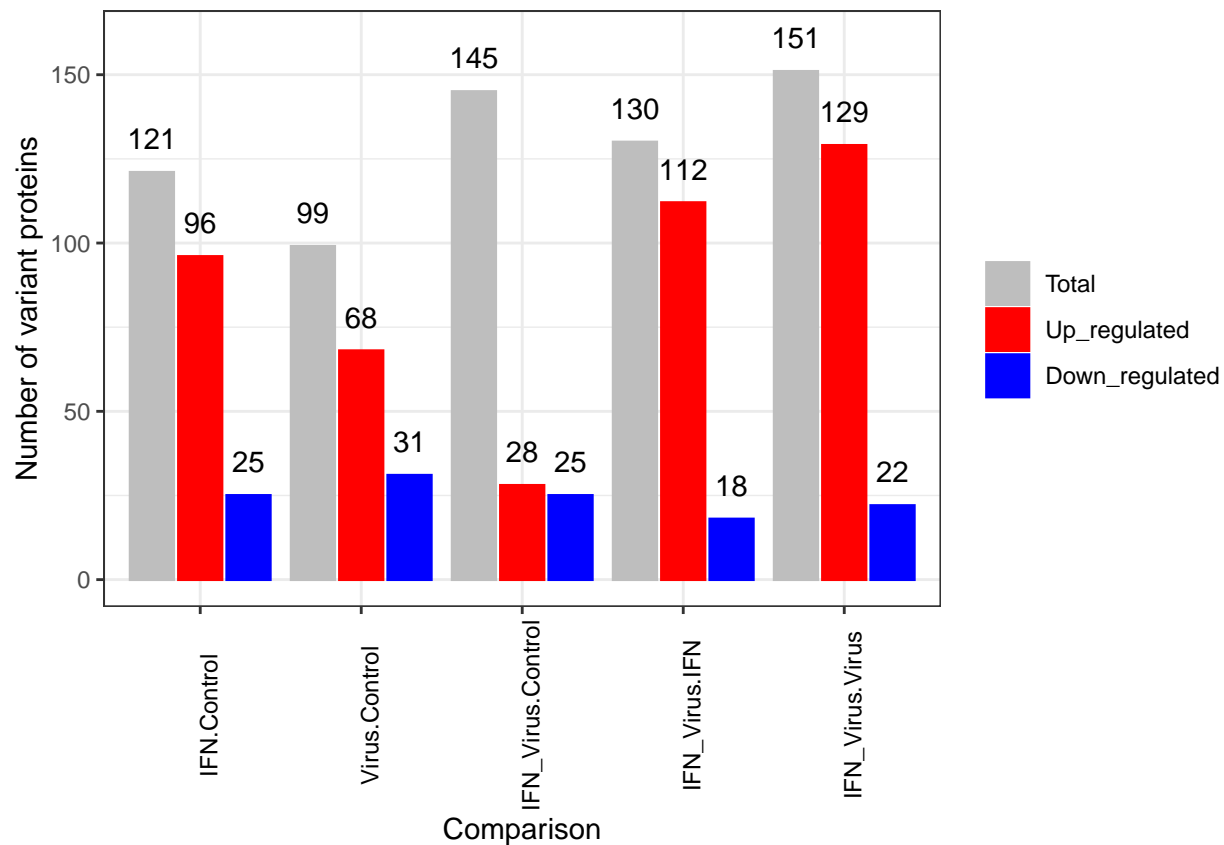
To do the boxplot of the data before normalization, I got the normalization factors from page 3 of the report as I do not have the actual data before normalization. However, as the data was re-analysed, maybe those are not the right normalization factors.

Sample	Normalization factors
CTRL1	1.13
CTRL2	0.96
CTRL3	1.05
IFN1	1.01
IFN2	0.97
IFN3	0.95
VI1	1.08
VI2	0.97
VI3	1.01
NL1	1
NL2	1
NL3	1