```
qqunif = function(p, BH=T, MAIN = " ", SUB=" ")
{
  nn = length(p)
  xx =  -log10((1:nn)/(nn+1))
  plot( xx,  -sort(log10(p)),
        main = MAIN, sub= SUB, cex.sub=1.3,
        xlab=expression(Expected~~-log[10](italic(p))),
        ylab=expression(Observed~~-log[10](italic(p))),
        cex.lab=1.0,mgp=c(2,1,0))
  abline(0,1,col='red')
  if(BH) ## BH = include Benjamini Hochberg FDR
  {

    abline(-log10(0.05),1, col='black',lty=1)
    text(0.5,1.9 , "FDR=0.05", col = "gray60",srt=35, cex=1)
    abline(-log10(0.10),1, col='black',lty=1)
    text(0.5, 1.6, "FDR=0.10", col = "gray60",srt=35, cex=1)
    abline(-log10(0.25),1, col='black',lty=1)
    text(0.5, 1.2, "FDR=0.25", col = "gray60",srt=35, cex=1)
    #legend('topleft', c("FDR = 0.05","FDR = 0.10","FDR = 0.25"),
          #col=c('black','black','black'),lty=c(1,1,1), cex=0.8)
    if (BF)
    {
      abline(h=-log10(0.05/nn), col='black') ## bonferroni
    }
  }
}


c=read.table("FLCN_allTissuesAndRetina_together_466_METAG", header=T)
cc=c[!duplicated(c), ]
p466=c$META_pval
qqunif(p466)
```