**Appendix**

**BUGS Code:**

**Bayesian hierarchical blinded model:**

model

 {

 for( j in 1 : 7) {

 Y[j] ~ dbin(p[j], n)

 p[j] <- 0.2\*p1[j] + 0.8\*p2[j]

 p1[j] <- pm[j]

 logit(p2[j]) <- logit(p1[j])+d[j]

 d[j] ~ dnorm(mud,invsigd2)

 Prob[j] <- step(p2[j]-pm[j])

 }

 mud ~ dnorm(0,.25)

 invsigd2 <- 1/(sigd\*sigd)

 sigd ~ dunif(0,3)

 PP <- step(mud)

 }

**Bayesian hierarchical logistic model:**

model

 {

 for (i in 1 : K) {

 sy[i] ~ dbin(p[I[i], J[i]], n[i])

 logit(p[I[i], J[i]]) <- beta0[J[i]] + beta1[J[i]]\*X[I[i]]

 }

 for (k in 1 : JT) {

 beta0[k] ~ dnorm(muB0[k], invsigd2B0)

 beta1[k] ~ dnorm(muB1, invsigd2B1)

 muB0[k] <- logit(pic[k])

 }

 invsigd2B0 <- 1/(sigdB0\*sigdB0)

 sigdB0 ~ dunif(0,3)

muB1 ~ dnorm(0,.25)

 invsigd2B1 <- 1/(sigdB1\*sigdB1)

 sigdB1 ~ dunif(0,3)

 for (k in 1 : JT) {

 PPB1[k] <- step(beta1[k])

 }

 }