Model A1:

```
model {
for(i in 1:N) {
        r[i] ~ dbin(p[i],n[i])
        logit(p[i]) <- mu[s[i]] + (d[t[i]]-d[b[i]])*(1-equals(t[i],b[i]))
        rhat[i] <- p[i] * n[i]
        dev[i] <- 2 * (r[i] * (log(r[i])-log(rhat[i]))  + (n[i]-r[i]) * (log(n[i]-r[i]) - log(n[i]-rhat[i])))
                }
        totresdev <- sum(dev[])     #total resedual deviance
for (j in 1:ns) { mu[j]~dnorm(0,0.000001) }
d[1]<-0
for (k in 2:nt){ d[k] ~ dnorm(0,0.000001)
        OR[k]<- exp(d[k])           }
        }
```

Model D2:

```
model {
for(i in 1:N) {
        r[i] ~ dbin(p[i],n[i])
        logit(p[i]) <- mu[s[i]] + (d[t[i]]-d[b[i]])*(1-equals(t[i],b[i]))
         + (beta[t[i]]-beta[t[1]])*(mu[s[i]]-(Mean))*(1-equals(t[i],b[i]))
        rhat[i] <- p[i] * n[i]
        dev[i] <- 2 * (r[i] * (log(r[i])-log(rhat[i]))  + (n[i]-r[i]) * (log(n[i]-r[i]) - log(n[i]-rhat[i])))
                }
totresdev <- sum(dev[])
d[1]<-0
for (i in 2:3) {d[i] ~ dnorm(D.c[1], prec.d)}
d[4] ~ dnorm(D.c[2], prec.d)
d[5] ~ dnorm(D.c[1], prec.d)
for (i in 6:9) {d[i] ~ dnorm(D.c[2], prec.d)}
d[10]<- D.c[3]
for (i in 1:3) { D.c[i]~dnorm(0.0,0.000001)}
prec.d<-1/(sd.d*sd.d)
sd.d~dunif(0,10)
for (i in 1:2) {D.pred[i]~dnorm(D.c[i],prec.d)}
beta[1]<-0
for (i in 2:nt) { beta[i]<- betaplac }
betaplac ~ dnorm(0,0.000001)
for (j in 1:ns) { mu[j]~dnorm(0,0.000001)}
A ~ dnorm (meanA,precA)
for (k in 1:nt) { logit(T[k]) <- A + d[k] }
for (k in 1:nt) { OR[k]<- exp(d[k])}
}
```

d[1]=PLA, d[2]=SEC300, d[3]=SEC150, d[4]=CZP, d[5]=UST, d[6]=GOL, d[7]=ADA, d[8]=INF, d[9]=ETA, d[10]=APR