**Commentary: Yang et al. 2020 'The efficacy of nerve growth factor antibody for the treatment of osteoarthritis pain and chronic low-back pain: A meta-analysis', Frontiers in Pharmacology**

* Excel file and R codes can be accessed with this link: <https://figshare.com/s/270e03615f677566ae64>
* We also provide the codes in this Word doc:

## Yang 2020 - Analysis ####

## Set-up ####

library(readxl)

library(dplyr)

library(metafor)

setwd() # Adjust as required

data <- read\_xlsx("Analysis.xlsx",

 sheet = "Yang 2020",

 range = "A1:H7")

str(data)

View(data)

## Recreate Figure 4 - WOMAC Pain subscale ####

ma\_pain <- rma(data = data,

 m1i = Exp\_mean,

 sd1i = Exp\_SD,

 n1i = Exp\_N,

 m2i = Cont\_mean,

 sd2i = Cont\_SD,

 n2i = Cont\_N,

 weighted = TRUE,

 measure = "SMD",

 method = "DL",

 slab = Study)

ma\_pain

forest(ma\_pain,

 addfit = TRUE,

 showweights = TRUE,

 xlim = c(-18, 8),

 at = c(-6, -4, -2, 0, 2, 4, 6),

 ilab = cbind(data$Exp\_N,

 data$Exp\_mean,

 data$Exp\_SD,

 data$Cont\_N,

 data$Cont\_mean,

 data$Cont\_SD),

 ilab.xpos = c(-13.5, -12, -10.5, -9, -7.5, -6),

 rows = (6:1),

 cex = 0.75,

 mlab = "",

 psize = 1,

 xlab = "Favours drug Favours placebo")

op <- par(cex = 0.75, font = 2)

text(c(-13.5, -12, -10.5, -9, -7.5, -6), 6.5, c("N", "Mean", "SD", "N", "Mean", "SD"))

text(c(-12, -7.5), 7.5, c("Experimental", "Control"))

text(-18, 6.5, "Study", pos=4)

text(0, 7.5, "SMD [95% CI]", pos=2)

text(-18, -1, pos = 4, cex = 1,

 bquote(paste("RE Model (", tau^2, " = ",

 .(formatC(ma\_pain$tau2, digits=4, format="f")), ", Q = ",

 .(formatC(ma\_pain$QE, digits=2, format="f")), ", df = ",

 .(ma\_pain$k - ma\_pain$p), ", p = ",

 .(formatC(ma\_pain$QEp, digits=2, format="f")), "; ", I^2, " = ",

 .(formatC(ma\_pain$I2, digits=1, format="f")), "%)")))

Figure4\_Yang <- recordPlot()

## Correct Figure 4 - Pain intensity (SMD) ####

data <- read\_xlsx("Analysis.xlsx",

 sheet = "Yang 2020",

 range = "A10:O31")

data <- data %>% filter(Recalculated == 1)

View(data)

ma\_pain <- rma(data = data,

 m1i = Exp\_mean,

 sd1i = Exp\_SD,

 n1i = Exp\_N,

 m2i = Cont\_mean,

 sd2i = Cont\_SD,

 n2i = Cont\_N,

 weighted = TRUE,

 measure = "SMD",

 method = "DL",

 slab = Study)

ma\_pain

dev.off()

forest(ma\_pain,

 addfit = TRUE,

 showweights = TRUE,

 xlim = c(-5, 2),

 at = c(-1, 0, 1),

 ilab = cbind(data$Exp\_N,

 data$Exp\_mean,

 data$Exp\_SD,

 data$Cont\_N,

 data$Cont\_mean,

 data$Cont\_SD),

 ilab.xpos = c(-4, -3.5, -3, -2.25, -1.75, -1.25),

 rows = (6:1),

 cex = 0.8,

 mlab = "",

 psize = 1,

 xlab = "Favours drug Favours placebo")

op <- par(cex = 0.8, font = 2)

text(c(-4, -3.5, -3, -2.25, -1.75, -1.25), 6.5, c("N", "Mean", "SD", "N", "Mean", "SD"))

text(c(-3.5, -1.75), 7.5, c("Experimental", "Control"))

text(-5, 6.5, "Study", pos=4)

text(2, 7.5, "SMD [95% CI]", pos=2)

text(-5, -1, pos = 4, cex = 1,

 bquote(paste("RE Model (", tau^2, " = ",

 .(formatC(ma\_pain$tau2, digits=4, format="f")), ", Q = ",

 .(formatC(ma\_pain$QE, digits=2, format="f")), ", df = ",

 .(ma\_pain$k - ma\_pain$p), ", p = ",

 .(formatC(ma\_pain$QEp, digits=2, format="f")), "; ", I^2, " = ",

 .(formatC(ma\_pain$I2, digits=1, format="f")), "%)")))

Figure4\_Recreate\_SMD <- recordPlot()

## Correct Figure 4 - Pain intensity (MD) ####

data <- read\_xlsx("Analysis.xlsx",

 sheet = "Yang 2020",

 range = "A10:O31")

data <- data %>% filter(Recalculated == 1)

View(data)

ma\_pain <- rma(data = data,

 m1i = Exp\_mean,

 sd1i = Exp\_SD,

 n1i = Exp\_N,

 m2i = Cont\_mean,

 sd2i = Cont\_SD,

 n2i = Cont\_N,

 weighted = TRUE,

 measure = "MD",

 method = "DL",

 slab = Study)

ma\_pain

dev.off()

forest(ma\_pain,

 addfit = TRUE,

 showweights = TRUE,

 xlim = c(-18, 8),

 at = c(-2, 0, 2),

 ilab = cbind(data$Exp\_N,

 data$Exp\_mean,

 data$Exp\_SD,

 data$Cont\_N,

 data$Cont\_mean,

 data$Cont\_SD),

 ilab.xpos = c(-13.5, -12, -10.5, -9, -7.5, -6),

 rows = (6:1),

 cex = 0.75,

 mlab = "",

 psize = 1,

 xlab = "Favours drug Favours placebo")

op <- par(cex = 0.75, font = 2)

text(c(-13.5, -12, -10.5, -9, -7.5, -6), 6.5, c("N", "Mean", "SD", "N", "Mean", "SD"))

text(c(-12, -7.5), 7.5, c("Experimental", "Control"))

text(-18, 6.5, "Study", pos=4)

text(0, 7.5, "MD [95% CI]", pos=2)

text(-18, -1, pos = 4, cex = 1,

 bquote(paste("RE Model (", tau^2, " = ",

 .(formatC(ma\_pain$tau2, digits=4, format="f")), ", Q = ",

 .(formatC(ma\_pain$QE, digits=2, format="f")), ", df = ",

 .(ma\_pain$k - ma\_pain$p), ", p = ",

 .(formatC(ma\_pain$QEp, digits=2, format="f")), "; ", I^2, " = ",

 .(formatC(ma\_pain$I2, digits=1, format="f")), "%)")))

Figure4\_Recreate\_MD <- recordPlot()