***Supplementary methods***

**R Script for analysing changes of outcome between 2 time points (before and after MDA).**

setwd ("R:\\Para-CIH\\Indonesia study\\HM\_Analysis for Paper\\data from rebecca 29-5-2017")

require(foreign)

library(lme4)

dat<-read.dta('DBS3\_PrePost\_Atopy3mm\_Long.dta')

names(dat)

#analysis for binary outcome: Atopy (SPT positivity) or STH status

mod.1<-glmer(Atopy ~ Age\_2015 + Gender\_2015 + time + (1|ID), dat, family = binomial)

summary(mod.1)

#to get OR and 95%CI for time

OR=exp(summary(mod.1)$coef[4,1])

lb=exp((summary(mod.1)$coef[4,1]-1.96\*summary(mod.1)$coef[4,2]))

ub=exp((summary(mod.1)$coef[4,1]+1.96\*summary(mod.1)$coef[4,2]))

OR

lb

ub

#analysis for continuous outcome: eosinophil count (Eos), total IgE or CRP

mod.2 <-lmer(log(Eos) ~ Age\_2015 + Gender\_2015 + time +(1|ID), dat, REML = FALSE)

summary(mod.2)

mod.3 <-lmer(log(Eos) ~ Age\_2015 + Gender\_2015 + (1|ID), dat, REML = FALSE)

x<-anova(mod.2,mod.3)

x

#to get estimate and 95%CI for time

#as Eos is log-transformed for analysis

#Eos count at time=1 is (1-estimate) in comparison to time=0

#eg eos count at time=1 is 70% of time=0, thus 30% lower.

OR.eos=exp(summary(mod.2)$coef[4,1])

lb.eos=exp((summary(mod.2)$coef[4,1]-1.96\*summary(mod.2)$coef[4,2]))

ub.eos=exp((summary(mod.2)$coef[4,1]+1.96\*summary(mod.2)$coef[4,2]))

OR.eos

lb.eos

ub.eos