
[Ruminococcus]_gnavus_group**M1 glmm.zinb, marg.R²: 0.126, cond.R²: 0.655**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.22(5.05,5.4)*** - age¹: -9.21(-12.1,-6.32)*** - age²: -10.1(-12.8,-7.39)*** - age³: 7.05(4.42,9.69)*** - age⁴: 0.829(-1.71,3.37) - age⁵: -0.846(-3.32,1.62)**M2 glmm.zinb, marg.R²: 0.138, cond.R²: 0.661**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.25(5.04,5.45)*** - age¹: -9.46(-12.5,-6.41)*** - age²: -9.95(-12.7,-7.23)*** - age³: 7.49(4.87,10.1)*** - age⁴: 0.847(-1.68,3.38) - age⁵: -1.11(-3.56,1.34) - pre45-225: -0.174(-0.611,0.262) - pre0-30: -1.41(-2.36,-0.453)** - post0-30: 0.451(-0.101,1) - post>90: -0.0972(-0.521,0.327)**Actinomyces****M1 glmm.zinb, marg.R²: 0.298, cond.R²: 0.552**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.02(2.9,3.14)*** - age¹: -20.5(-22.8,-18.3)*** - age²: 6.87(4.64,9.09)*** - age³: -3.35(-5.5,-1.2)** - age⁴: -2.14(-4.26,-0.0288)* - age⁵: -0.554(-2.64,1.53)**M2 glmm.zinb, marg.R²: 0.3, cond.R²: 0.562**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.03(2.89,3.17)*** - age¹: -20.4(-22.8,-17.9)*** - age²: 7.03(4.75,9.32)*** - age³: -3.22(-5.37,-1.07)** - age⁴: -2.32(-4.45,-0.195)* - age⁵: -0.752(-2.82,1.32) - pre45-225: -0.101(-0.406,0.205) - pre0-30: -0.699(-1.56,0.162) - post0-30: 0.306(-0.147,0.759) - post>90: -0.129(-0.482,0.225)**Anaerostipes****M1 glmm.zinb, marg.R²: 0.696, cond.R²: 0.804**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5(4.88,5.12)*** - age¹: 38.3(35.1,41.4)*** - age²: -21.6(-24.7,-18.5)*** - age³: 9.38(6.4,12.4)*** - age⁴: -7.2(-9.93,-4.47)*** - age⁵: 6.33(4.08,8.58)*****M2 glmm.zinb, marg.R²: 0.692, cond.R²: 0.802**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.97(4.84,5.11)*** - age¹: 38.5(35.2,41.7)*** - age²: -21.2(-24.3,-18.1)*** - age³: 8.69(5.67,11.7)*** - age⁴: -6.73(-9.48,-3.97)*** - age⁵: 6.16(3.91,8.42)*** - pre45-225: 0.257(-0.0736,0.588) - pre0-30: -0.0795(-0.801,0.642) - post0-30: -0.0622(-0.439,0.315) - post>90: 0.0296(-0.24,0.299)**Bacteroides****M1 glmm.zinb, marg.R²: 0.0994, cond.R²: 0.481**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 7.18(7.07,7.29)*** - age¹: 9.53(7.8,11.3)*** - age²: -0.614(-2.3,1.07) - age³: -0.0193(-1.71,1.67) - age⁴: 0.602(-1.08,2.28) - age⁵: 0.338(-1.34,2.02)**M2 glmm.zinb, marg.R²: 0.124, cond.R²: 0.485**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 7.11(6.99,7.24)*** - age¹: 10.4(8.51,12.3)*** - age²: -0.0866(-1.83,1.66) - age³: -0.412(-2.12,1.29) - age⁴: 0.405(-1.29,2.1) - age⁵: 0.39(-1.29,2.07) - pre45-225: 0.401(0.124,0.677)** - pre0-30: 0.66(-0.0304,1.35) - post0-30: 0.156(-0.229,0.54) - post>90: 0.0545(-0.224,0.333)**Bifidobacterium****M1 glmm.zinb, marg.R²: 0.13, cond.R²: 0.185**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 8.52(8.47,8.58)*** - age¹: -13.1(-14.1,-12.1)*** - age²: -0.826(-1.8,0.146) - age³: 2.4(1.43,3.38)*** - age⁴: -2.46(-3.42,-1.5)*** - age⁵: -0.3(-1.27,0.671)**M2 glmm.zinb, marg.R²: 0.132, cond.R²: 0.186**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 8.54(8.48,8.6)*** - age¹: -12.9(-14,-11.8)*** - age²: -0.858(-1.87,0.15) - age³: 2.32(1.34,3.3)*** - age⁴: -2.45(-3.42,-1.47)*** - age⁵: -0.308(-1.28,0.665) - pre45-225: -0.00355(-0.151,0.144) - pre0-30: -0.218(-0.641,0.206) - post0-30: -0.195(-0.417,0.0263) - post>90: -0.0663(-0.22,0.0875)**Blautia****M1 glmm.zinb, marg.R²: 0.495, cond.R²: 0.69**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 6.42(6.31,6.53)*** - age¹: 25.8(23.5,28)*** - age²: -12.5(-14.6,-10.4)*** - age³: 4.86(2.79,6.93)*** - age⁴: -1.24(-3.24,0.768) - age⁵: 1.04(-0.798,2.88)**M2 glmm.zinb, marg.R²: 0.494, cond.R²: 0.686**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 6.45(6.32,6.57)*** - age¹: 24.9(22.5,27.2)*** - age²: -12.8(-14.9,-10.7)*** - age³: 5.12(3.03,7.22)*** - age⁴: -1.06(-3.08,0.956) - age⁵: 0.908(-0.935,2.75) - pre45-225: -0.284(-0.585,0.0166) - pre0-30: -0.317(-0.967,0.334) - post0-30: -0.0146(-0.403,0.374) - post>90: 0.0503(-0.216,0.317)**Clostridium_sensu_stricto_1****M1 glmm.zinb, marg.R²: 0.0786, cond.R²: 0.365**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 6.01(5.88,6.13)*** - age¹: -6.39(-9.15,-3.63)*** - age²: 2.52(-0.144,5.19) - age³: -5.17(-7.84,-2.5)*** - age⁴: 4.87(2.18,7.57)*** - age⁵: -0.755(-3.44,1.93)**M2 glmm.zinb, marg.R²: 0.0934, cond.R²: 0.377**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 6.05(5.91,6.19)*** - age^1: -5.86(-8.81,-2.9)*** - age^2: 2.63(-0.0989,5.36) - age^3: -5.22(-7.9,-2.54)*** - age^4: 4.88(2.17,7.58)*** - age^5: -0.824(-3.5,1.85) - pre45-225: -0.126(-0.507,0.255) - pre0-30: -1.36(-2.48,0.243)* - post0-30: -0.0346(-0.567,0.498) - post>90: -0.254(-0.624,0.115)

Eggerthella

M1 glmm.zinb, marg.R^2: 0.0728, cond.R^2: 0.379

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.09(2.99,3.19)*** - age^1: -6.61(-8.68,-4.54)*** - age^2: 3.98(1.94,6.02)*** - age^3: -1.16(-3.18,0.867) - age^4: 1.56(-0.352,3.47) - age^5: -0.853(-2.79,1.08)

M2 glmm.zinb, marg.R^2: 0.0751, cond.R^2: 0.38

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.11(2.99,3.22)*** - age^1: -6.78(-9.01,-4.54)*** - age^2: 3.87(1.77,5.96)*** - age^3: -1(-3.04,1.03) - age^4: 1.58(-0.337,3.5) - age^5: -0.904(-2.84,1.03) - pre45-225: -0.116(-0.379,0.147) - pre0-30: -0.233(-0.817,0.352) - post0-30: 0.0339(-0.334,0.402) - post>90: -0.0428(-0.298,0.212)

Enterococcus

M1 glmm.zinb, marg.R^2: 0.437, cond.R^2: 0.772

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.02(3.86,4.19)*** - age^1: -31.9(-34.8,-29.1)*** - age^2: 1.4(-1.37,4.18) - age^3: 0.59(-2.35,3.53) - age^4: 1.83(-1.09,4.75) - age^5: -3.68(-6.51,-0.847)*

M2 glmm.zinb, marg.R^2: 0.457, cond.R^2: 0.783

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.97(3.78,4.16)*** - age^1: -34.8(-37.9,-31.7)*** - age^2: 0.708(-2.12,3.53) - age^3: 0.884(-2,3.76) - age^4: 2.18(-0.68,5.05) - age^5: -3.62(-6.38,-0.853)* - pre45-225: -0.359(-0.751,0.0329) - pre0-30: -0.917(-1.96,0.123) - post0-30: 1.03(0.492,1.56)*** - post>90: 0.531(0.0241,1.04)*

Erysipelatoclostridium

M1 glmm.zinb, marg.R^2: 0.202, cond.R^2: 0.687

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.19(4.02,4.36)*** - age^1: -18.3(-21.2,-15.5)*** - age^2: 6.58(3.99,9.18)*** - age^3: -3.87(-6.35,-1.39)** - age^4: 2.12(-0.285,4.53) - age^5: -0.911(-3.16,1.33)

M2 glmm.zinb, marg.R^2: 0.192, cond.R^2: 0.68

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.17(3.97,4.37)*** - age^1: -17.6(-20.6,-14.6)*** - age^2: 6.48(3.83,9.12)*** - age^3: -3.8(-6.3,-1.3)** - age^4: 2.2(-0.21,4.61) - age^5: -1.07(-3.31,1.17) - pre45-225: 0.0291(-0.383,0.441) - pre0-30: -0.118(-0.906,0.67) - post0-30: 0.301(-0.204,0.806) - post>90: -0.0391(-0.438,0.359)

Escherichia-Shigella

M1 glmm.zinb, marg.R^2: 0.524, cond.R^2: 0.73

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.04(4.91,5.17)*** - age^1: -34.5(-37,-32)*** - age^2: 9.08(6.66,11.5)*** - age^3: 1.03(-1.35,3.42) - age^4: -1.63(-3.95,0.677) - age^5: -2.26(-4.58,0.0669)

M2 glmm.zinb, marg.R^2: 0.539, cond.R^2: 0.739

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.13(4.97,5.28)*** - age^1: -33(-35.8,-30.3)*** - age^2: 9.4(6.92,11.9)*** - age^3: 0.782(-1.59,3.15) - age^4: -1.99(-4.3,0.325) - age^5: -2.49(-4.79,-0.191)* - pre45-225: -0.113(-0.452,0.226) - pre0-30: -1.09(-2.13,-0.0423)* - post0-30: -0.454(-0.975,0.0666) - post>90: -0.572(-0.959,-0.185)**

Faecalibacterium

M1 glmm.zinb, marg.R^2: 0.735, cond.R^2: 0.823

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.76(5.65,5.86)*** - age^1: 38.8(36.4,41.3)*** - age^2: -21.5(-23.8,-19.2)*** - age^3: 6.74(4.36,9.12)*** - age^4: 1.11(-1.22,3.44) - age^5: 0.366(-1.7,2.43)

M2 glmm.zinb, marg.R^2: 0.74, cond.R^2: 0.825

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.8(5.68,5.92)*** - age^1: 38.2(35.6,40.7)*** - age^2: -22.1(-24.5,-19.8)*** - age^3: 7.18(4.78,9.58)*** - age^4: 1.21(-1.13,3.55) - age^5: 0.286(-1.78,2.35) - pre45-225: -0.633(-0.955,-0.312)*** - pre0-30: 0.254(-0.604,1.11) - post0-30: -0.228(-0.612,0.155) - post>90: 0.0281(-0.224,0.28)

Flavonifractor

M1 glmm.zinb, marg.R^2: 0.25, cond.R^2: 0.531

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.06(2.95,3.18)*** - age^1: 4.45(1.54,7.36)** - age^2: -9.3(-12.2,-6.38)*** - age^3: 10.7(7.85,13.5)*** - age^4: -5.49(-7.97,-3.02)*** - age^5: 6.07(3.86,8.27)***

M2 glmm.zinb, marg.R^2: 0.264, cond.R^2: 0.538

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.08(2.95,3.21)*** - age^1: 6.03(3.04,9.03)*** - age^2: -8.61(-11.5,-5.68)*** - age^3: 10.5(7.67,13.3)*** - age^4: -5.98(-8.45,-3.51)*** - age^5: 6.26(4.08,8.45)*** - pre45-225: 0.192(-0.108,0.492) - pre0-30: 0.443(-0.114,1) - post0-30: -0.134(-0.484,0.216) - post>90: -0.354(-0.615,-0.0933)**

Haemophilus

M1 glmm.zinb, marg.R^2: 0.091, cond.R^2: 0.522

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.06(3.91,4.21)*** - age^1: -3.59(-6.08,-1.11)** - age^2: -9.86(-12.2,-7.5)*** - age^3: 5.31(2.94,7.68)*** - age^4: 0.024(-2.33,2.38) - age^5: -4.41(-6.72,-2.09)***

M2 glmm.zinb, marg.R²: 0.101, cond.R²: 0.535

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.04(3.86,4.22)*** - age¹: -3.33(-5.94,-0.712)* - age²: -10.4(-12.7,-7.99)*** - age³: 5.74(3.41,8.07)*** - age⁴: -0.368(-2.68,1.94) - age⁵: -3.97(-6.23,-1.72)*** - pre45-225: 0.0639(-0.326,0.454) - pre0-30: -0.756(-1.71,0.193) - post0-30: 0.225(-0.287,0.736) - post>90: 0.0619(-0.327,0.45)**Intestinibacter****M1 glmm.zinb, marg.R²: 0.138, cond.R²: 0.377**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.82(4.72,4.92)*** - age¹: 9.41(6.74,12.1)*** - age²: -5.33(-7.94,-2.73)*** - age³: 3.87(1.38,6.36)** - age⁴: -2.53(-4.86,-0.197)* - age⁵: 0.408(-1.71,2.53)**M2 glmm.zinb, marg.R²: 0.14, cond.R²: 0.381**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.81(4.69,4.93)*** - age¹: 9.71(6.93,12.5)*** - age²: -5.09(-7.73,-2.46)*** - age³: 3.83(1.33,6.33)** - age⁴: -2.69(-5.04,-0.34)* - age⁵: 0.461(-1.66,2.58) - pre45-225: 0.0713(-0.215,0.358) - pre0-30: 0.133(-0.607,0.872) - post0-30: 0.176(-0.212,0.564) - post>90: -0.0586(-0.319,0.202)**Lachnoclostridium****M1 glmm.zinb, marg.R²: 0.0723, cond.R²: 0.538**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.52(4.37,4.66)*** - age¹: 2.16(-0.36,4.69) - age²: -9.03(-11.4,-6.61)*** - age³: 1.49(-0.922,3.91) - age⁴: 2.2(-0.0938,4.49) - age⁵: -2.35(-4.39,-0.323)***M2 glmm.zinb, marg.R²: 0.0769, cond.R²: 0.54**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.55(4.39,4.72)*** - age¹: 1.43(-1.22,4.09) - age²: -8.96(-11.4,-6.52)*** - age³: 1.93(-0.491,4.35) - age⁴: 2.06(-0.241,4.36) - age⁵: -2.47(-4.5,-0.444)* - pre45-225: -0.309(-0.663,0.0451) - pre0-30: -0.146(-0.829,0.537) - post0-30: 0.256(-0.165,0.677) - post>90: -0.0701(-0.398,0.257)**Romboutsia****M1 glmm.zinb, marg.R²: 0.869, cond.R²: 0.943**

fixed~poly(age,4), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.27(3.08,3.46)*** - age¹: 63.4(57.4,69.5)*** - age²: -52.1(-57.7,-46.5)*** - age³: 32.6(28.2,37.1)*** - age⁴: -12.7(-15.8,-9.65)*****M2 glmm.zinb, marg.R²: 0.874, cond.R²: 0.944**

fixed~group.ref+poly(age,4), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 3.32(3.11,3.53)*** - age¹: 64(57.9,70.2)*** - age²: -53.2(-58.9,-47.5)*** - age³: 34.2(29.7,38.7)*** - age⁴: -13.6(-16.8,-10.5)*** - pre45-225: -0.473(-0.882,-0.0634)* - pre0-30: -0.939(-1.87,-0.00946)* - post0-30: 0.143(-0.304,0.59) - post>90: -0.234(-0.585,0.116)**Roseburia****M1 glmm.zinb, marg.R²: 0.661, cond.R²: 0.836**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.72(4.57,4.86)*** - age¹: 33.2(29.4,37.1)*** - age²: -24.1(-27.8,-20.4)*** - age³: 12.4(8.91,15.9)*** - age⁴: -2.08(-5.25,1.1) - age⁵: 1.14(-1.39,3.67)**M2 glmm.zinb, marg.R²: 0.655, cond.R²: 0.835**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 4.74(4.57,4.91)*** - age¹: 33.1(29.2,37)*** - age²: -23.9(-27.6,-20.2)*** - age³: 12.2(8.76,15.7)*** - age⁴: -1.95(-5.13,1.22) - age⁵: 1.29(-1.24,3.81) - pre45-225: -0.141(-0.525,0.243) - pre0-30: 1.04(0.239,1.85)* - post0-30: -1(-1.48,-0.531)*** - post>90: -0.0179(-0.332,0.297)**Streptococcus****M1 glmm.zinb, marg.R²: 0.0793, cond.R²: 0.165**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.86(5.76,5.96)*** - age¹: -6.09(-8.69,-3.49)*** - age²: 3.09(0.497,5.69)* - age³: -5.53(-8.13,-2.93)*** - age⁴: 6.9(4.3,9.49)*** - age⁵: -1.24(-3.84,1.36)**M2 glmm.zinb, marg.R²: 0.0917, cond.R²: 0.171**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.86(5.75,5.97)*** - age¹: -6.48(-9.34,-3.61)*** - age²: 2.79(0.0972,5.48)* - age³: -5.44(-8.06,-2.82)*** - age⁴: 7.08(4.47,9.7)*** - age⁵: -1.29(-3.9,1.31) - pre45-225: -0.052(-0.382,0.278) - pre0-30: -1.77(-2.85,-0.681)** - post0-30: 0.252(-0.295,0.8) - post>90: 0.0596(-0.285,0.404)**Veillonella****M1 glmm.zinb, marg.R²: 0.507, cond.R²: 0.642**

fixed~poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.78(5.66,5.9)*** - age¹: -33.6(-36.2,-30.9)*** - age²: -11.4(-14,-8.82)*** - age³: 9.3(6.67,11.9)*** - age⁴: 1.23(-1.38,3.84) - age⁵: -6.32(-8.92,-3.72)*****M2 glmm.zinb, marg.R²: 0.517, cond.R²: 0.653**

fixed~group.ref+poly(age,5), random~(1|ID.S), zi_fixed~TRUE, zi_random~(TRUE)

Intrcpt: 5.83(5.69,5.98)*** - age¹: -32.7(-35.5,-29.8)*** - age²: -11.1(-13.8,-8.4)*** - age³: 9.22(6.61,11.8)*** - age⁴: 0.989(-1.61,3.59) - age⁵: -6.36(-8.92,-3.8)*** - pre45-225: -0.132(-0.487,0.222) - pre0-30: -1.75(-2.79,-0.707)** - post0-30: 0.152(-0.393,0.696) - post>90: -0.394(-0.786,-0.00227)*