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Figure S1. Genetic association of iron with CES (Scatter plot and Leave-one-out plot)

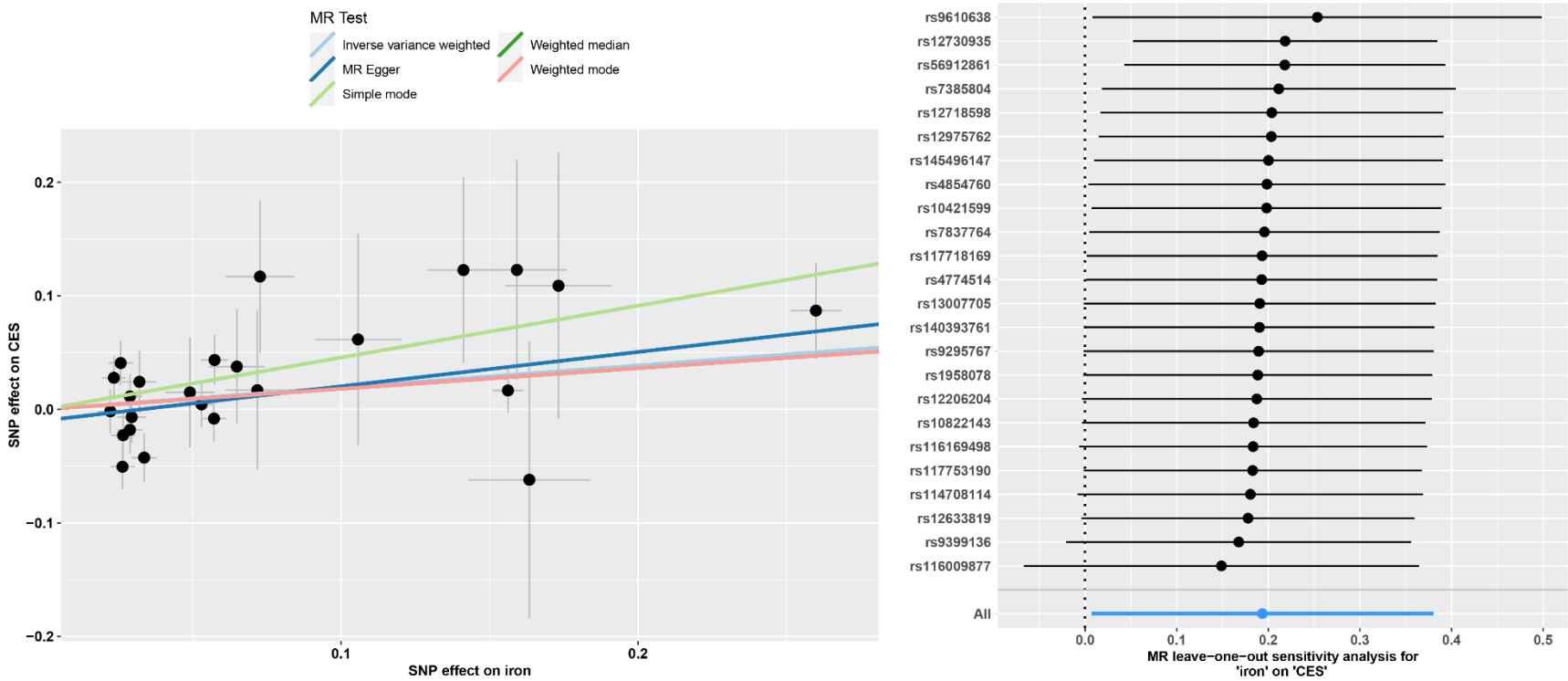


Figure S2. Genetic association of magnesium with CES (Scatter plot and Leave-one-out plot)

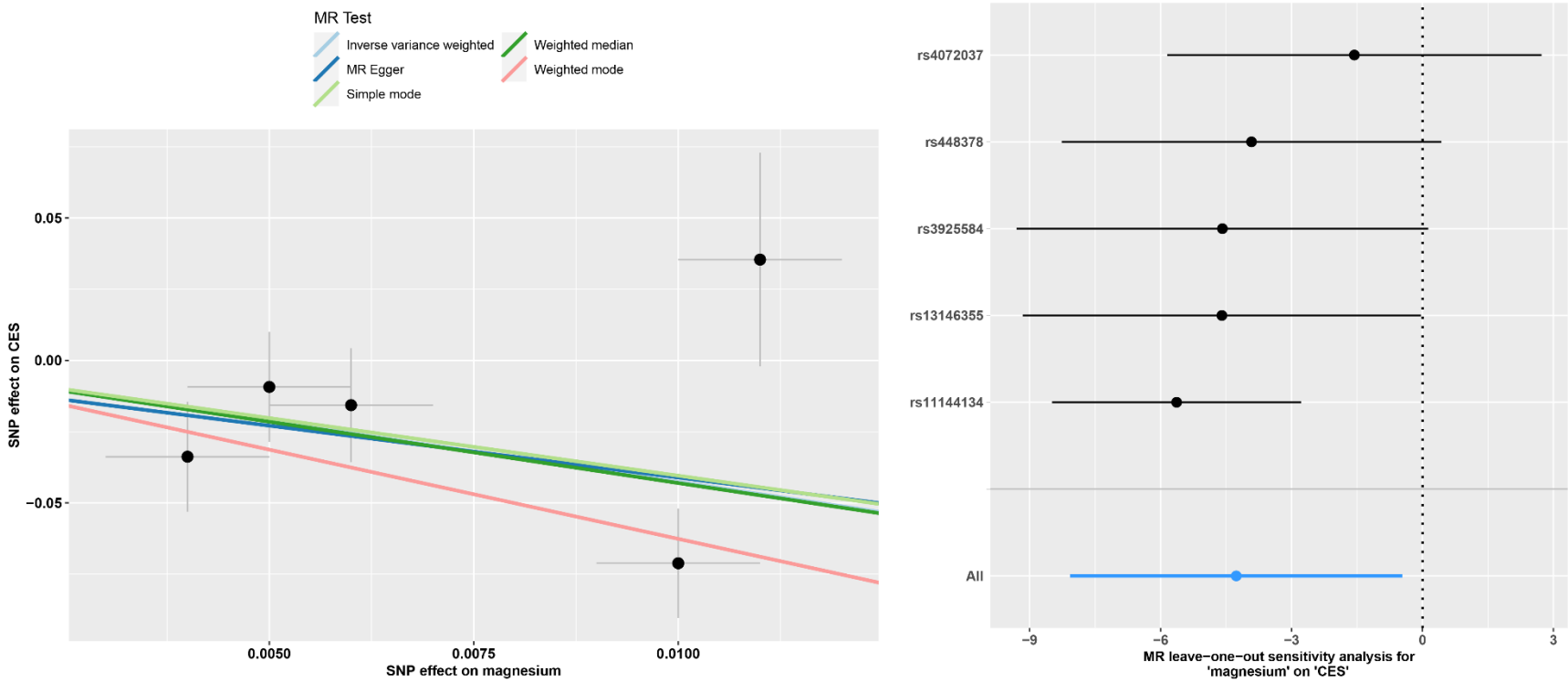


Figure S3. Genetic association of iron with T2D (Scatter plot and Leave-one-out plot)

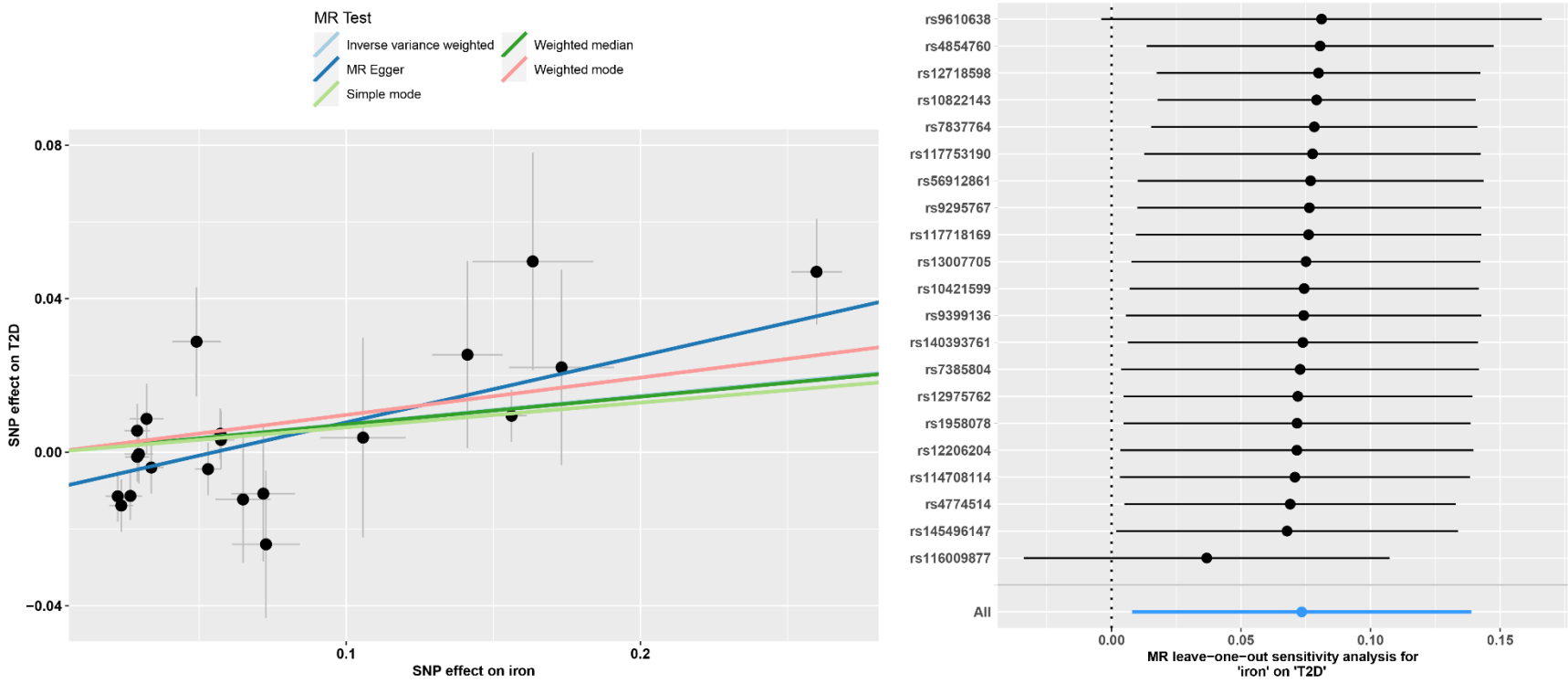


Figure S4. Genetic association of zinc with BMI (Scatter plot and Leave-one-out plot)

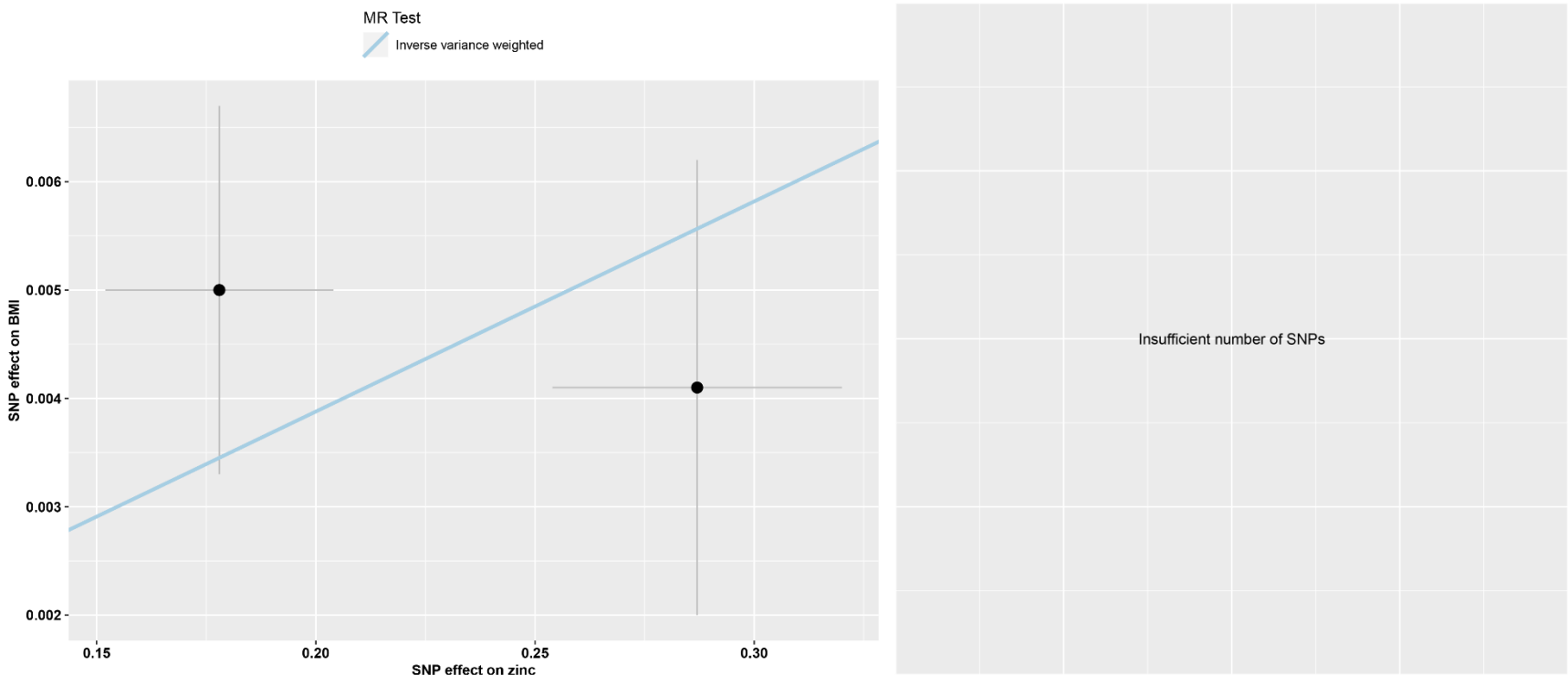


Figure S5. Genetic association of class *Actinobacteria* with AD (Scatter plot and Leave-one-out plot)

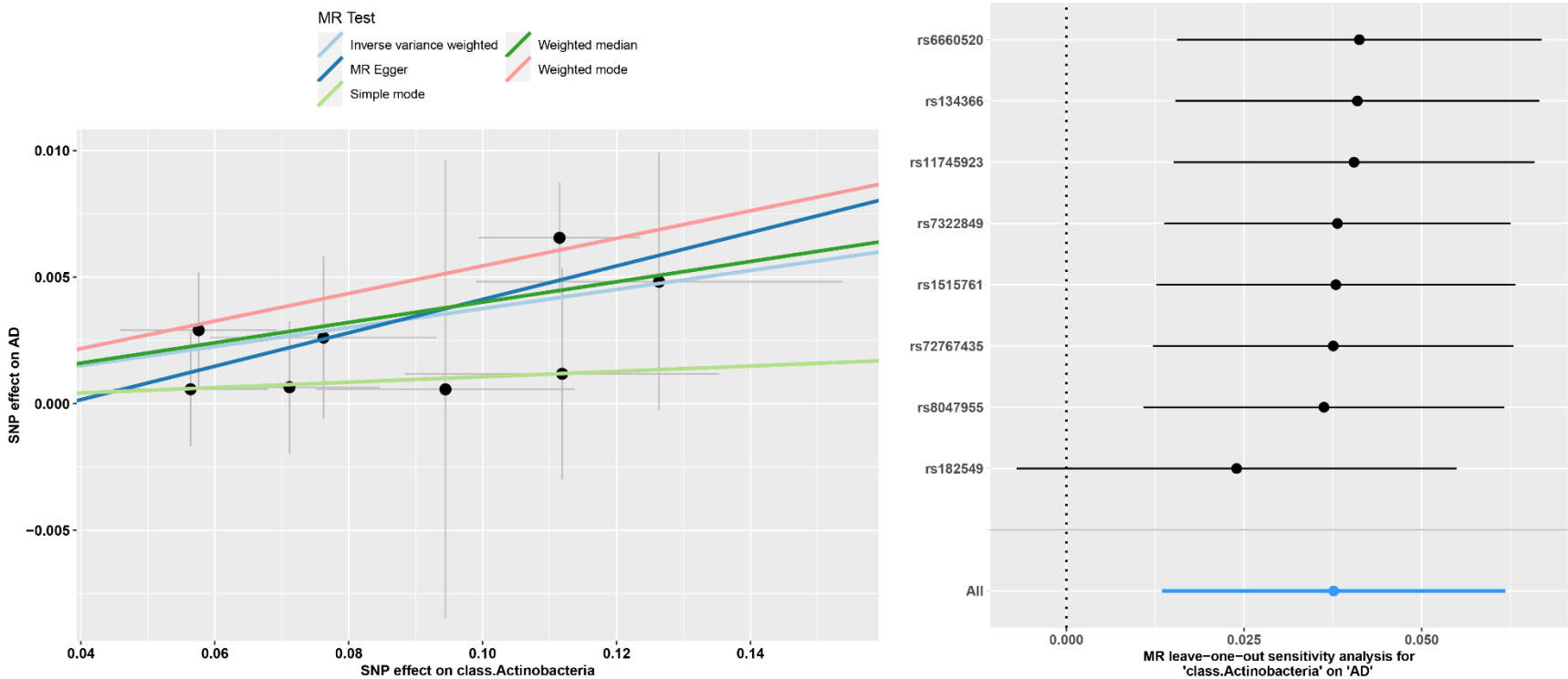


Figure S6. Genetic association of genus *Sutterella* with ASD (Scatter plot and Leave-one-out plot)

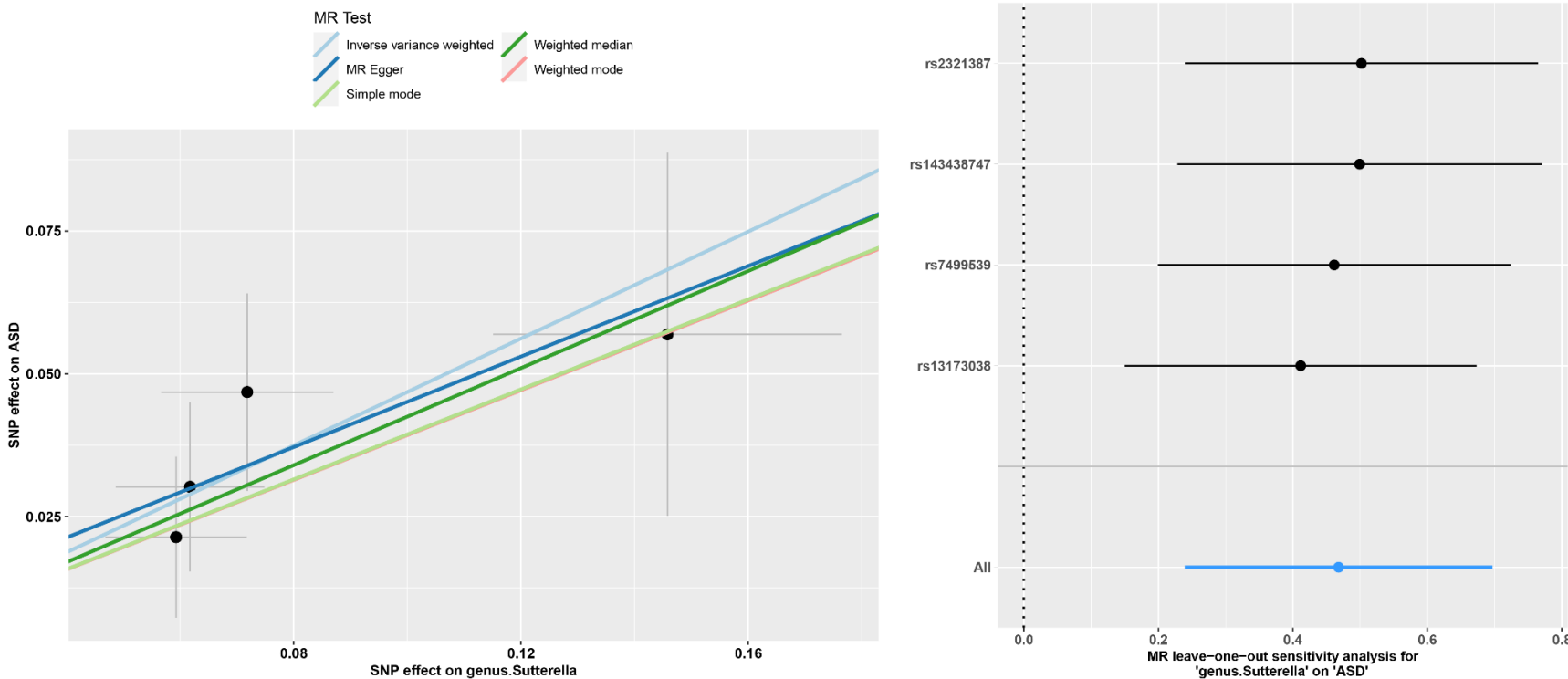


Figure S7. Genetic association of order *NB1n* with MS (Scatter plot and Leave-one-out plot)

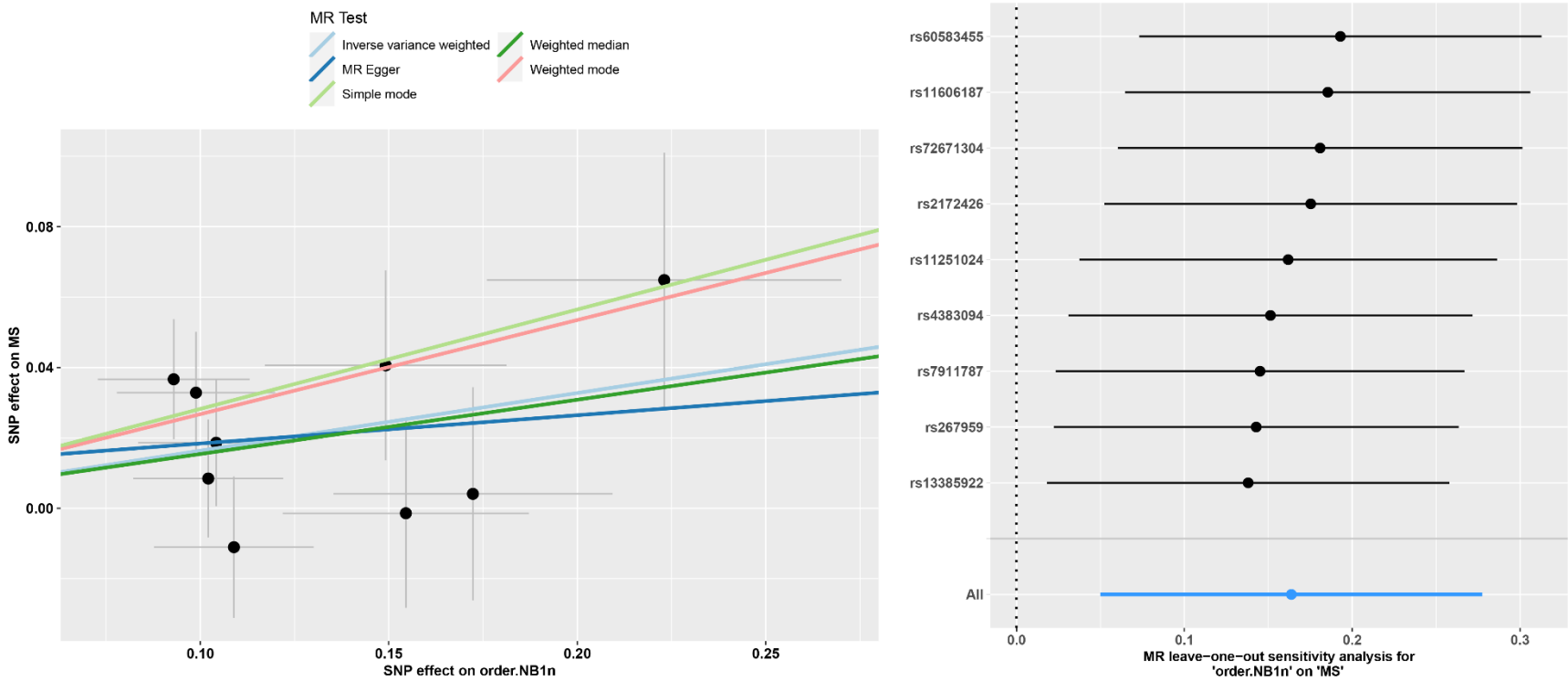


Figure S8. Genetic association of class *Bacteroidia* with CES (Scatter plot and Leave-one-out plot)

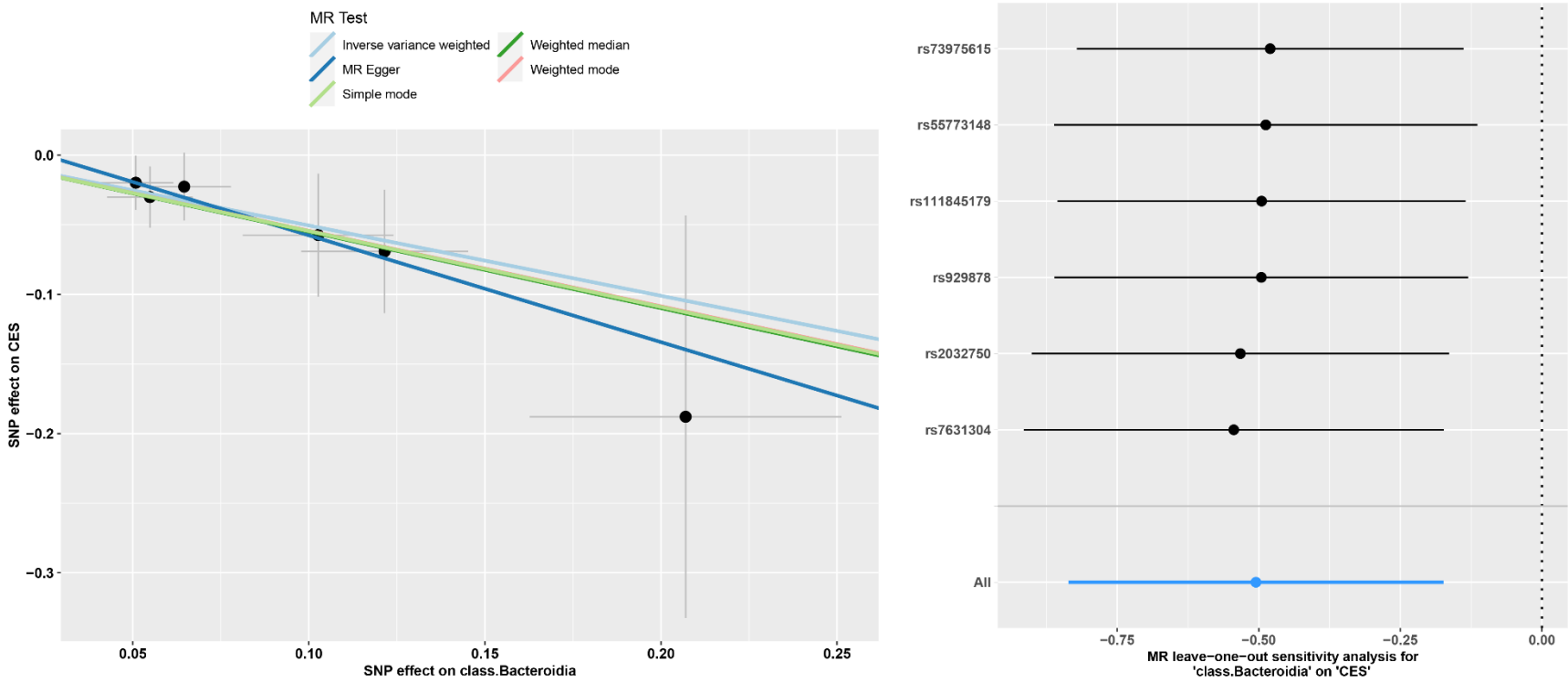


Figure S9. Genetic association of class *Mollicutes* with BMI (Scatter plot and Leave-one-out plot)

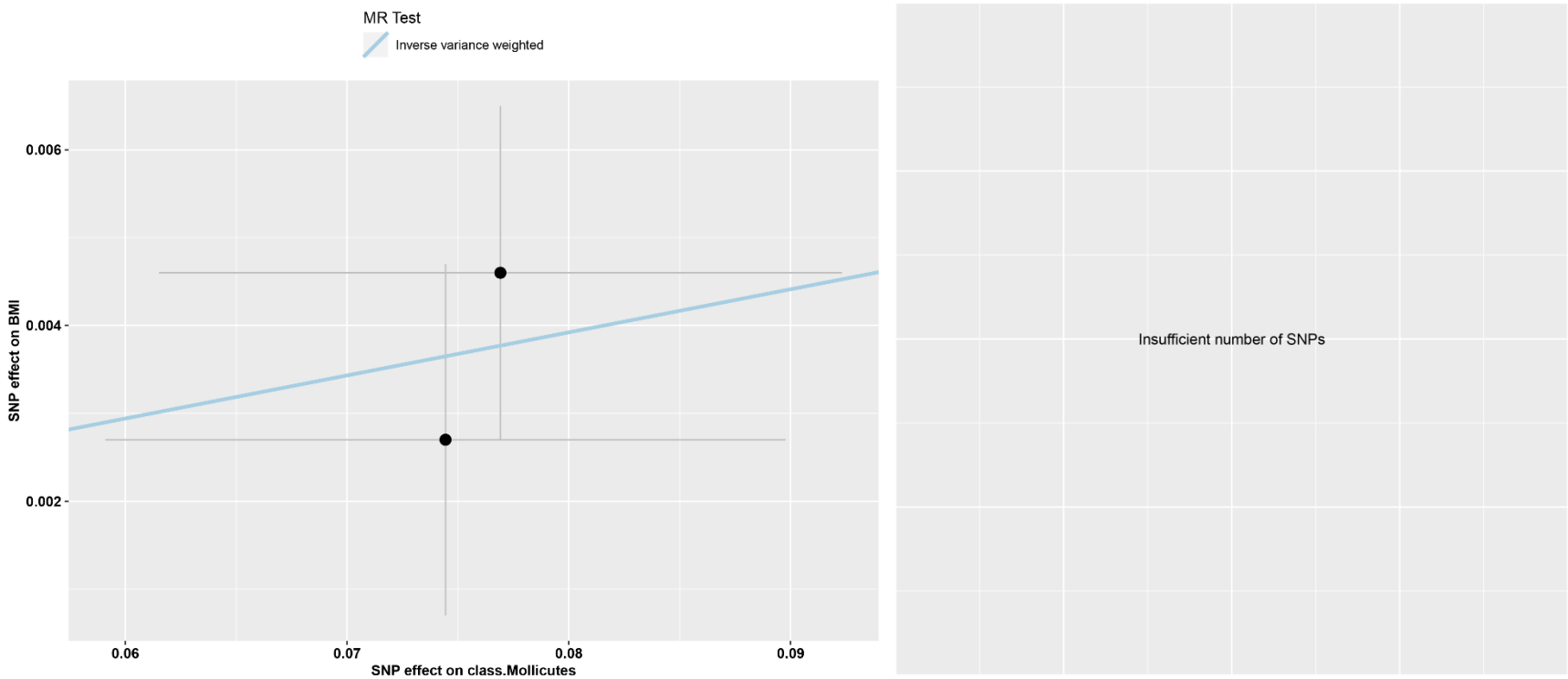


Figure S10. Genetic association of order *Bacteroidales* with CES (Scatter plot and Leave-one-out plot)

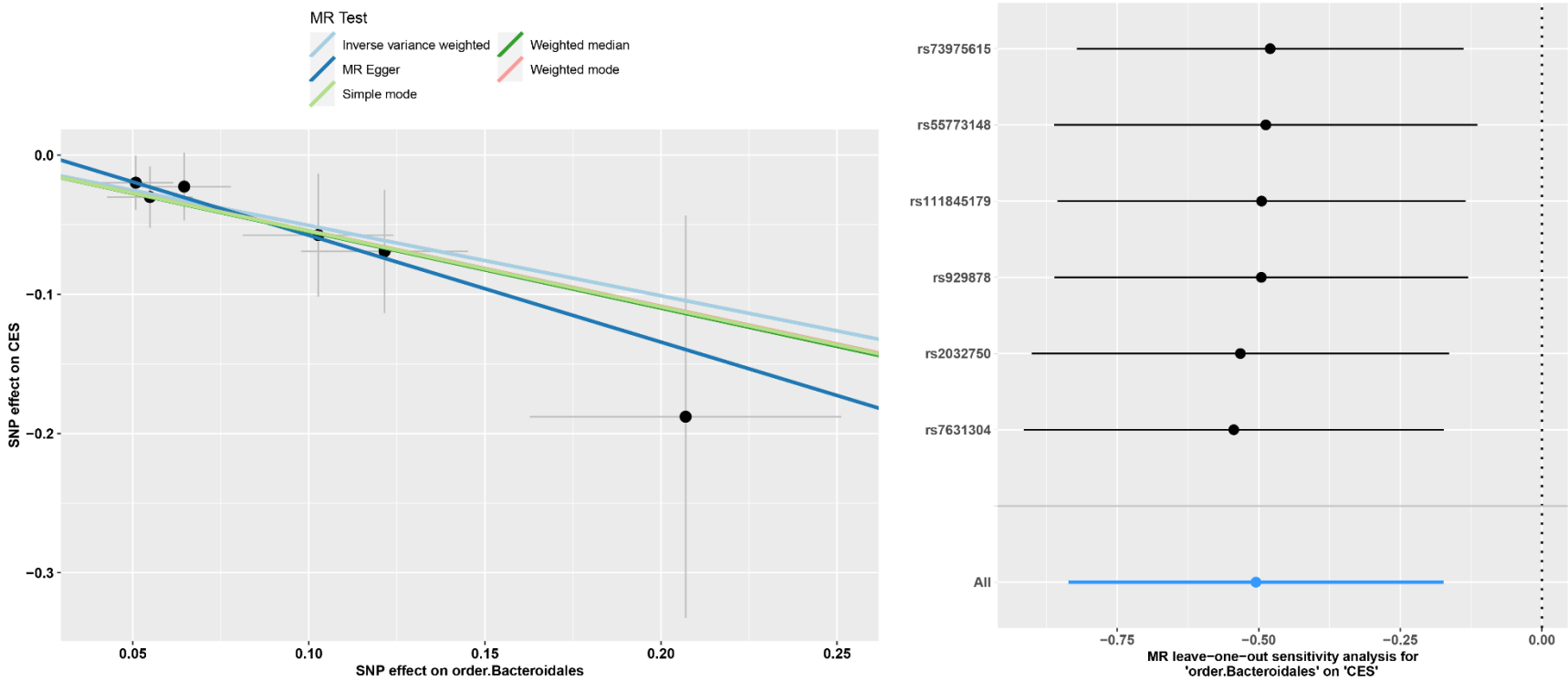


Figure S11. Genetic association of family *Streptococcaceae* with SVS (Scatter plot and Leave-one-out plot)

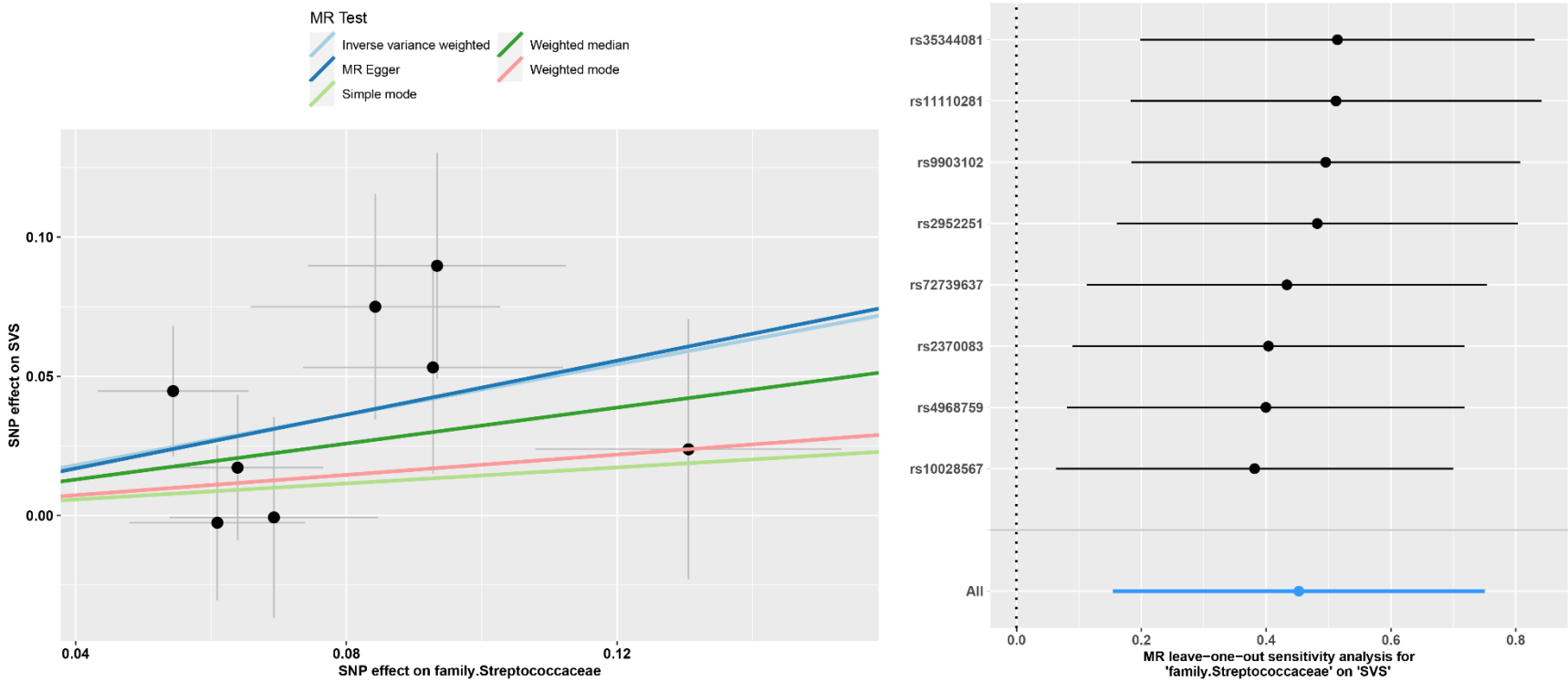


Figure S12. Genetic association of class *Bacteroidia* with BMI (Scatter plot and Leave-one-out plot)

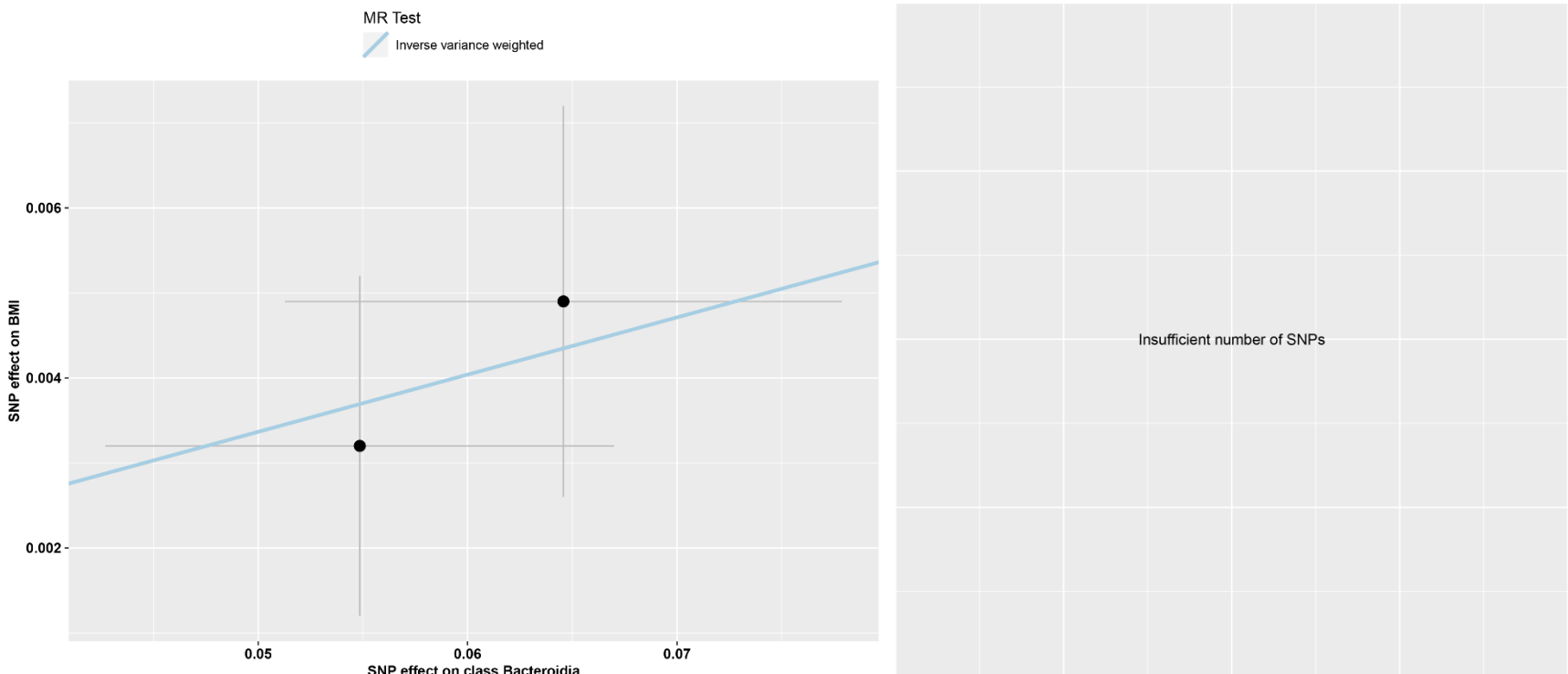


Figure S13. Genetic association of family *Lachnospiraceae* with BMI (Scatter plot and Leave-one-out plot)

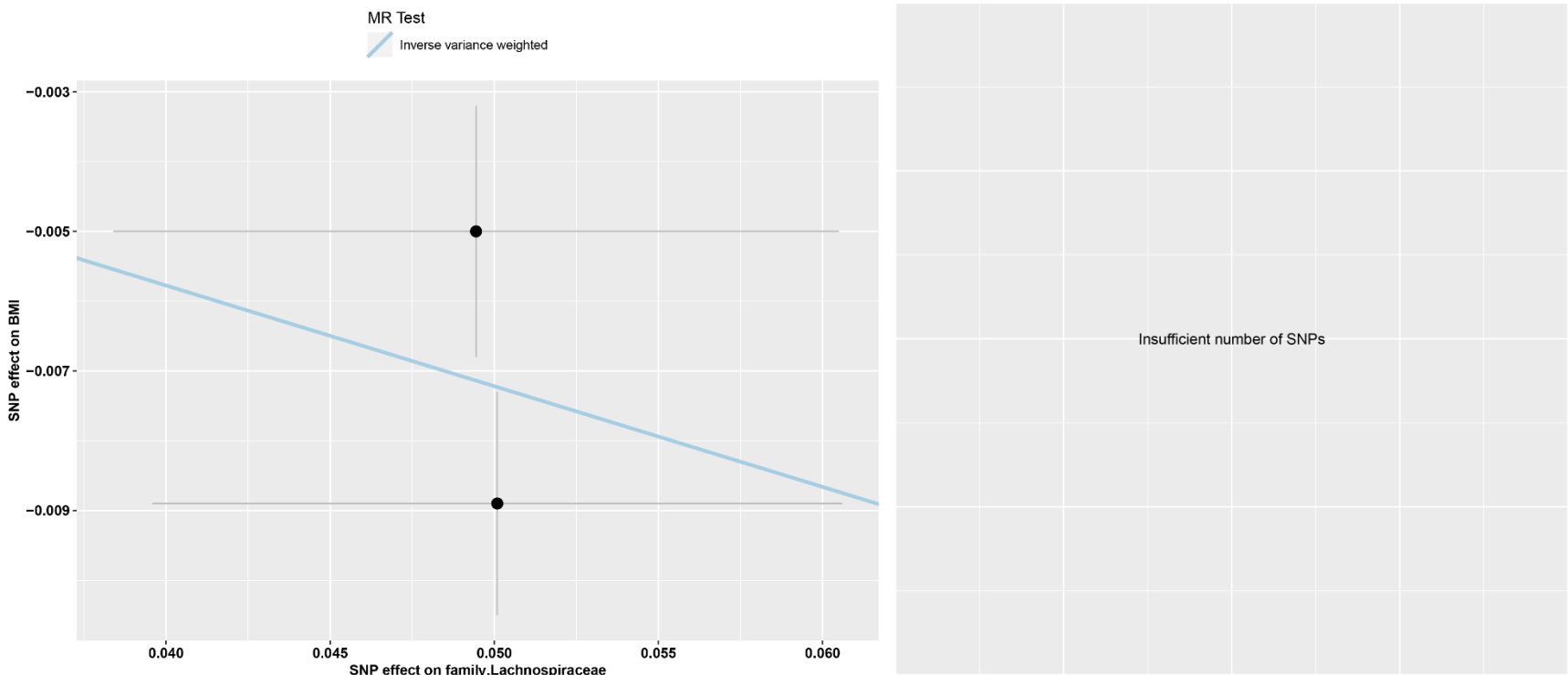


Figure S14. Genetic association of genus *Erysipelatoclostridium* with BMI (Scatter plot and Leave-one-out plot)

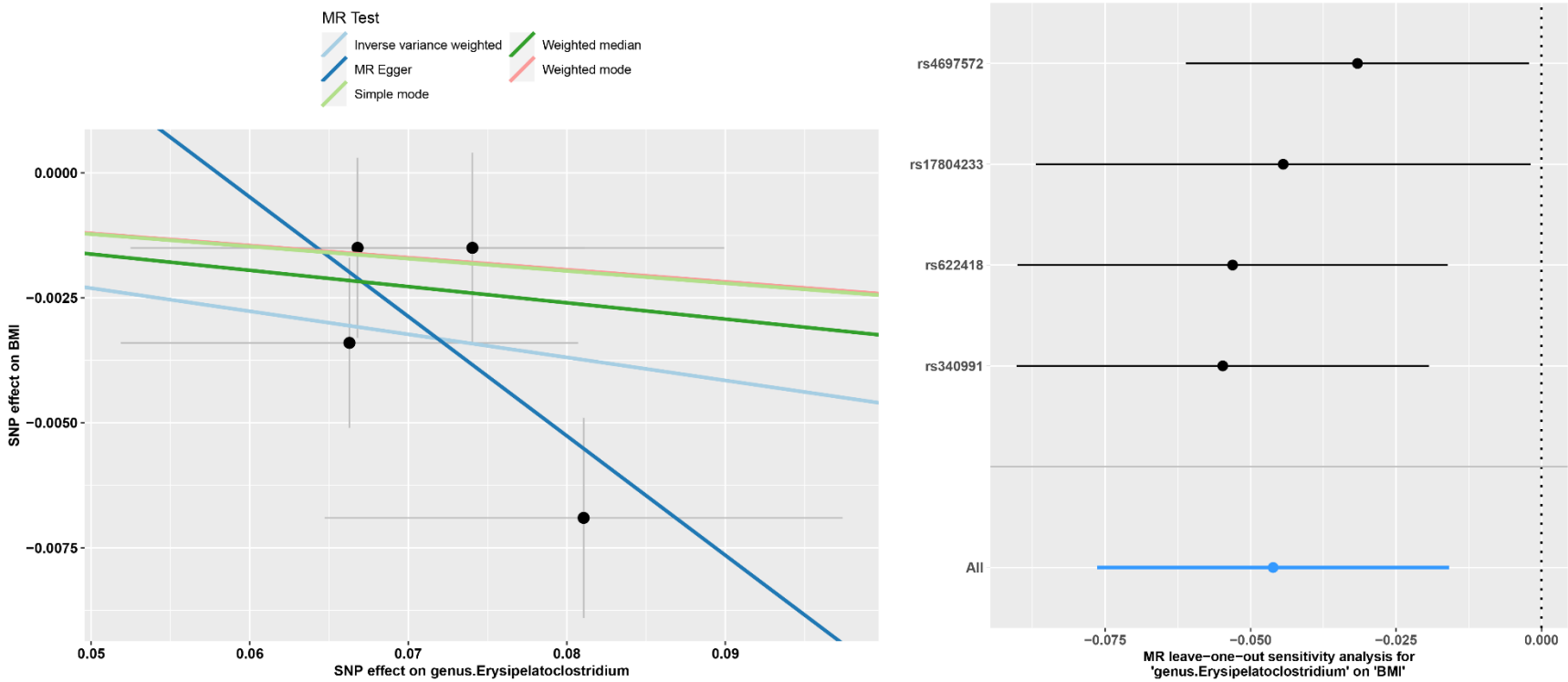


Figure S15. Genetic association of genus *Roseburia* with BMI (Scatter plot and Leave-one-out plot)

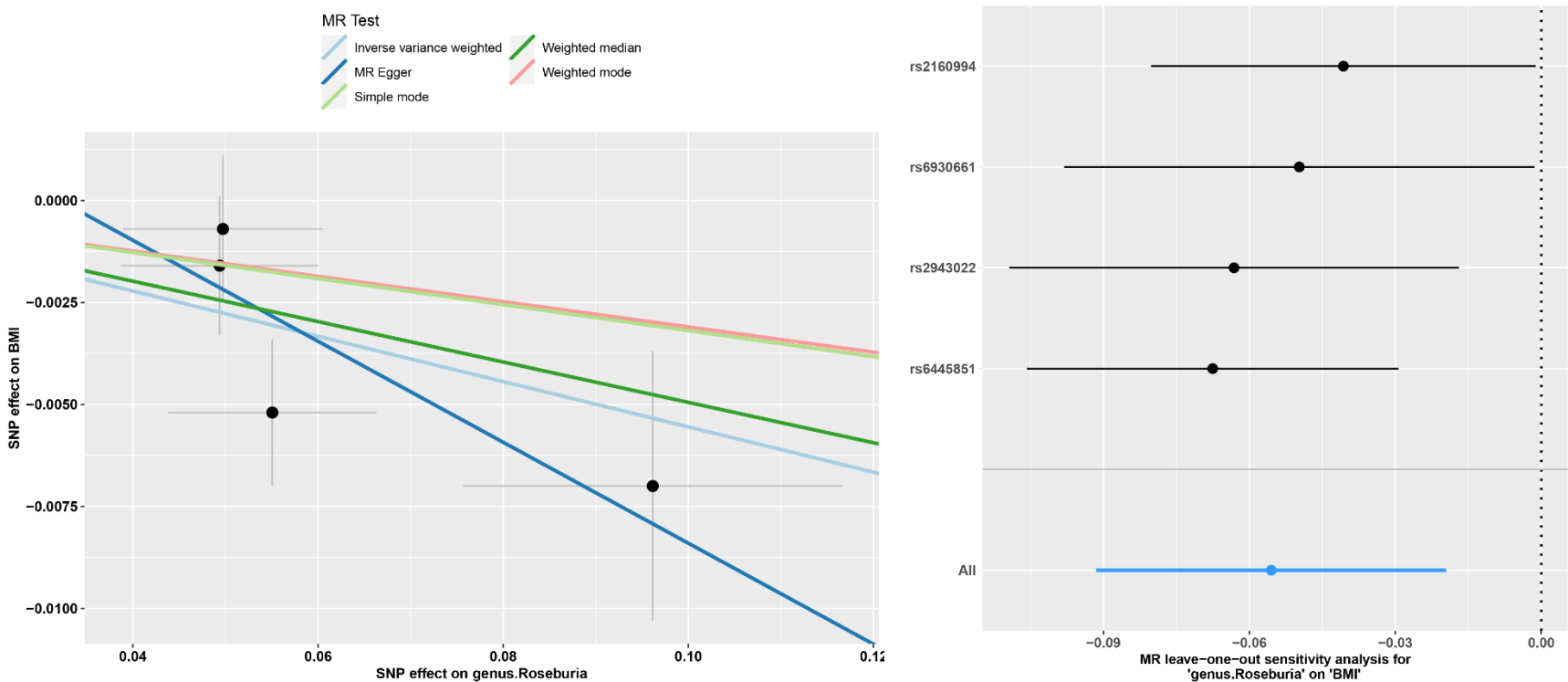


Figure S16. Genetic association of genus *Turicibacter* with BMI (Scatter plot and Leave-one-out plot)

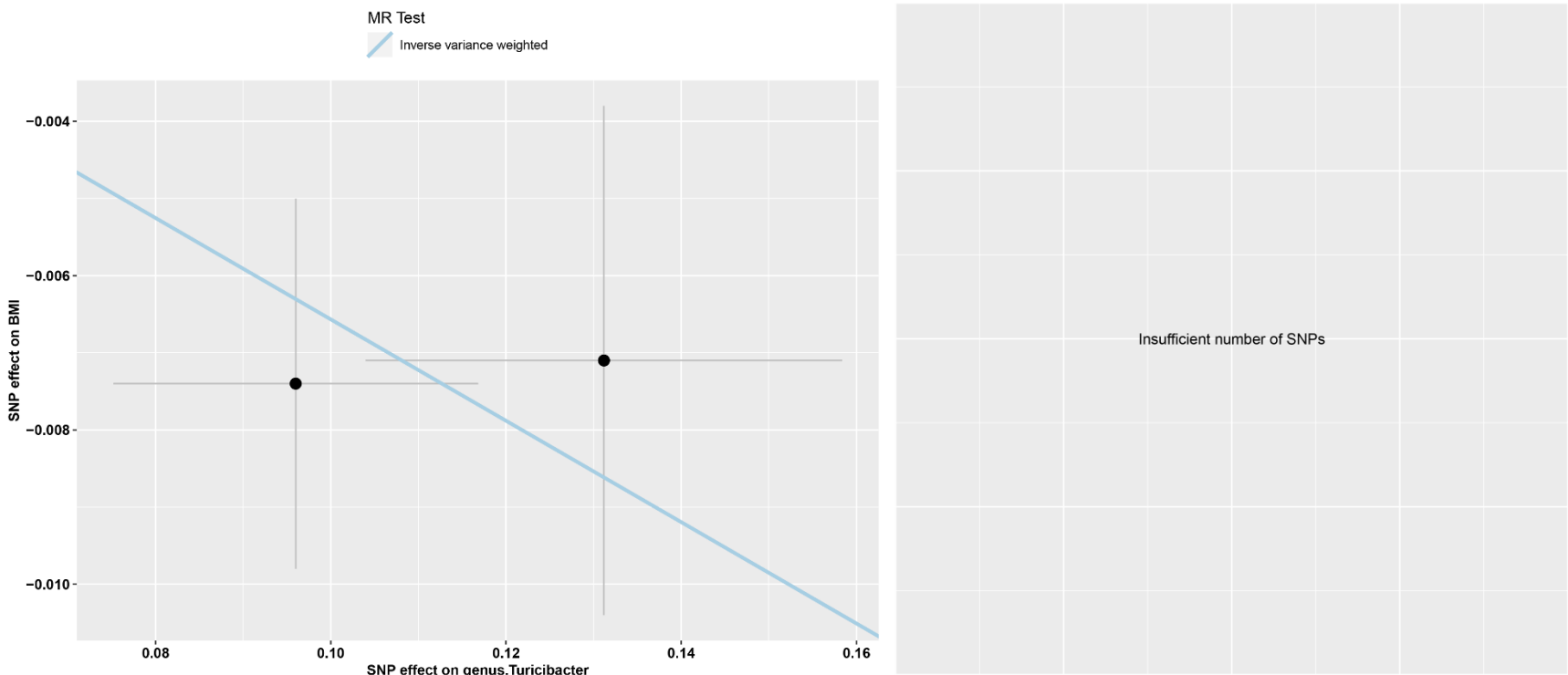


Figure S17. Genetic association of copper with family *Victivallaceae* (Scatter plot and Leave-one-out plot)

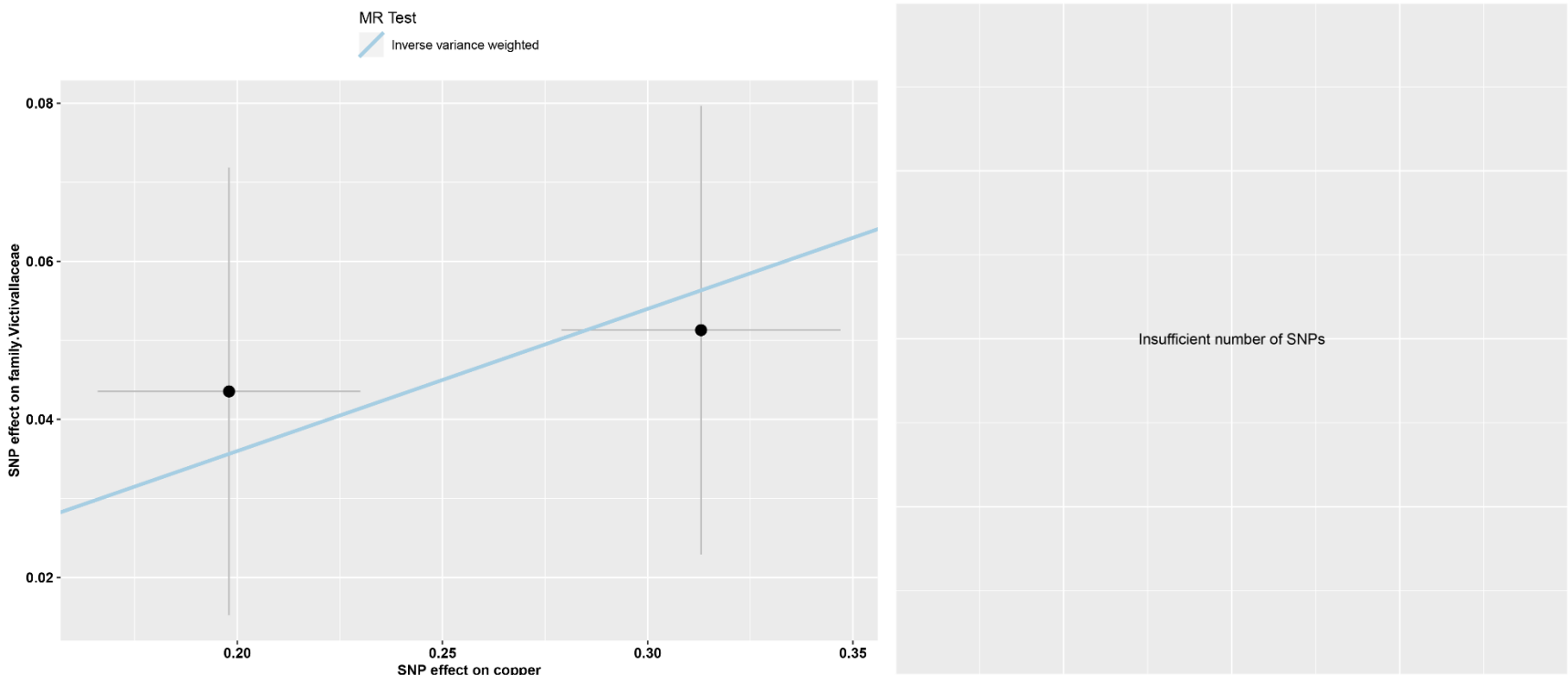


Figure S18. Genetic association of copper with genus *Butyricoccus* (Scatter plot and Leave-one-out plot)

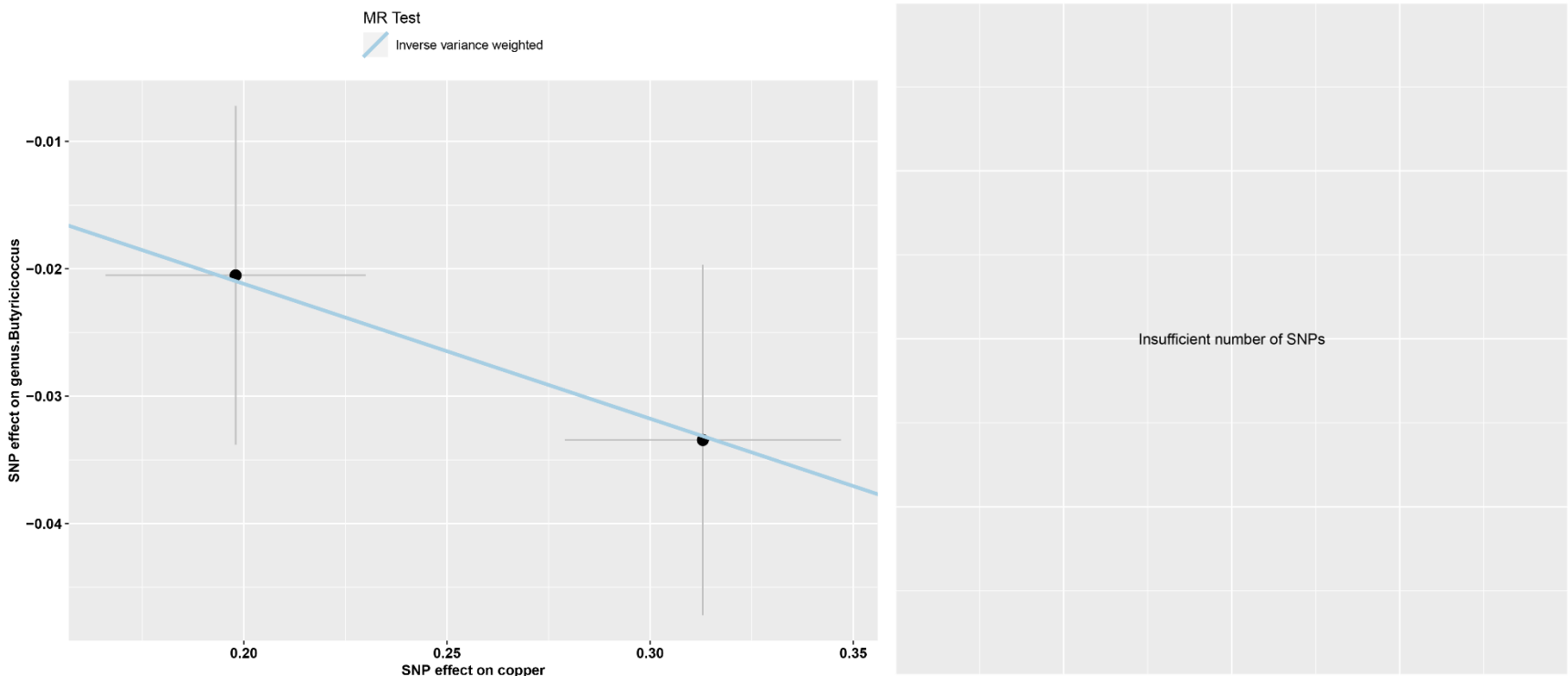


Figure S19. Genetic association of iron with class *Melainabacteria* (Scatter plot and Leave-one-out plot)

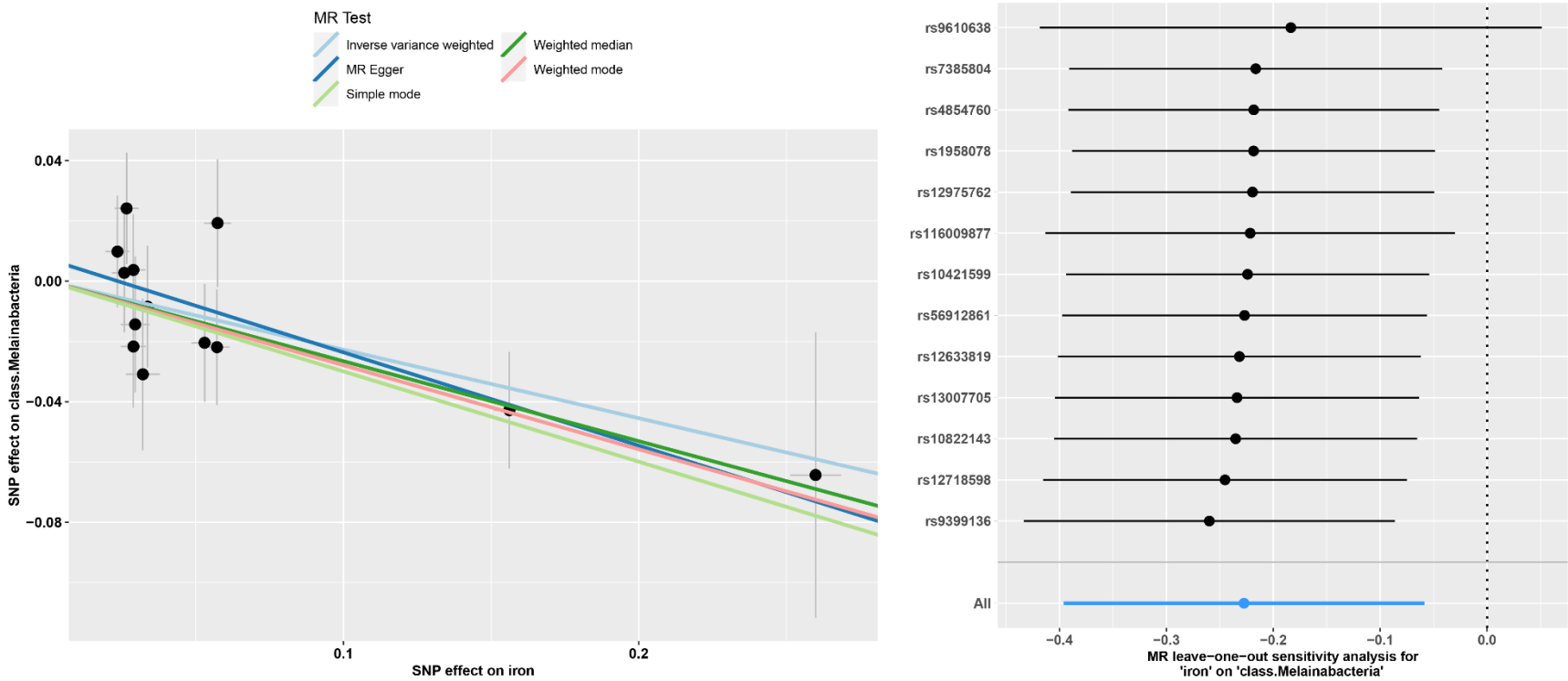


Figure S20. Genetic association of iron with order *Enterobacteriales* (Scatter plot and Leave-one-out plot)

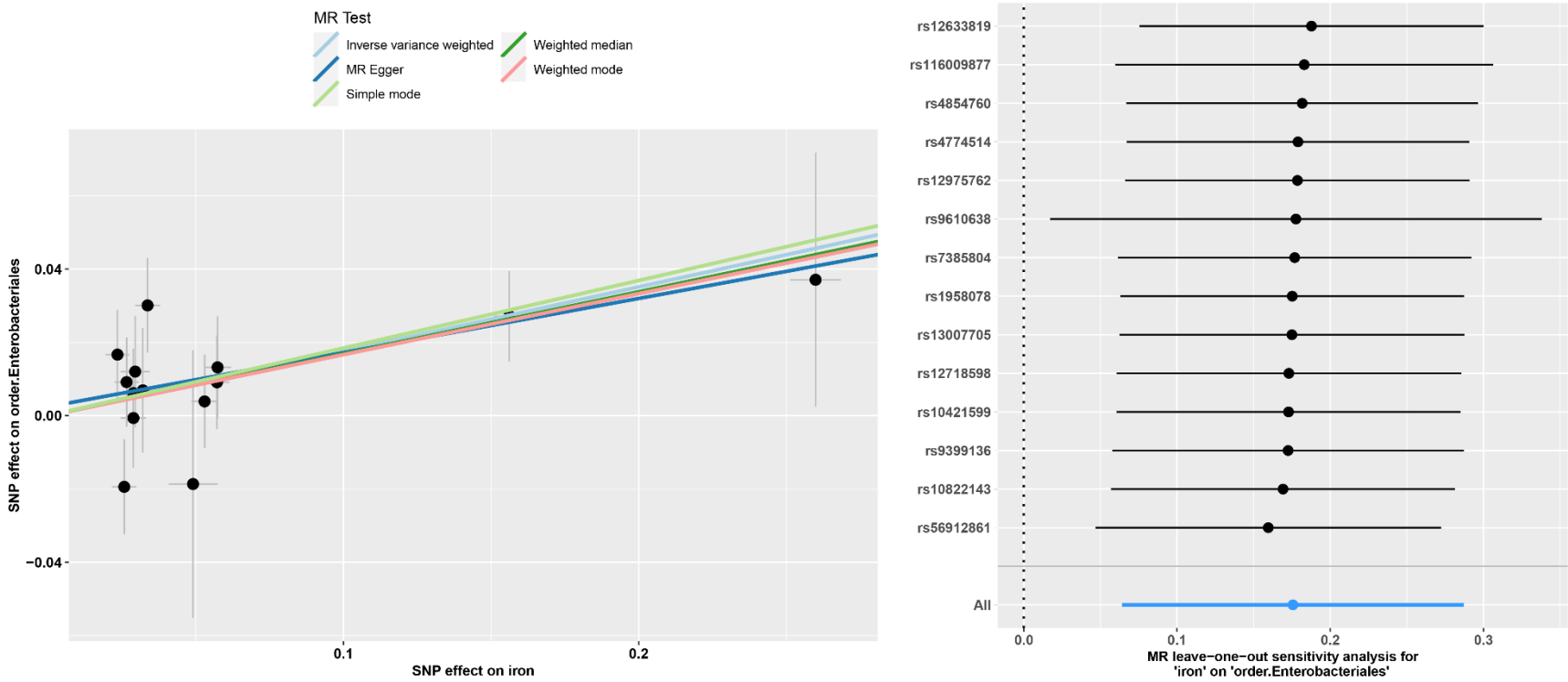


Figure S21. Genetic association of iron with order *Gastranaerophilales* (Scatter plot and Leave-one-out plot)

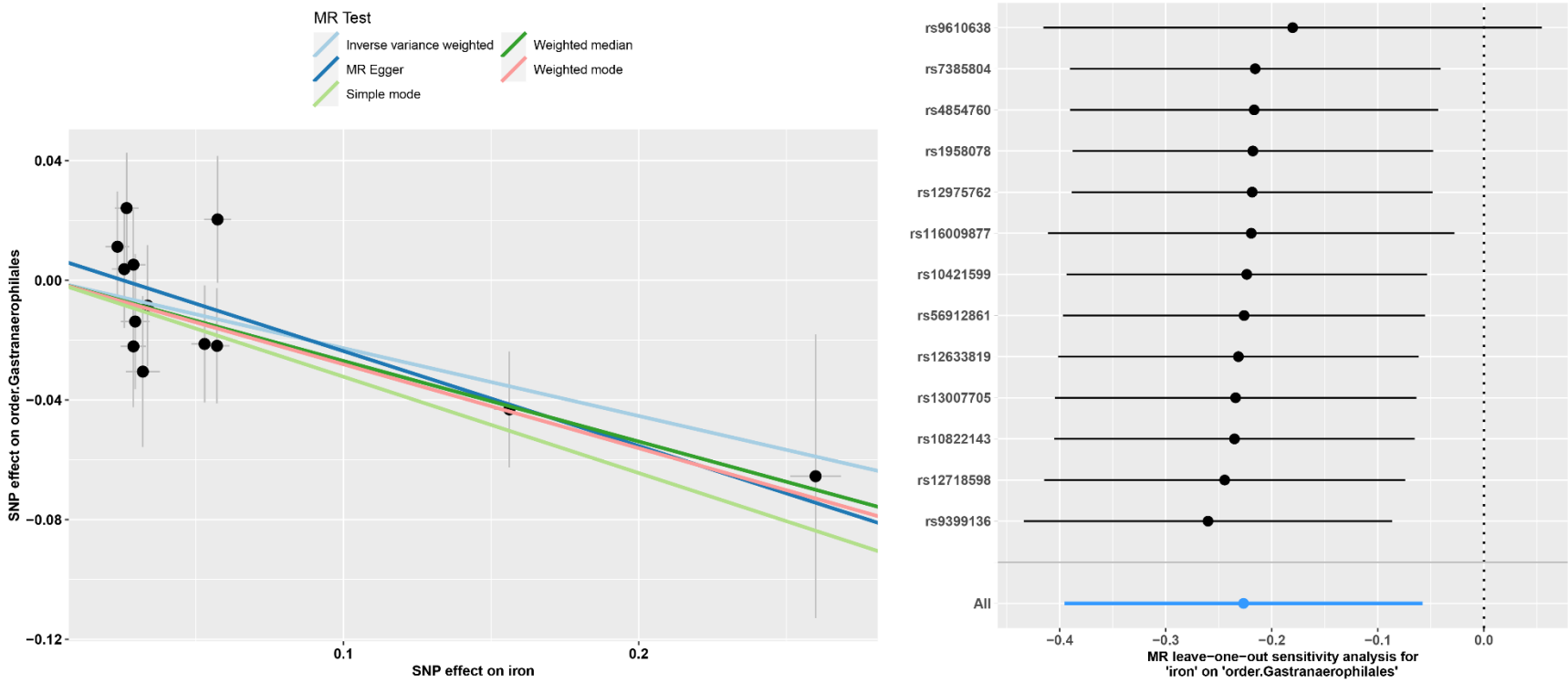




Figure S22. Genetic association of iron with family *Enterobacteriaceae* (Scatter plot and Leave-one-out plot)

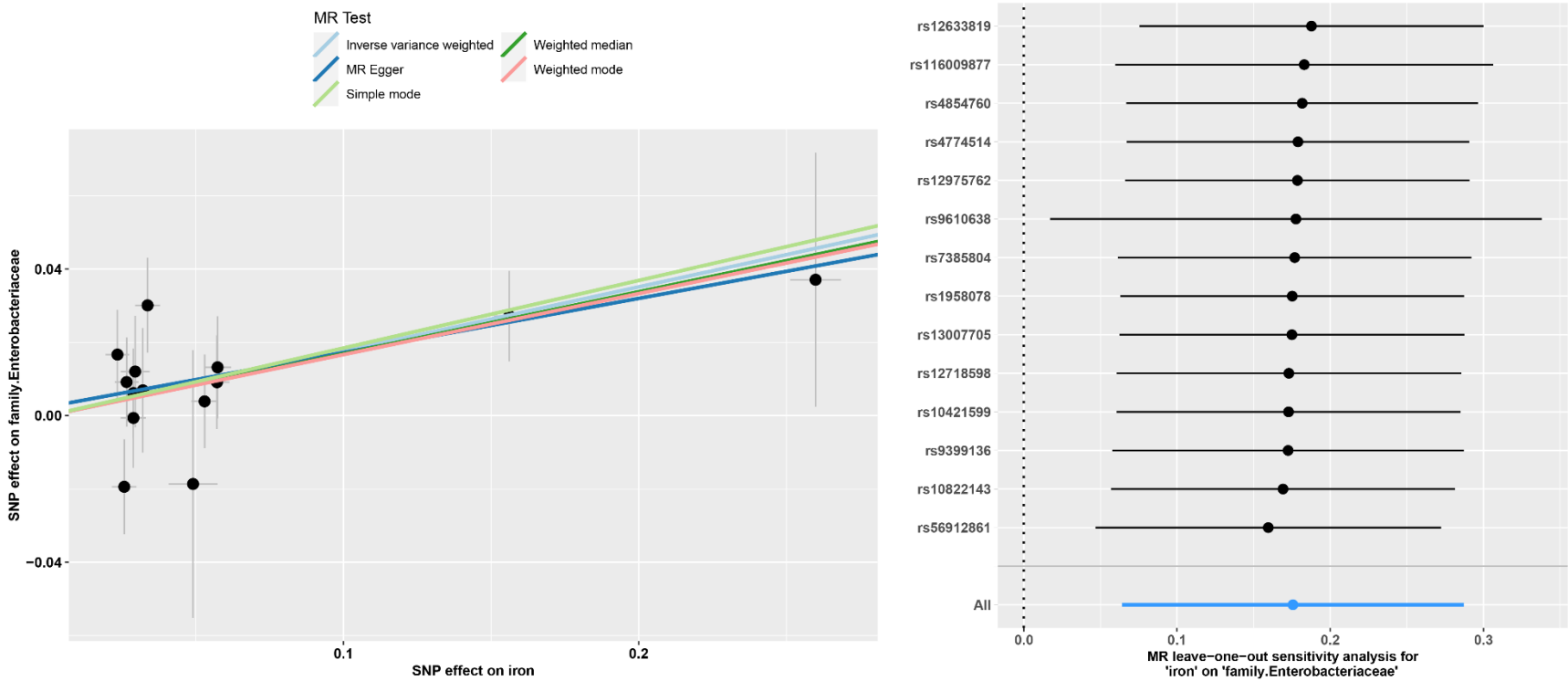


Figure S23. Genetic association of iron with genus *Escherichia Shigella* (Scatter plot and Leave-one-out plot)

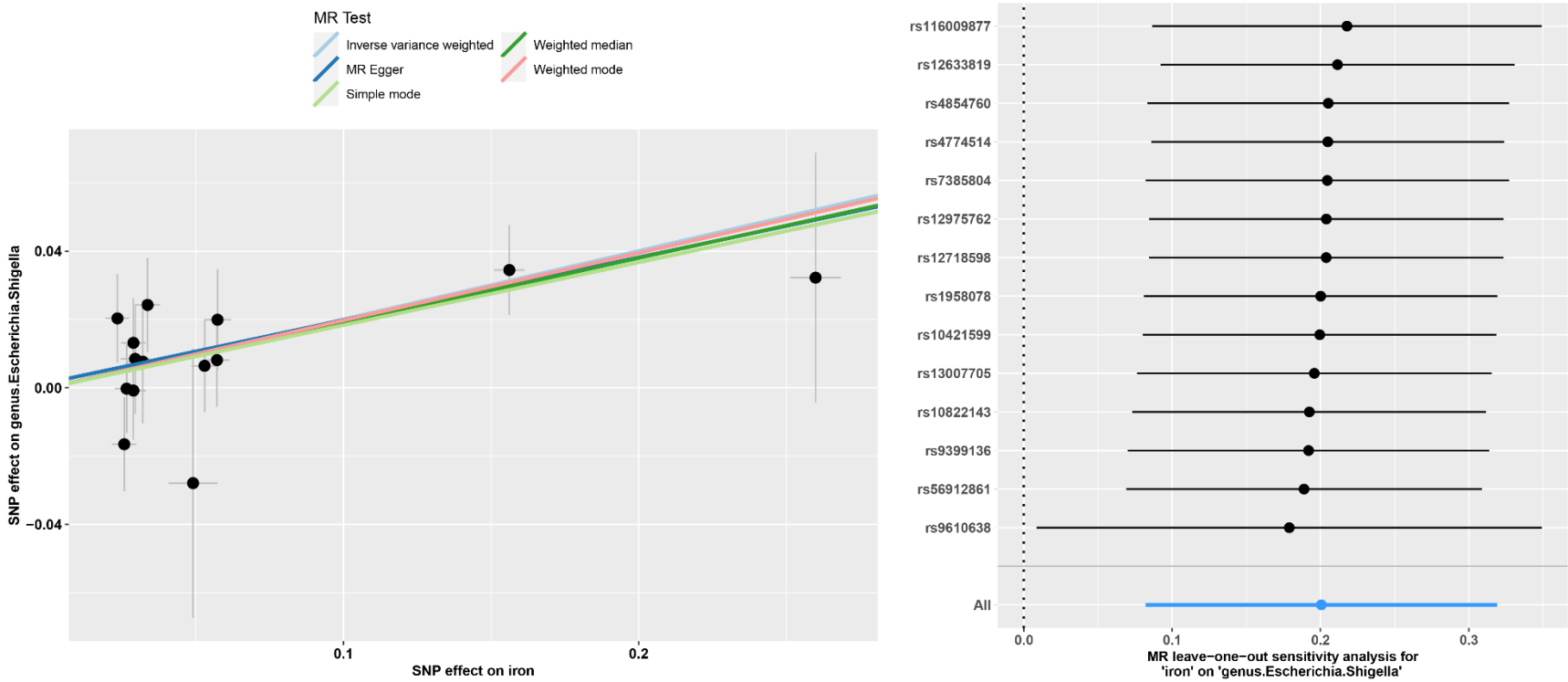


Figure S24. Genetic association of iron with genus *Terrisporobacter* (Scatter plot and Leave-one-out plot)

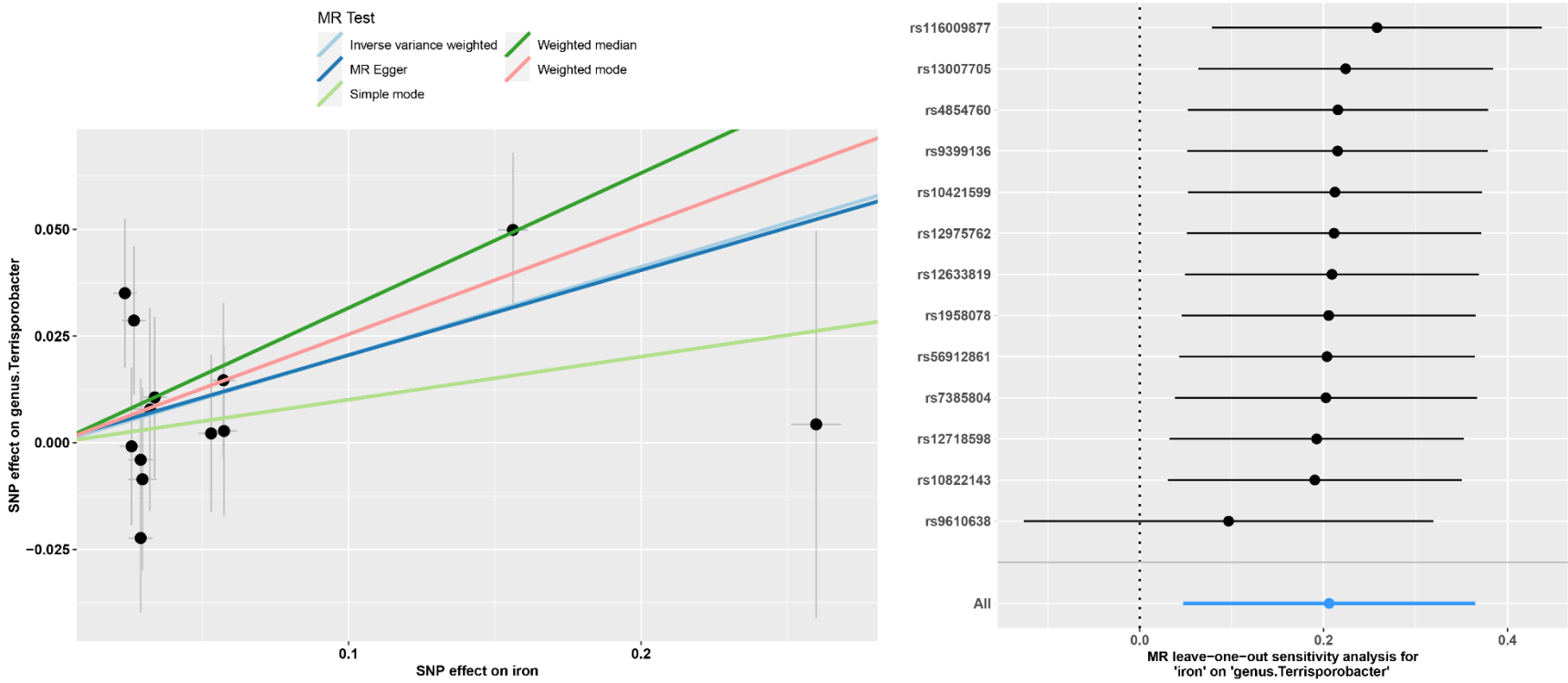


Figure S25. Genetic association of magnesium with class *Actinobacteria* (Scatter plot and Leave-one-out plot)

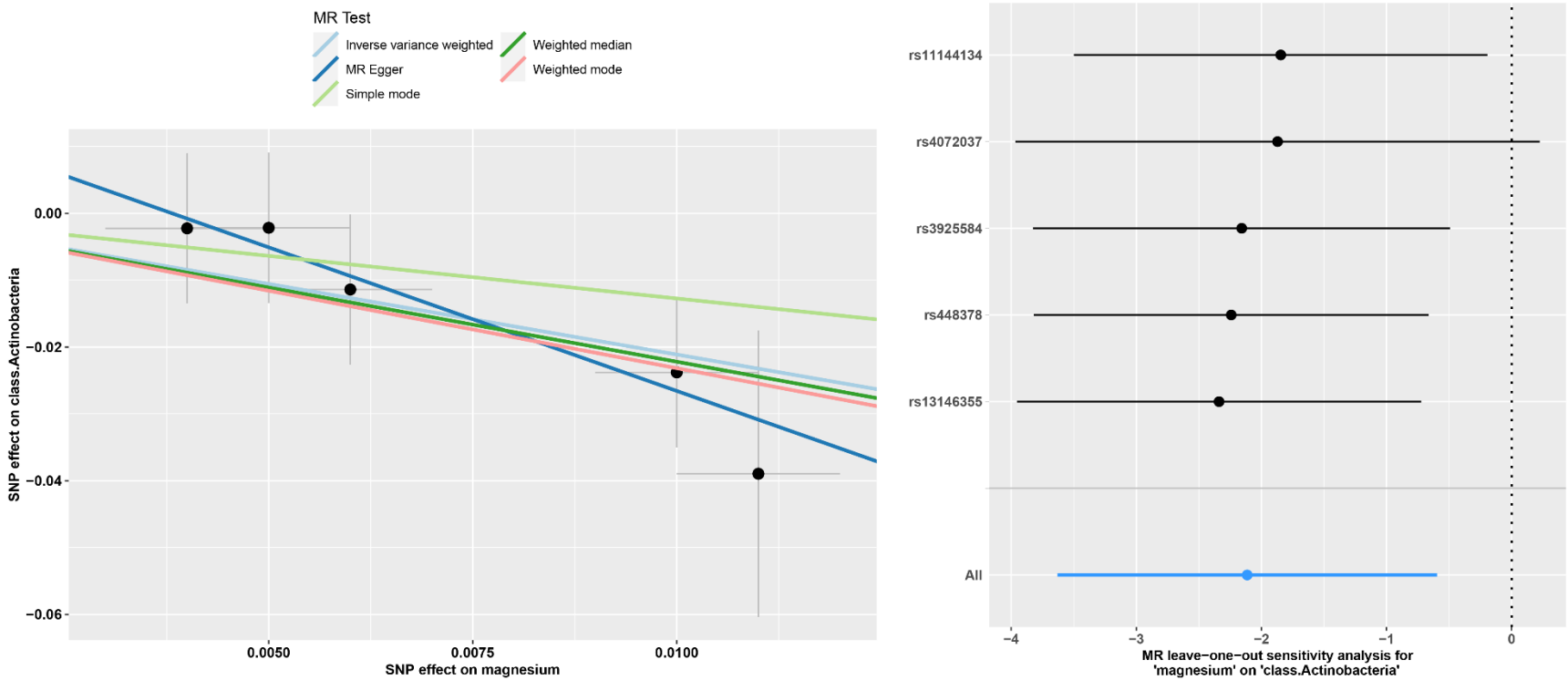


Figure S26. Genetic association of magnesium with order *Bifidobacteriales* (Scatter plot and Leave-one-out plot)

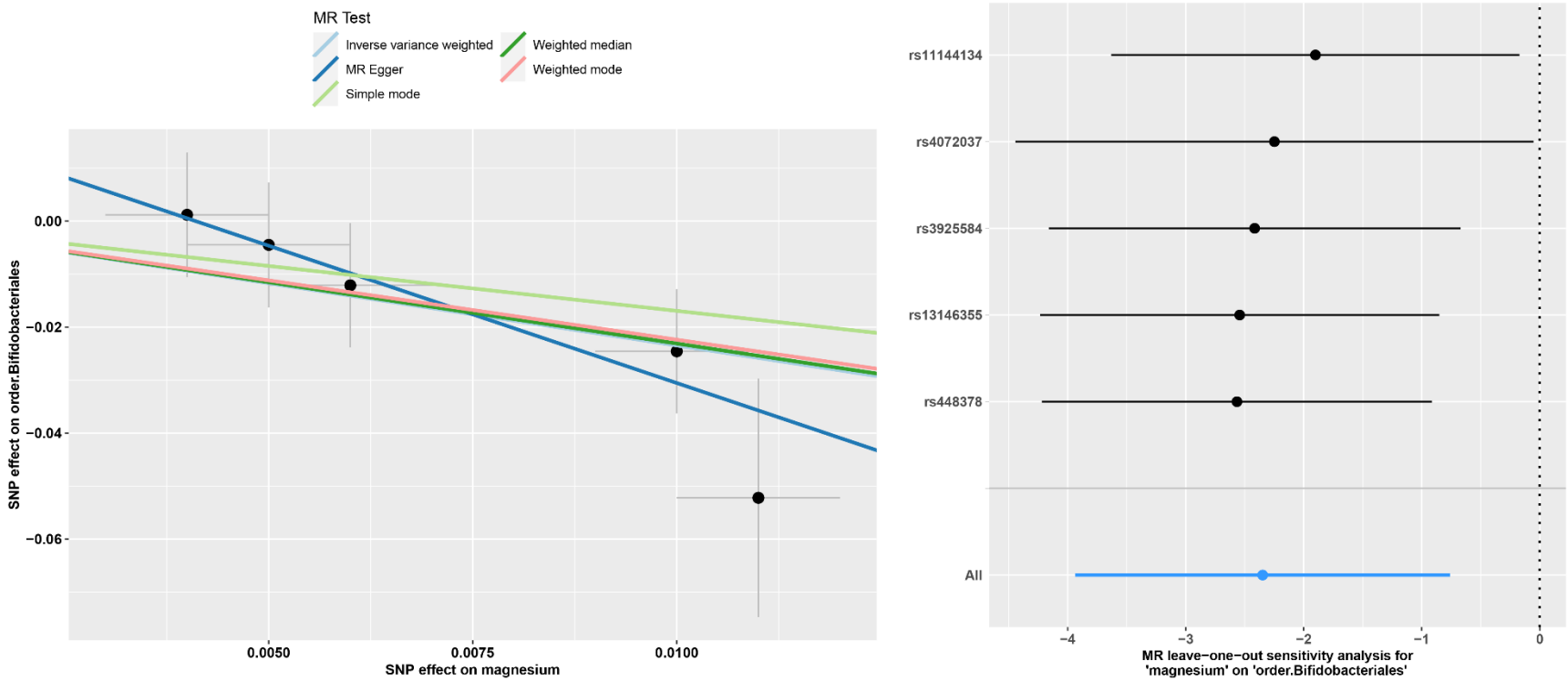


Figure S27. Genetic association of magnesium with family *Bifidobacteriaceae* (Scatter plot and Leave-one-out plot)

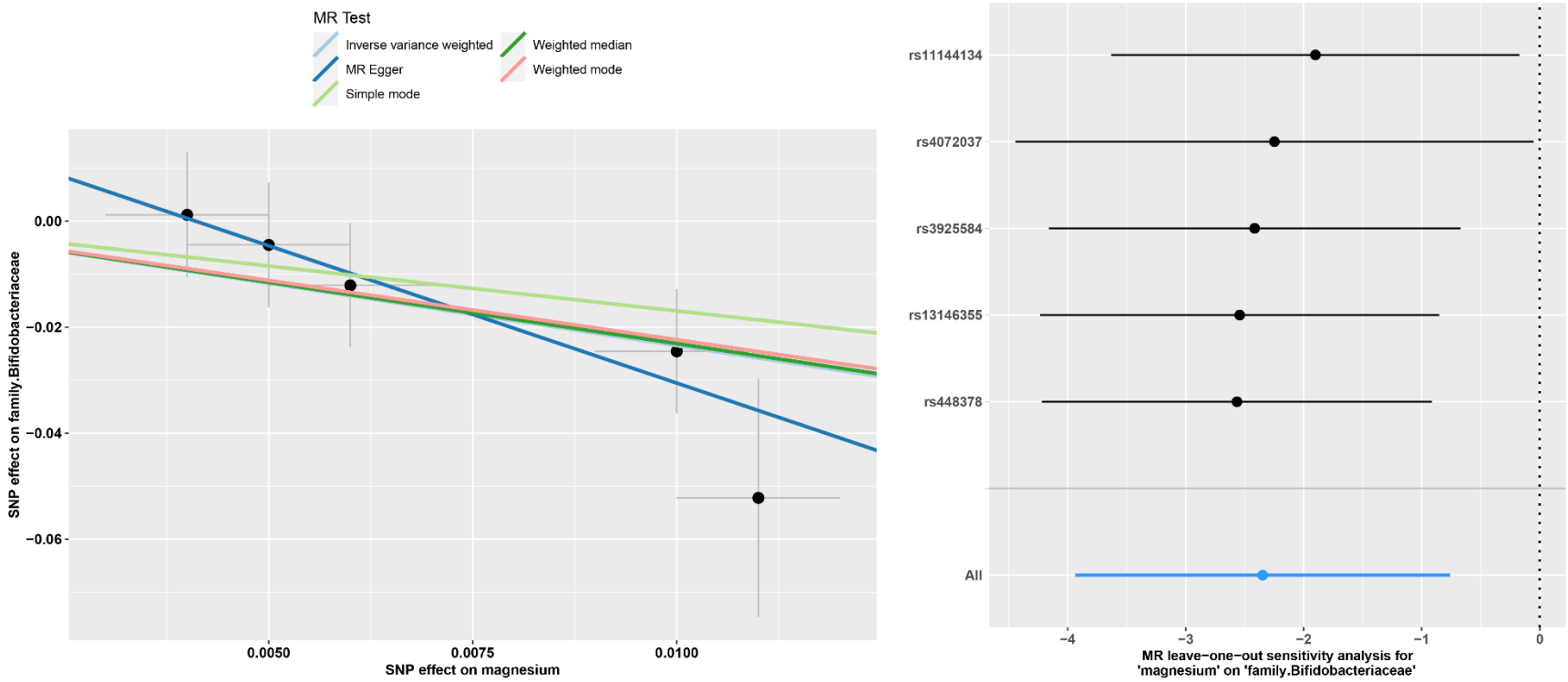


Figure S28. Genetic association of magnesium with genus *Bifidobacterium* (Scatter plot and Leave-one-out plot)

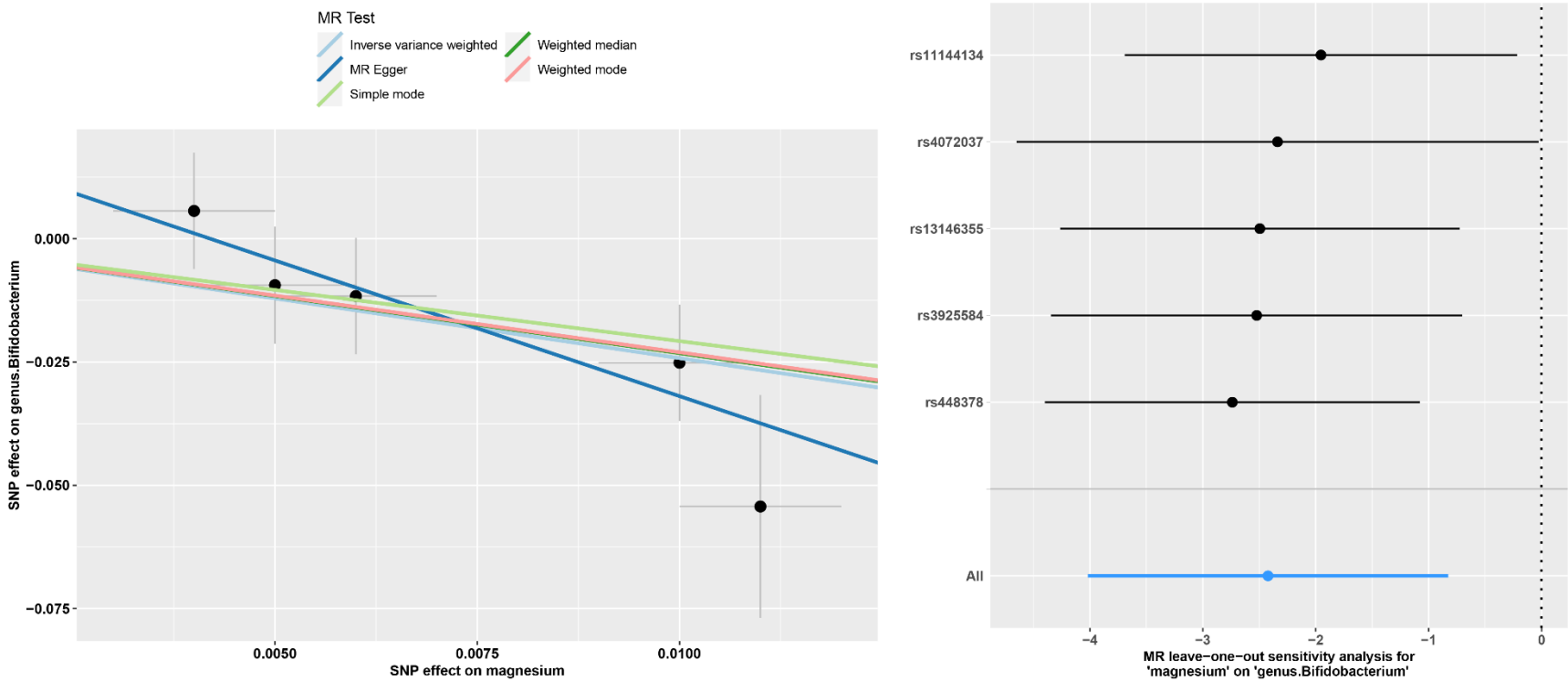


Figure S29. Genetic association of zinc with genus *Ruminococcustorquesgroup* (Scatter plot and Leave-one-out plot)

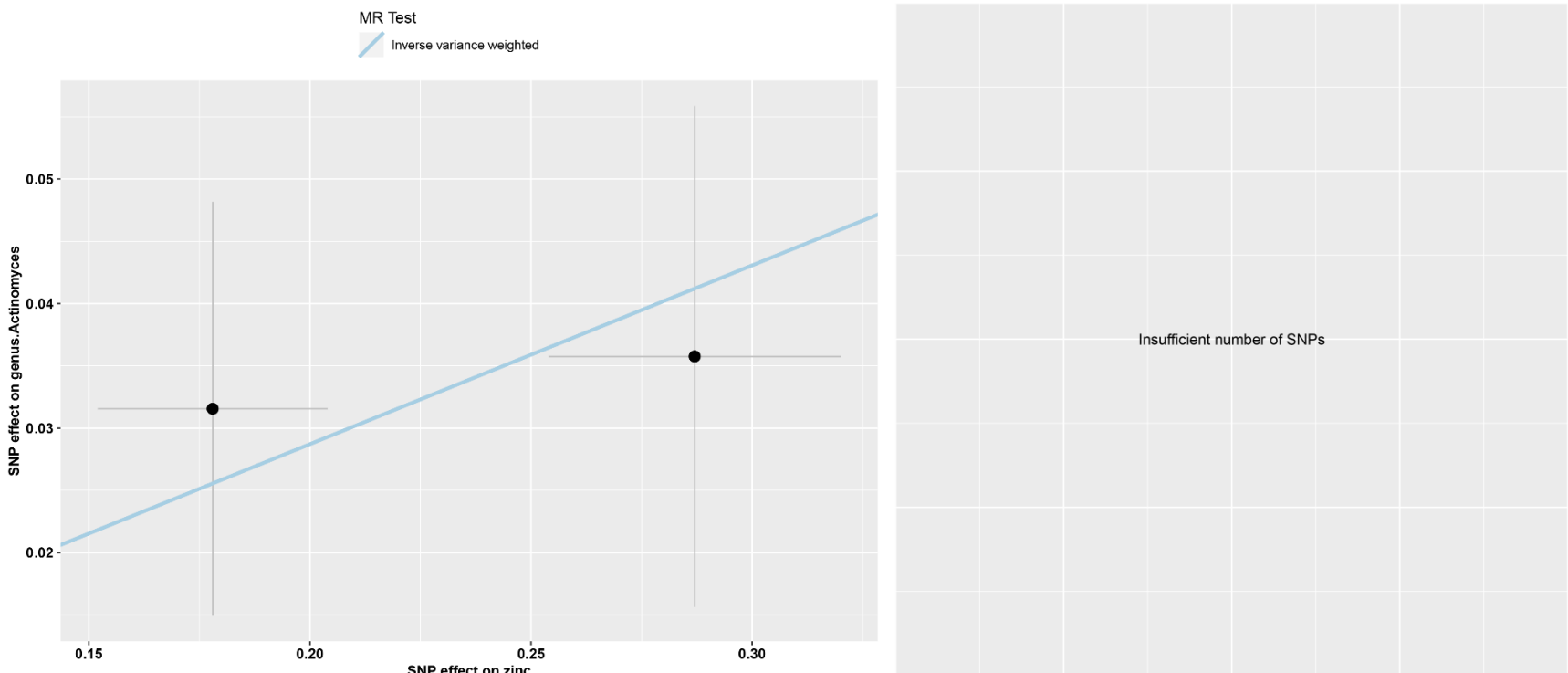


Figure S30. Genetic association of zinc with genus *Actinomyces* (Scatter plot and Leave-one-out plot)

