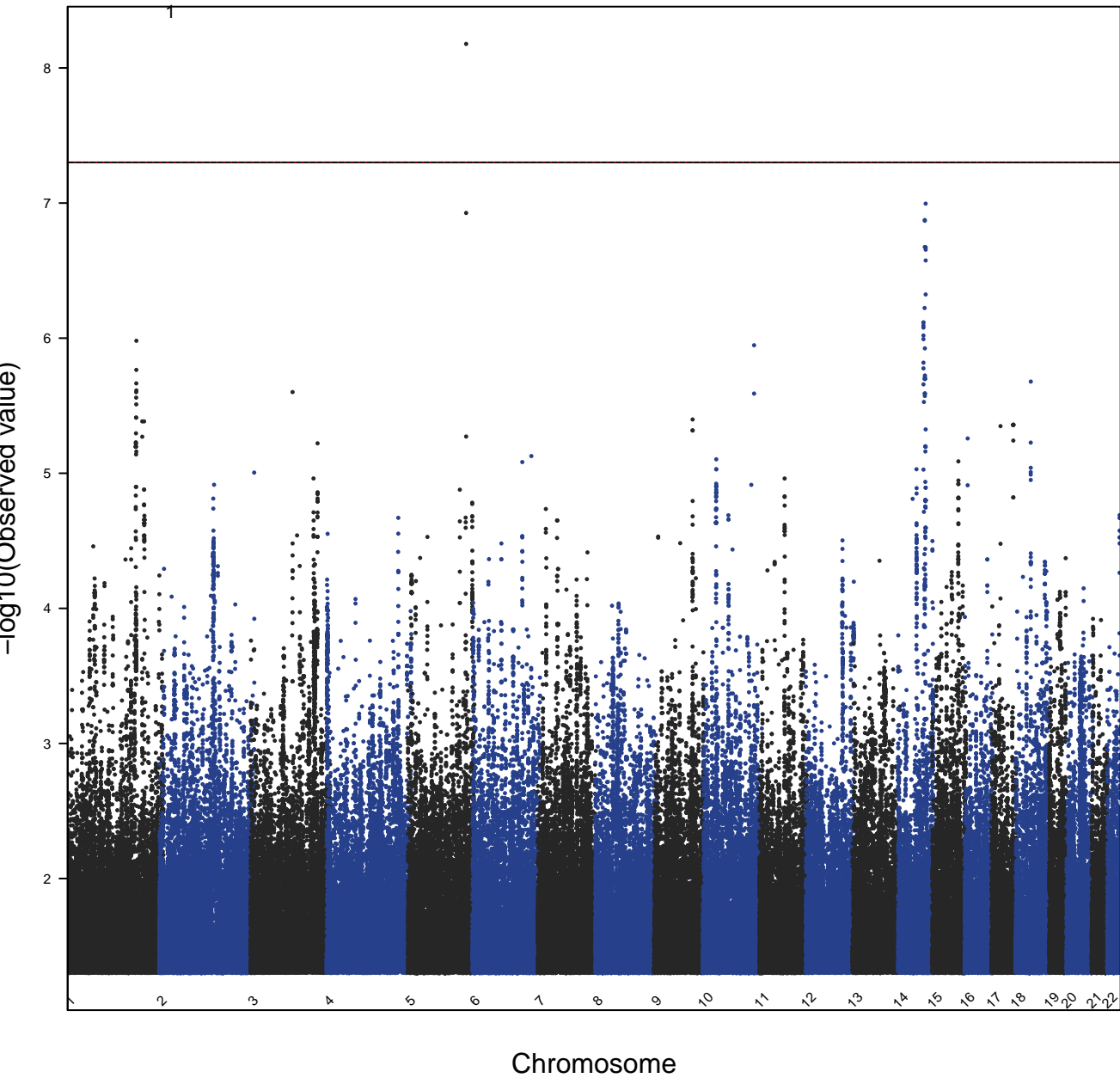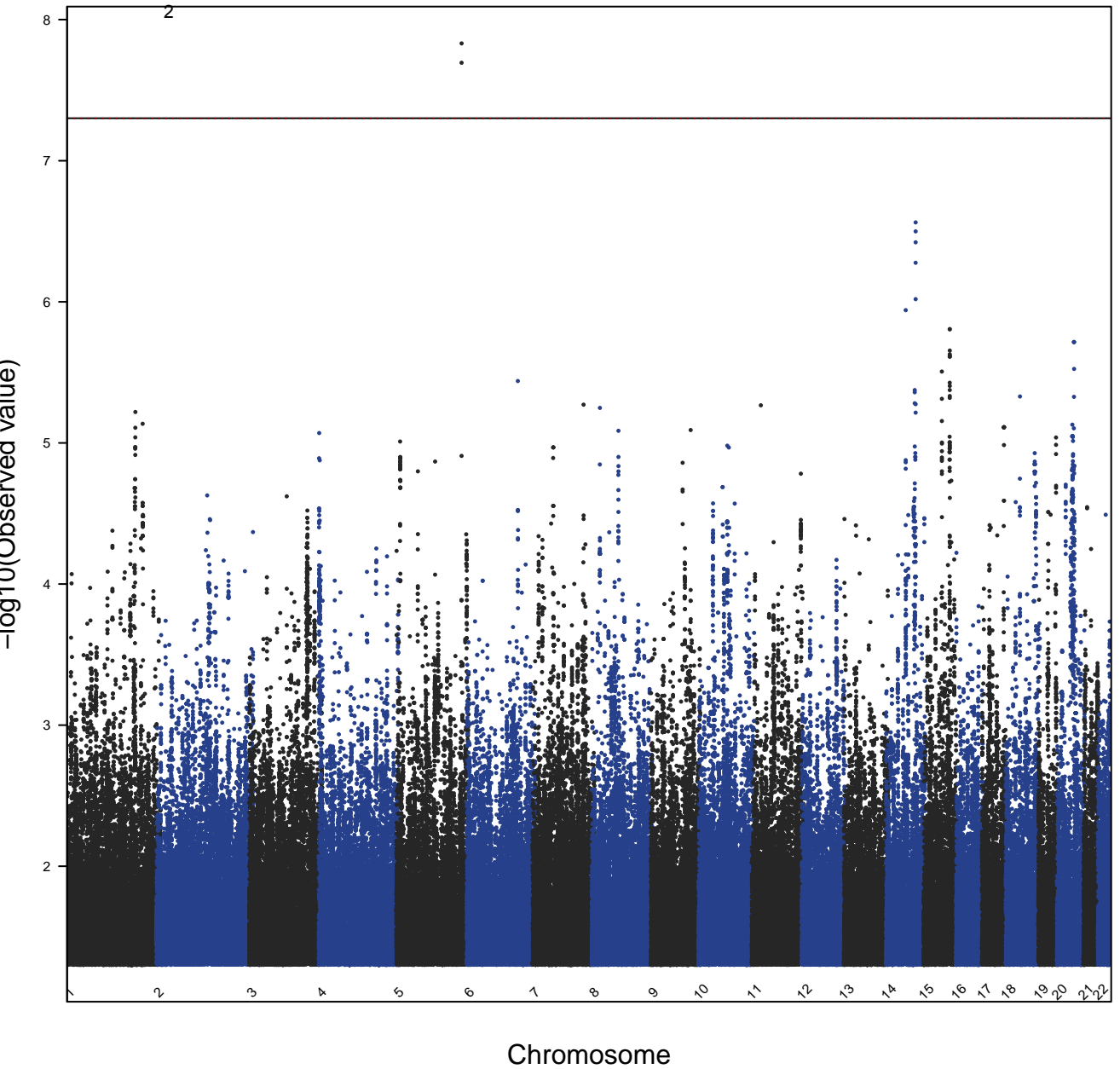**Supplmental Digital Content Figure 3:** Manhattan plots of the MLM GWAS Analyses. Univariate analysis (a) Marder positive factor score, (b) total PANSS score , (c) Marder negative factor score, (d) CGI-S and multivariate analysis of Marder positive factor score, Marder negative factor score, total PANSS score , and CGI-S (e)**.** The dotted line indicates genome wide significance threshold of $5\text{x}10^{-8}$. Only variants with $p < 0.05$ are shown.
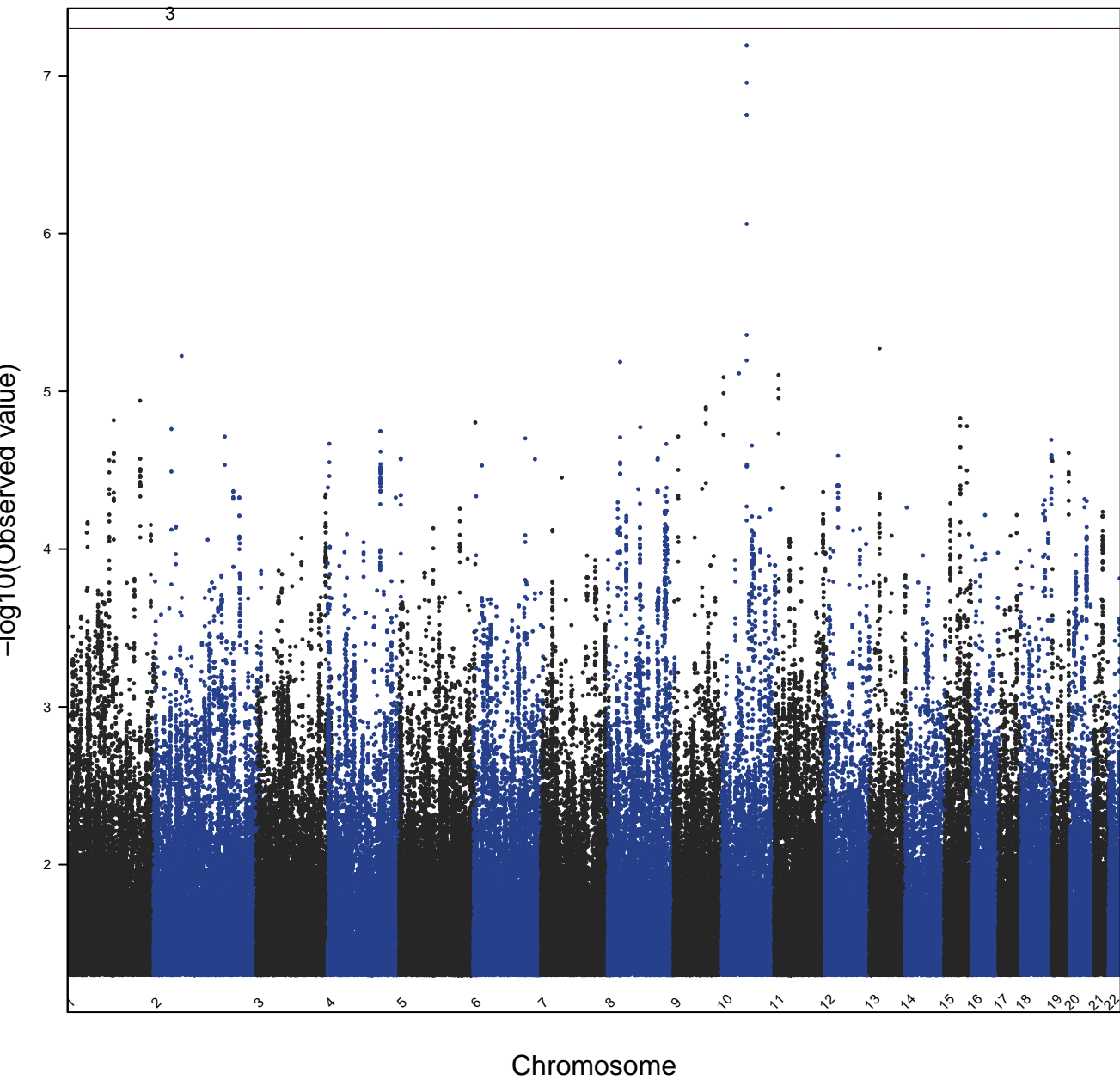
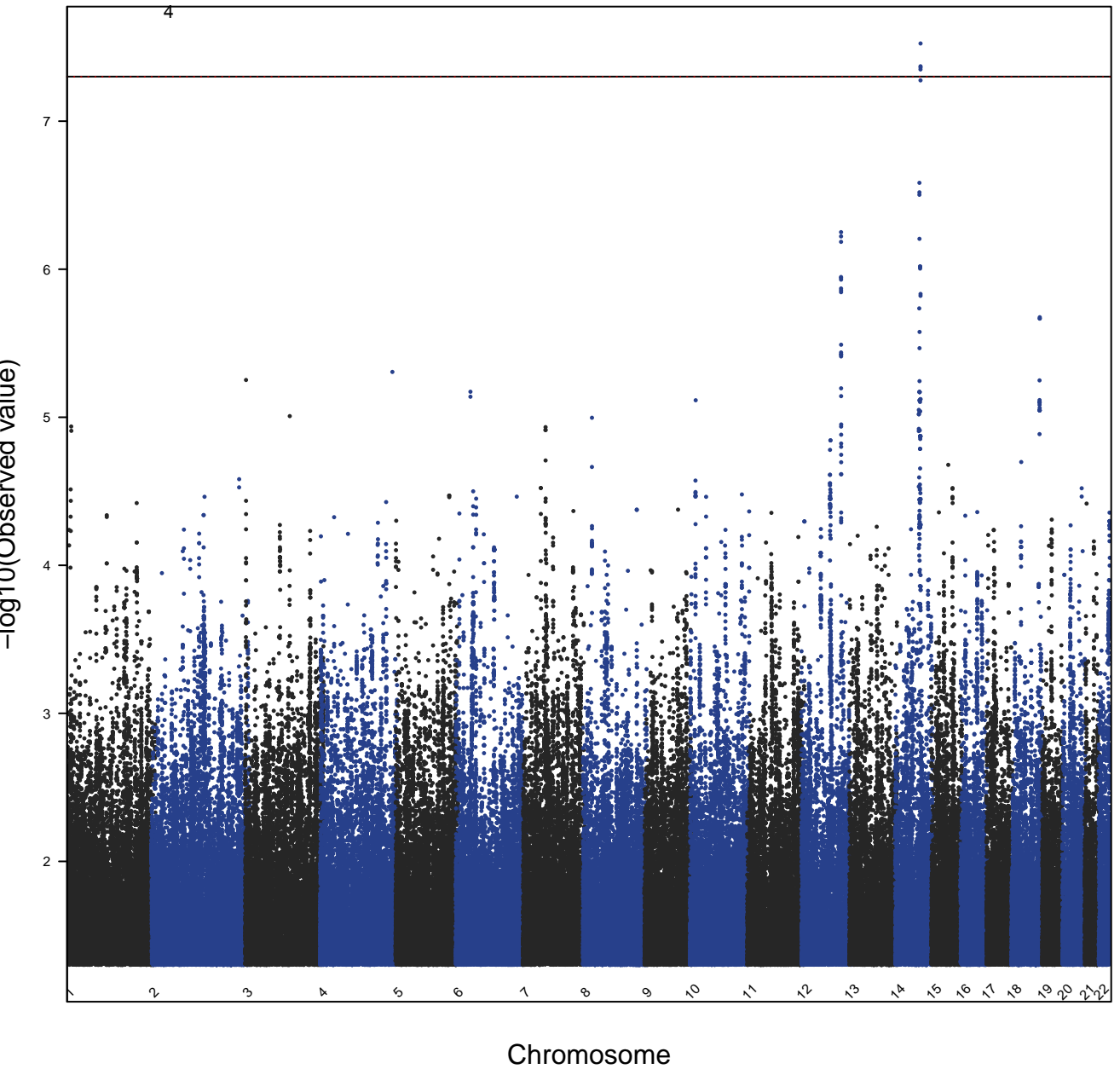**Positive Marder Factor Score Univariate GWAS Analysis (MLM)**

Total PANSS Score Univariate GWAS Analysis (MLM)

Negative Marder Factor Score Univariate GWAS Analysis (MLM)

CGIS Univariate GWAS Analysis (MLM)

−log10(Observed value) vs Chromosome

Multivariate GWAS Analysis (MLM)