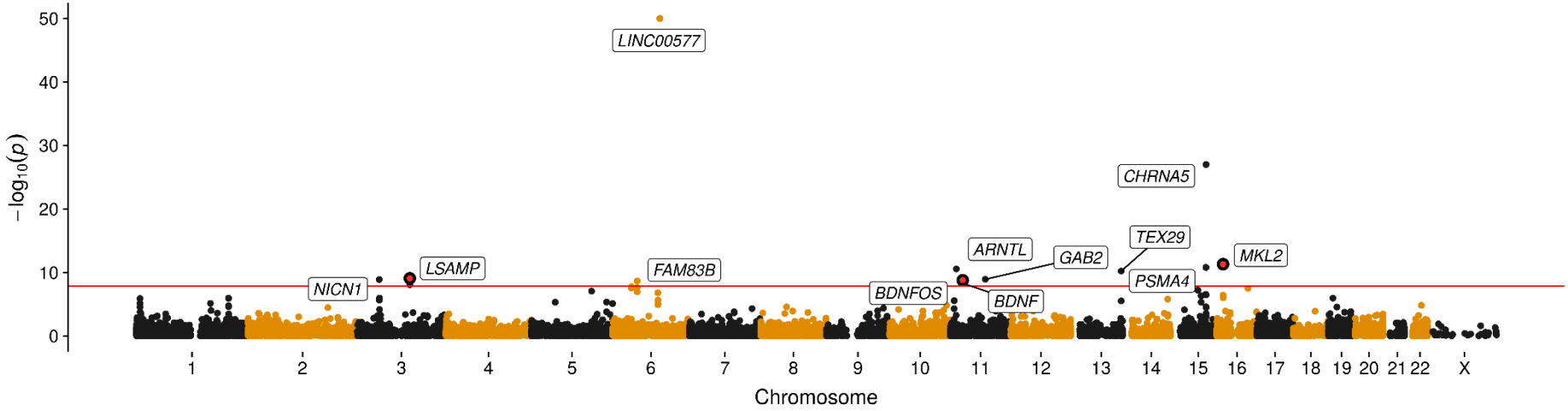
Figure legend

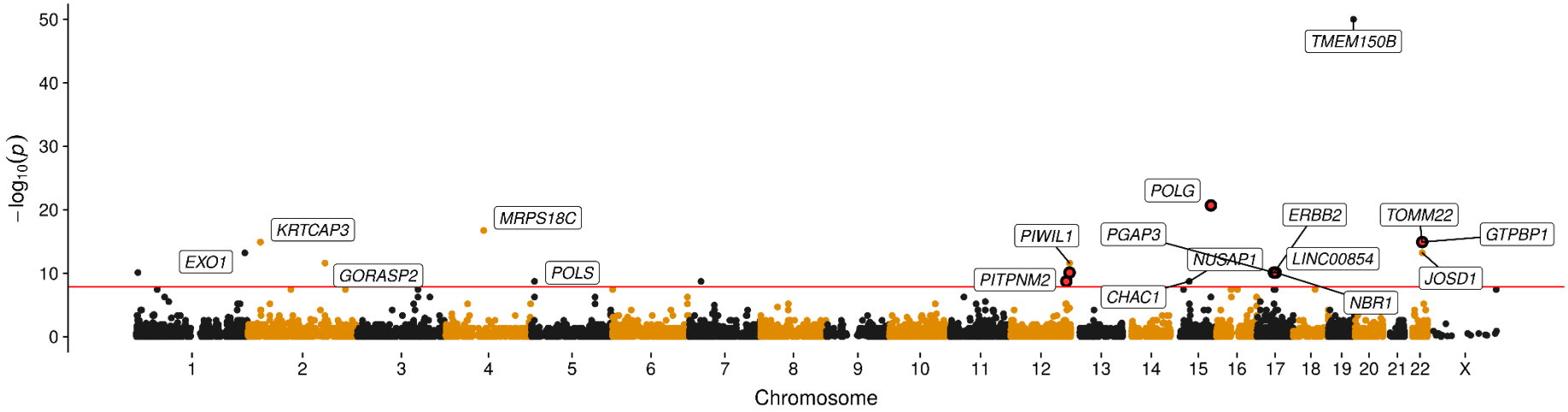
These Manhattan plots illustrate results from evaluating the causal influence of DNA methylation on complex traits using genetic variants as instruments. All points correspond to p-values derived from the Mendelian randomization analysis as described in the manuscript. Points which are highlighted mean that these effects provided evidence that the same underlying genetic variation was observed to influence both methylation and trait at this locus using the joint likelihood mapping method. Plots are coloured depending on the subcategory that the analysed traits has been allocated to, as there is more likely to be shared loci across traits within the same category. P-values have been capped at 1×10^{-50} to ensure plots remain legible.

Aging

Age at menarche

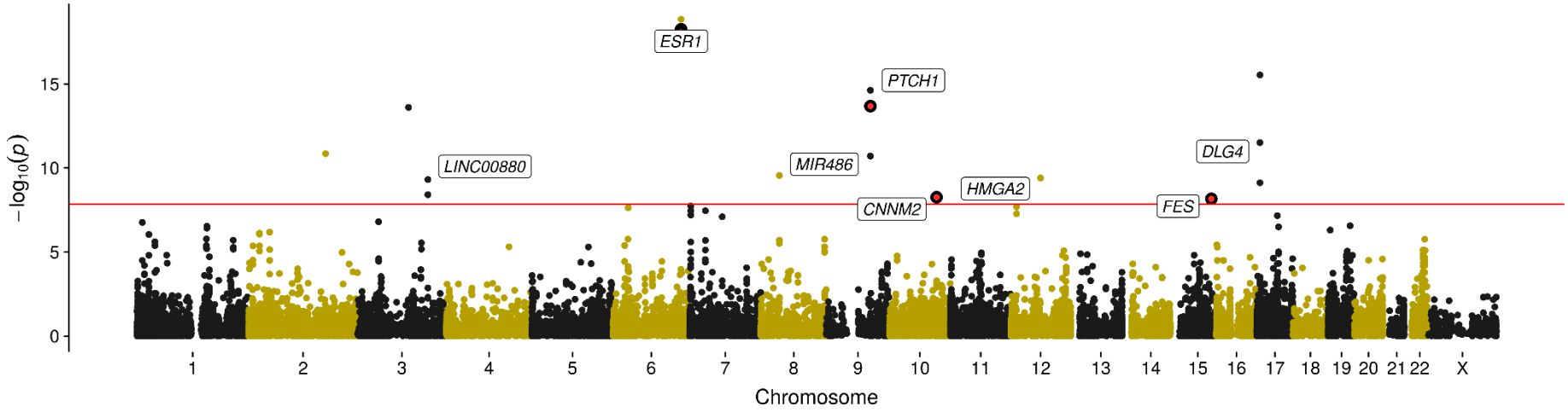


Age at menopause

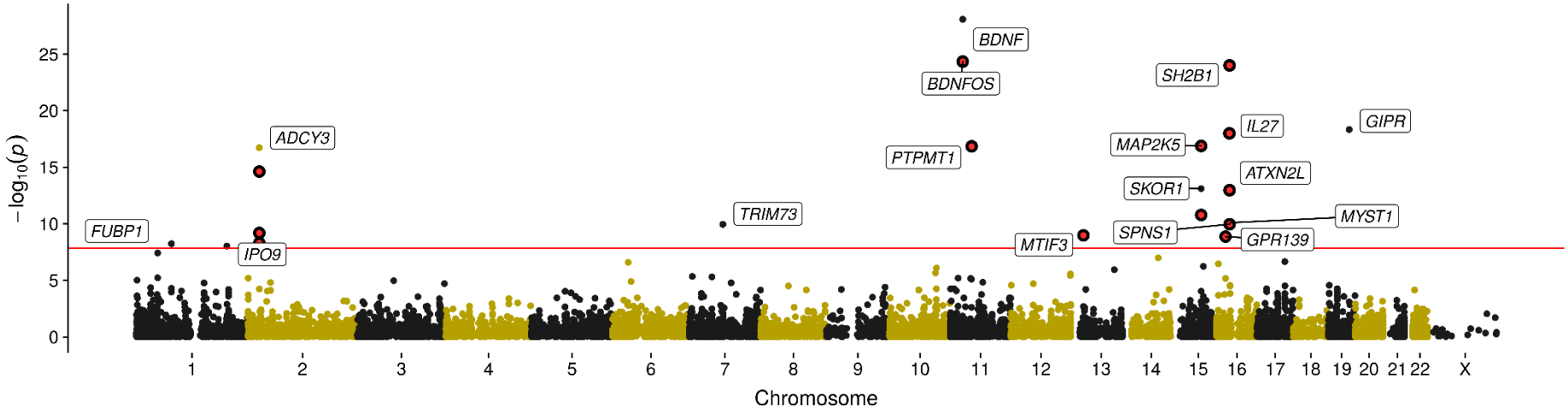


Anthropometric

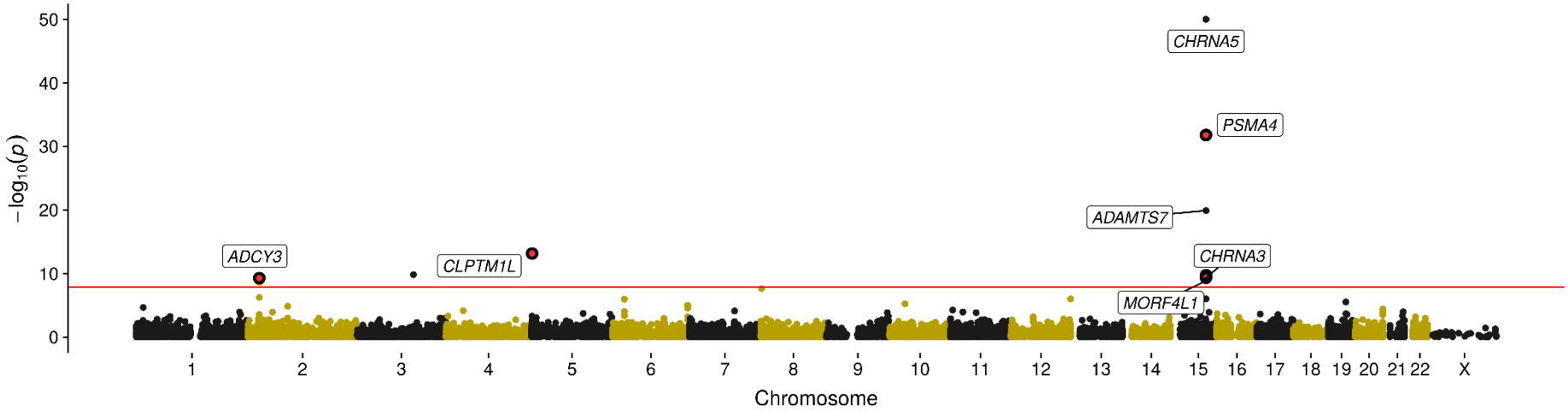
Birth weight



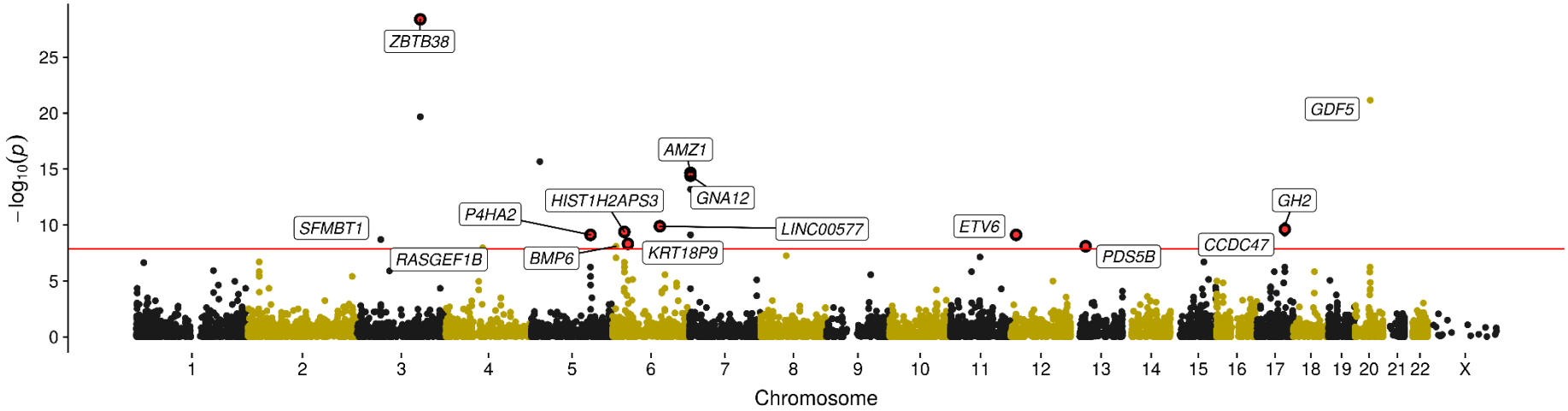
Body mass Index



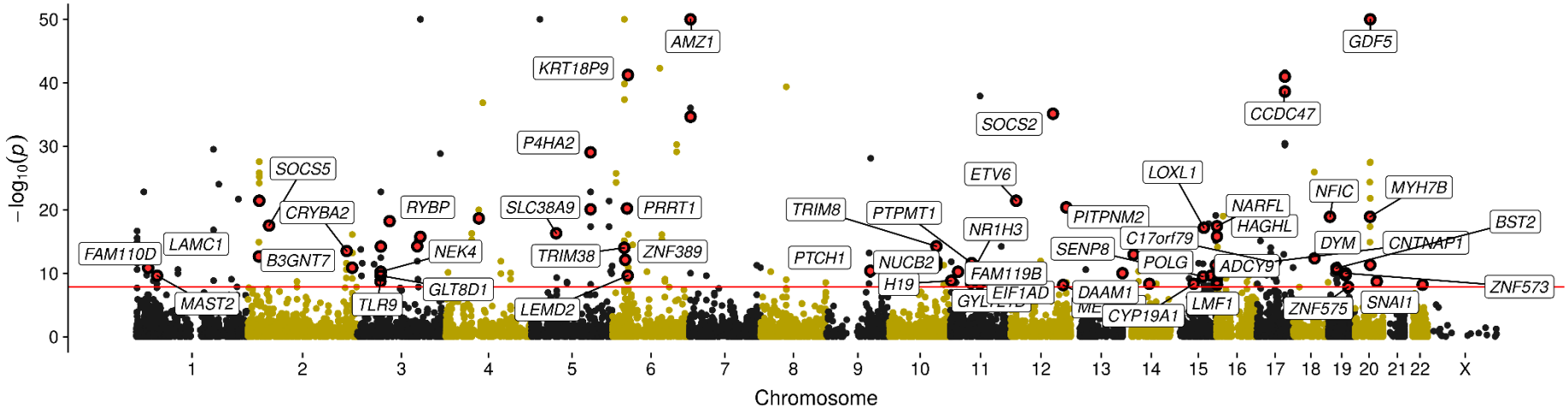
Childhood obesity



Extreme height



Height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P4HA2
SOCS5
CRYBA2
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RYBP
NEK4
GLT8D1
TLR9
SLC38A9
PRRT1
TRIM38
ZNF389
LEMD2
FAM110D
LAMC1
MAST2
TRIM8
PTPMT1
PTCH1
NUCB2
H19
NR1H3
FAM119B
EIF1AD
SOCS2
ETV6
PITPNM2
SENP8
DAAM1
CYP19A1
LOXL1
C17orf79
POLG
NARFL
HAGHL
ADCY9
LMF1
CCDC47
NFIC
DYM
ZNF575
GDF5
MYH7B
CNTNAP1
SNAI1
BST2
ZNF573
50
40
30
20
10
0
$-\log_{10}(p)$
1
2
3
4
5
6
7
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9
10
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14
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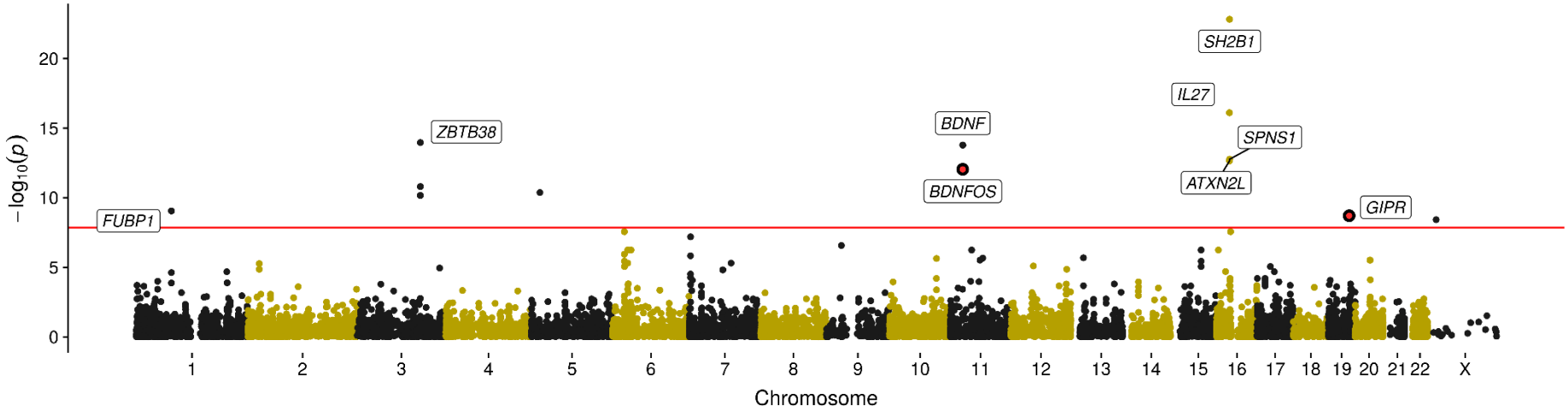
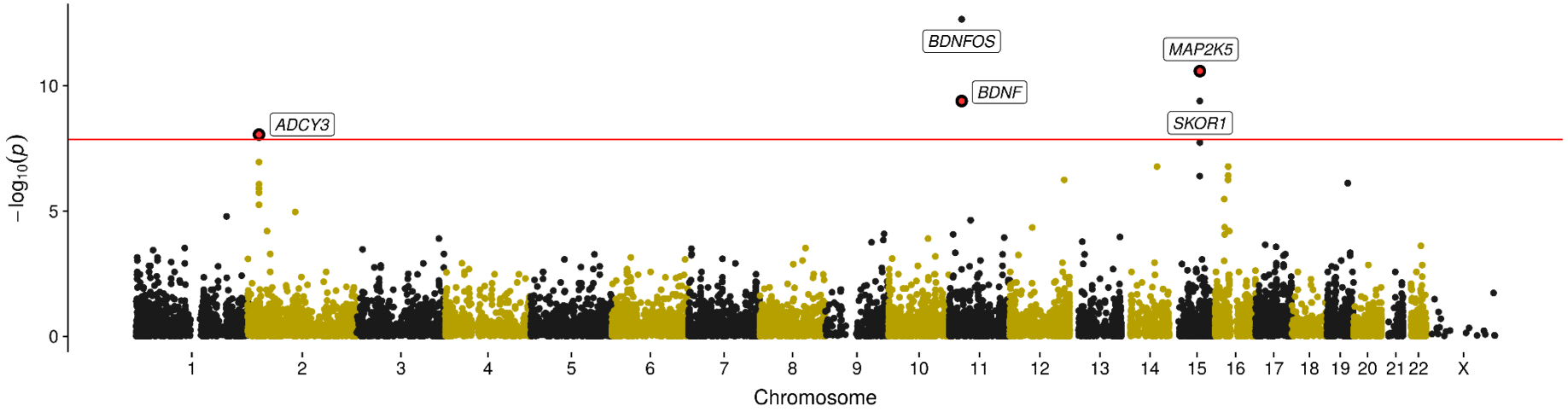
19
20
21
22
X
Chromosome

Hip circumference



Obesity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MAP2K5
BDNF
SKOR1
ADCY3
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$-\log_{10}(p)$
1
2
3
4
5
6
7
8
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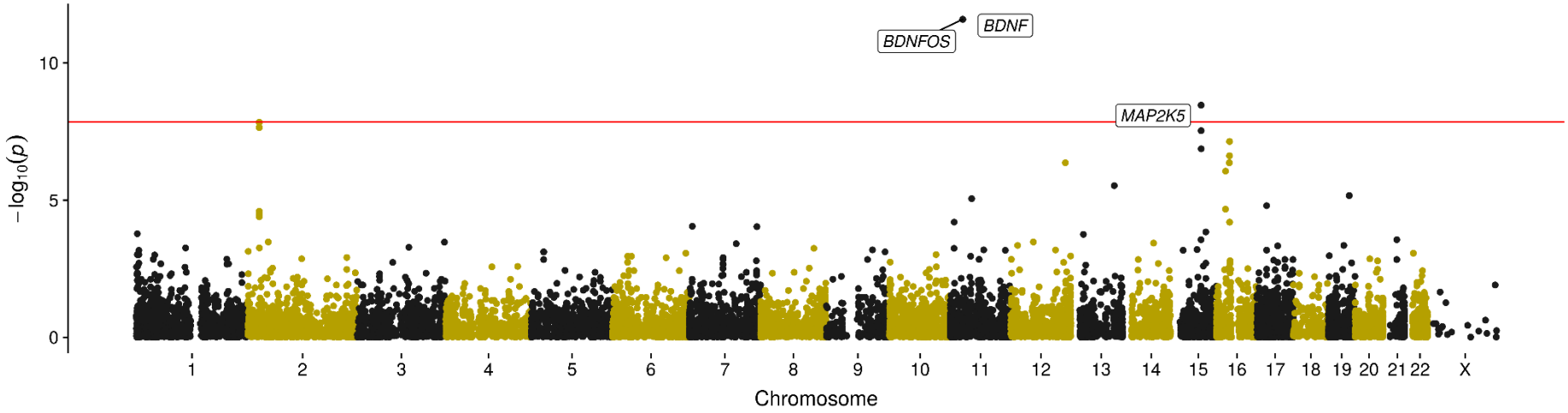
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

Overweight


BDNFOS
BDNF
MAP2K5
10
5
0
$-\log_{10}(p)$
1
2
3
4
5
6
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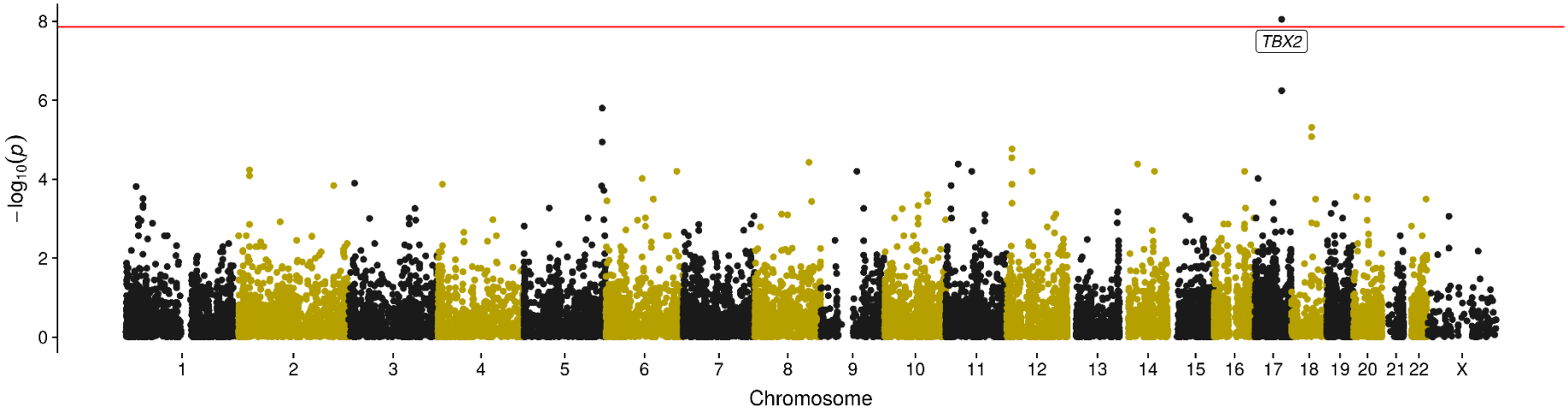
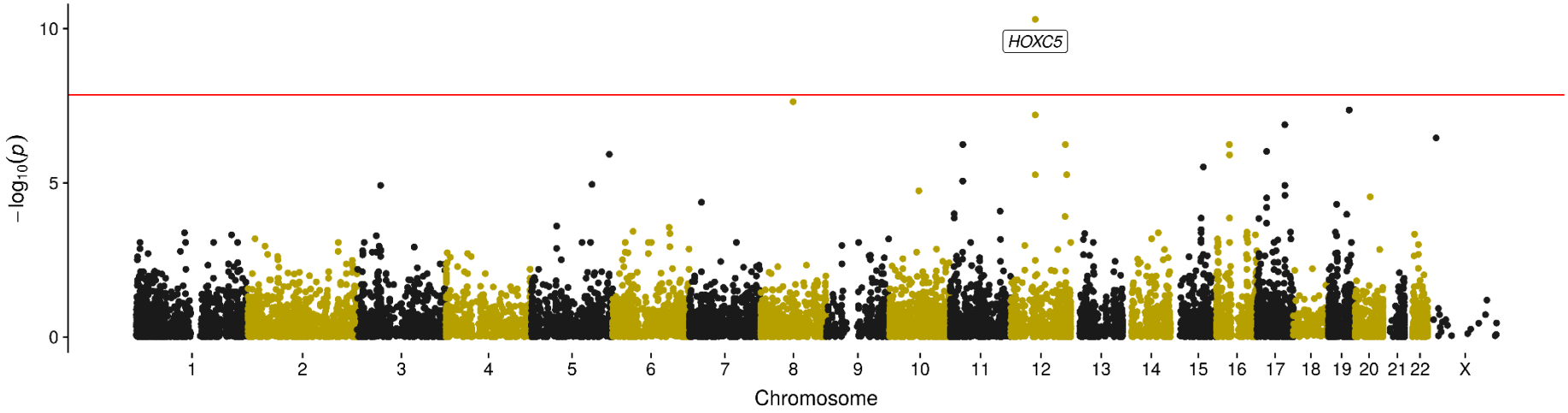
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

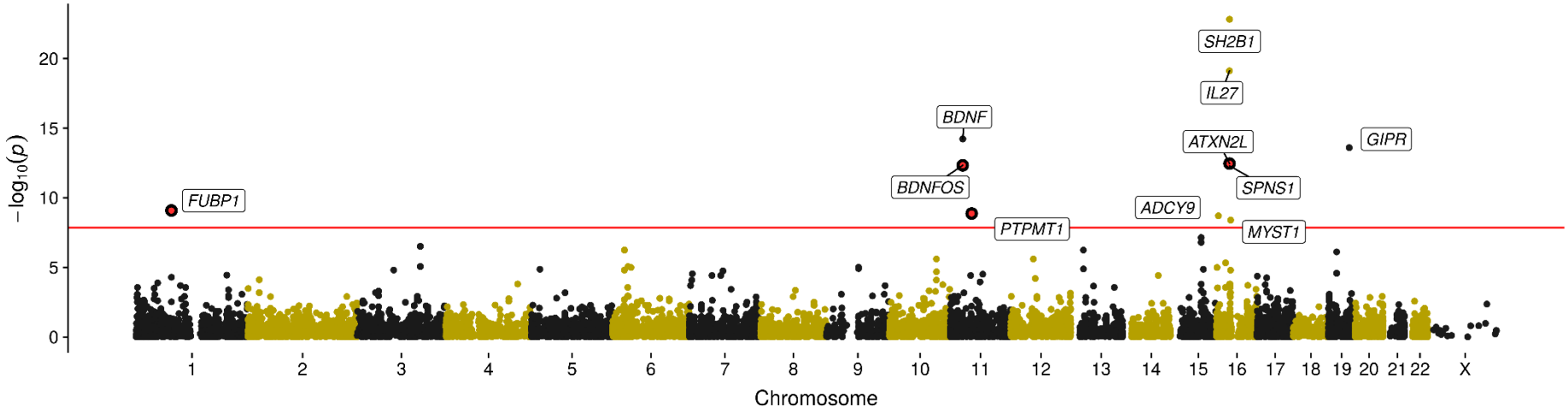
Sitting height ratio



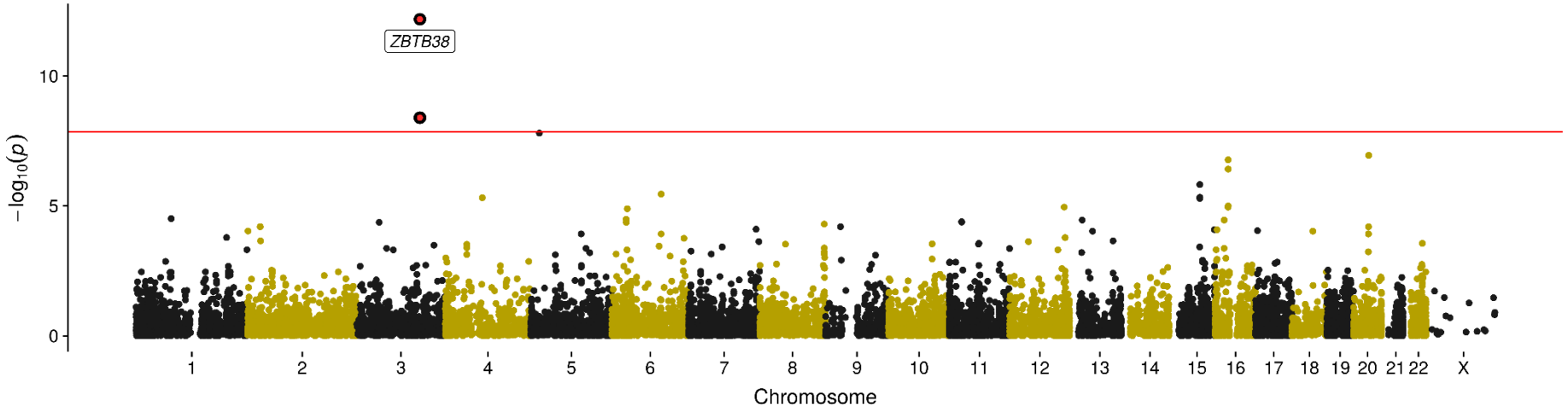
Waist-to-hip ratio



Waist circumference



Weight


ZBTB38
10
5
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$-\log_{10}(p)$
1
2
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4
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7
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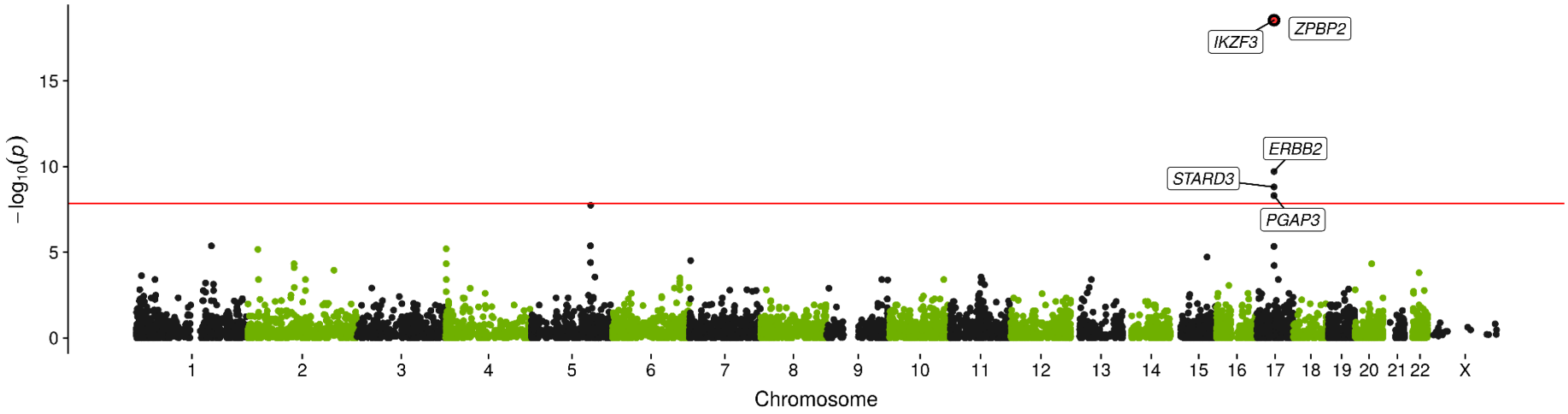
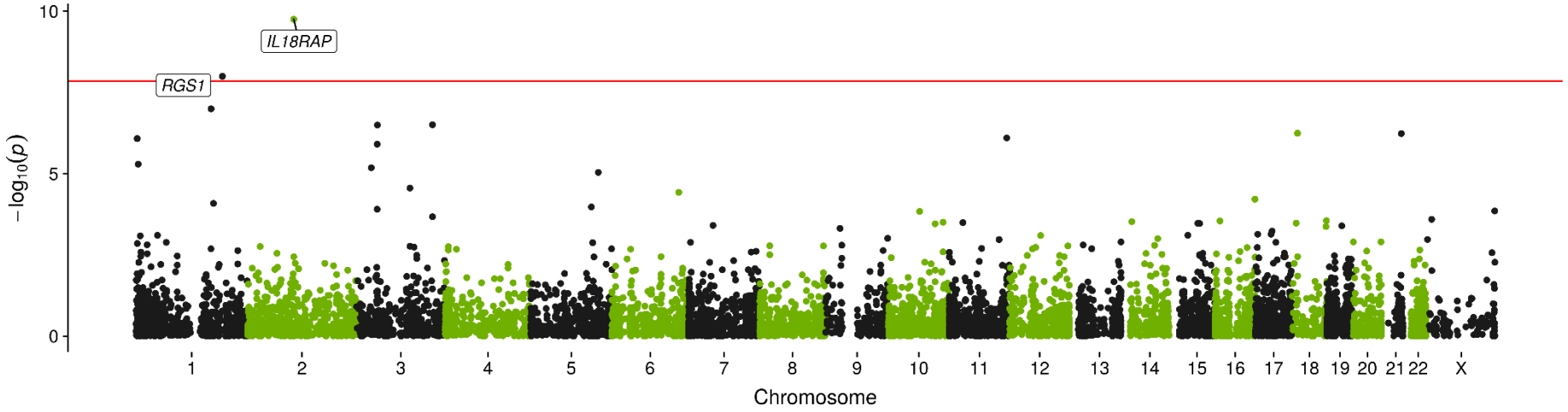
9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

Autoimmune / inflammatory

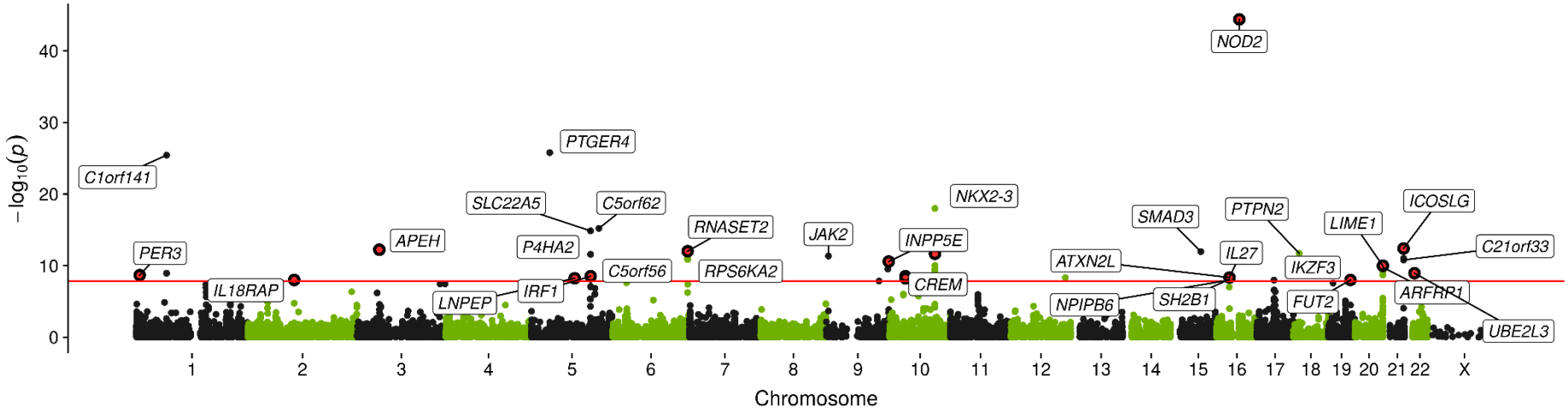
Asthma



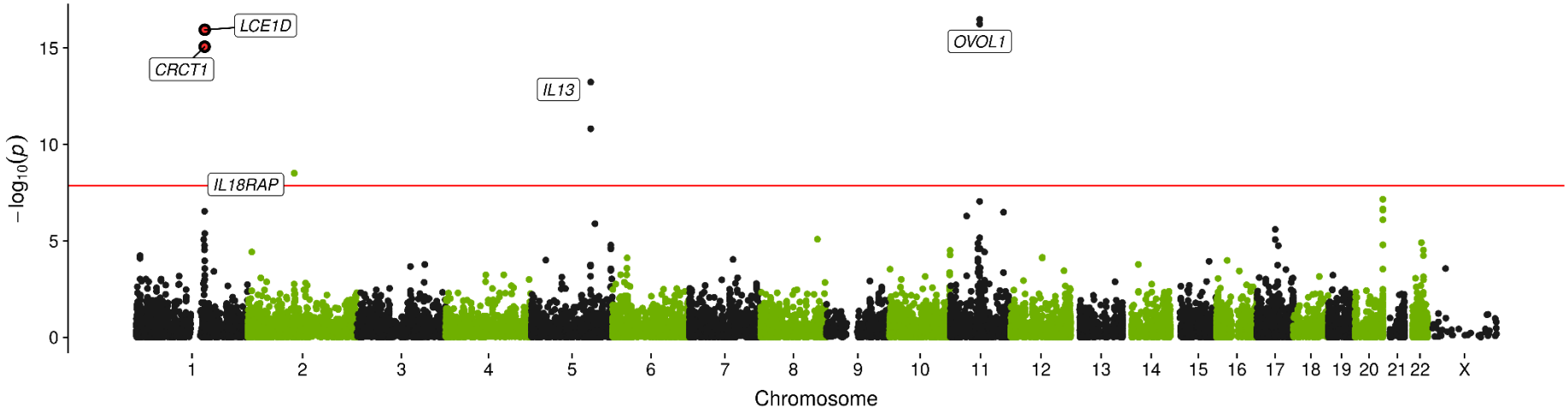
Celiac disease



Crohn's disease



Eczema


LCE1D
CRCT1
IL13
OVOL1
IL18RAP
15
10
5
0
$-\log_{10}(p)$
1
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7
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11
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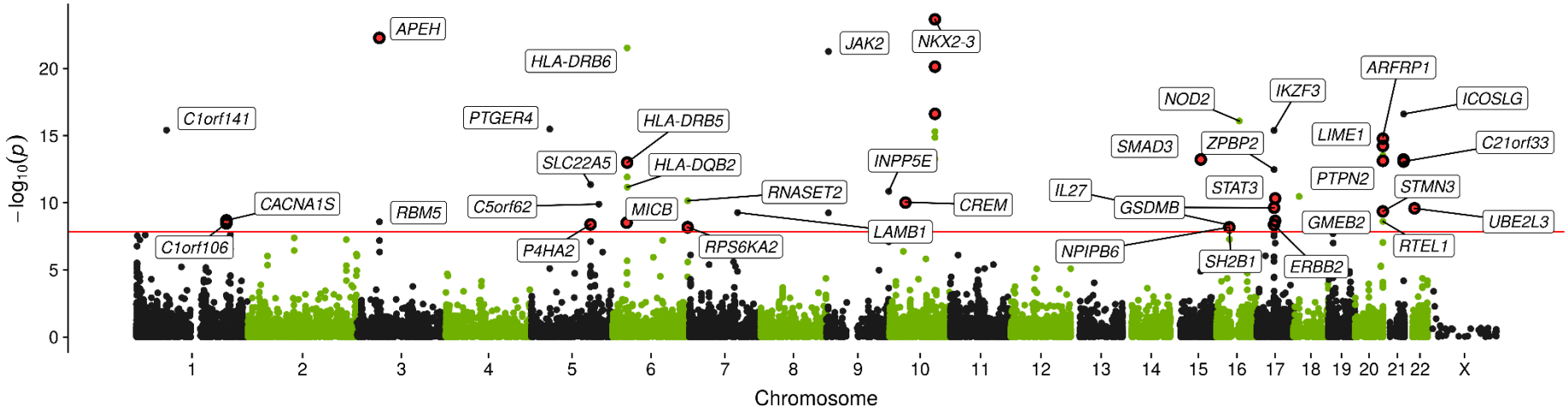
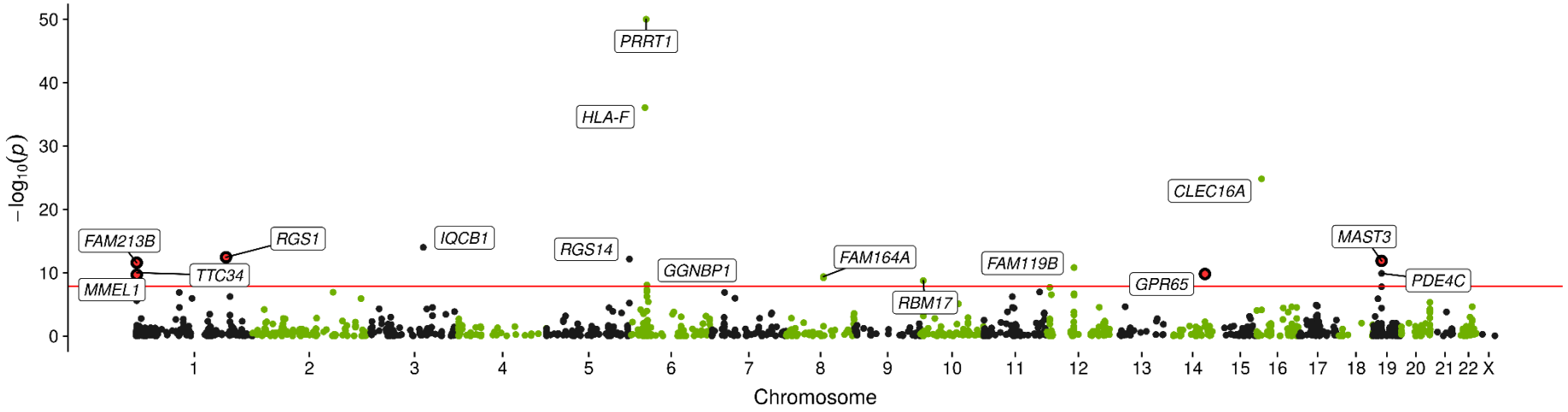
17
18
19
20
21
22
X
Chromosome

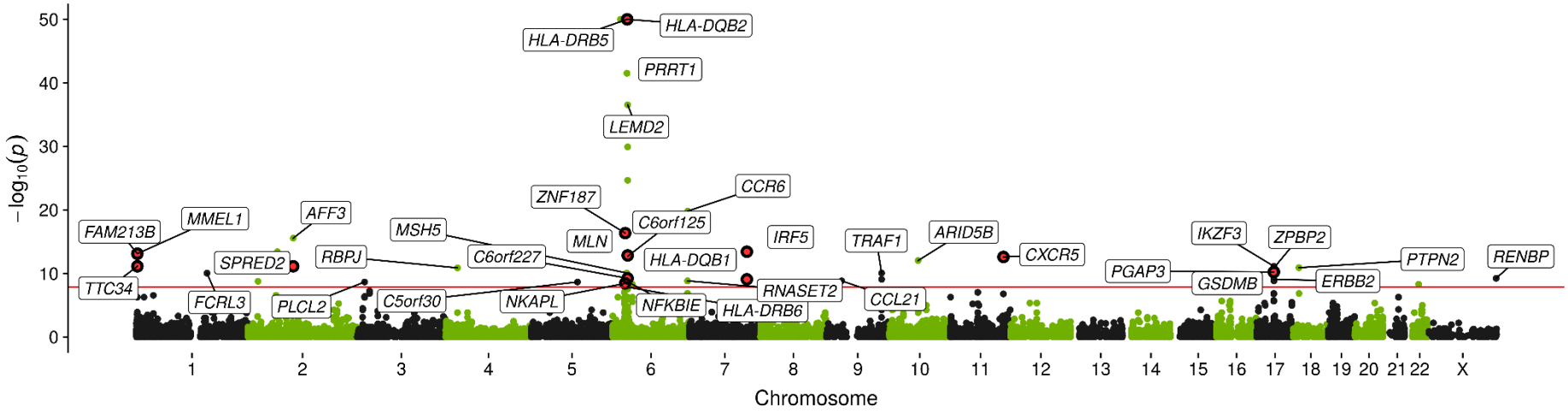
Inflammatory bowel disease



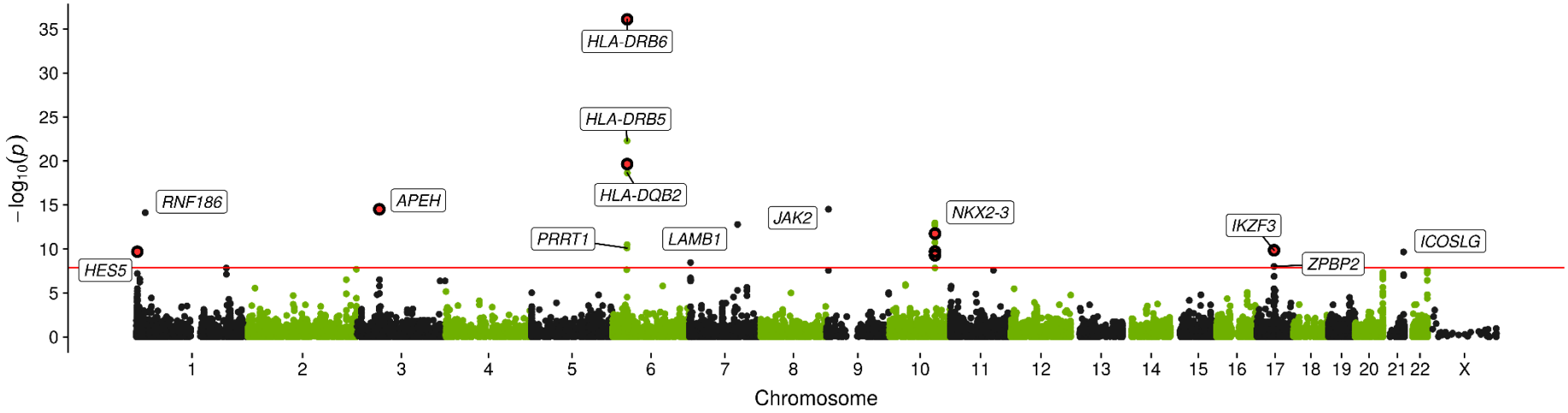
Multiple sclerosis



Rheumatoid arthritis

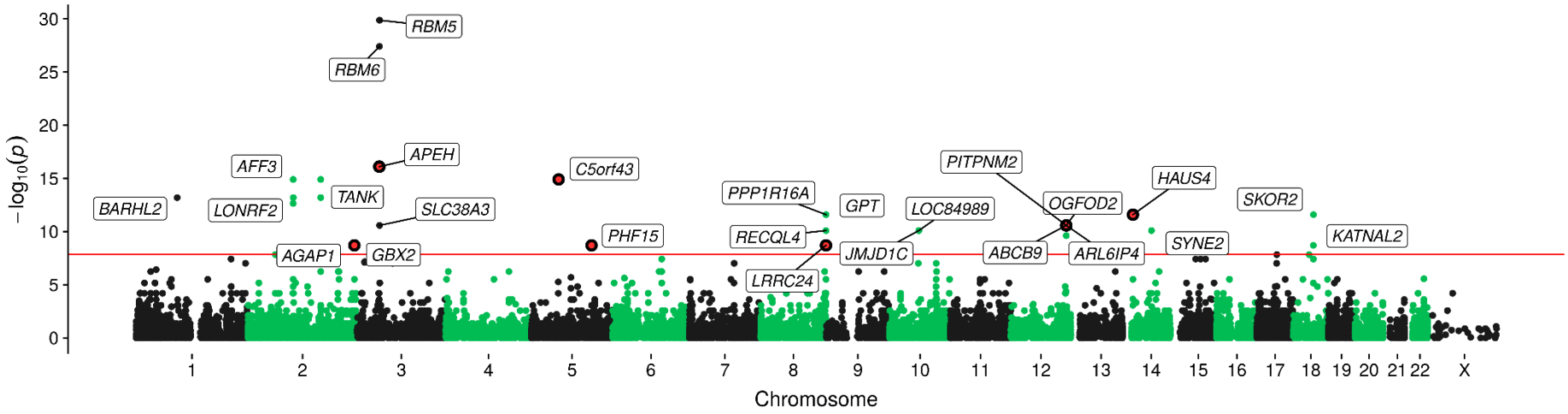


Ulcerative colitis



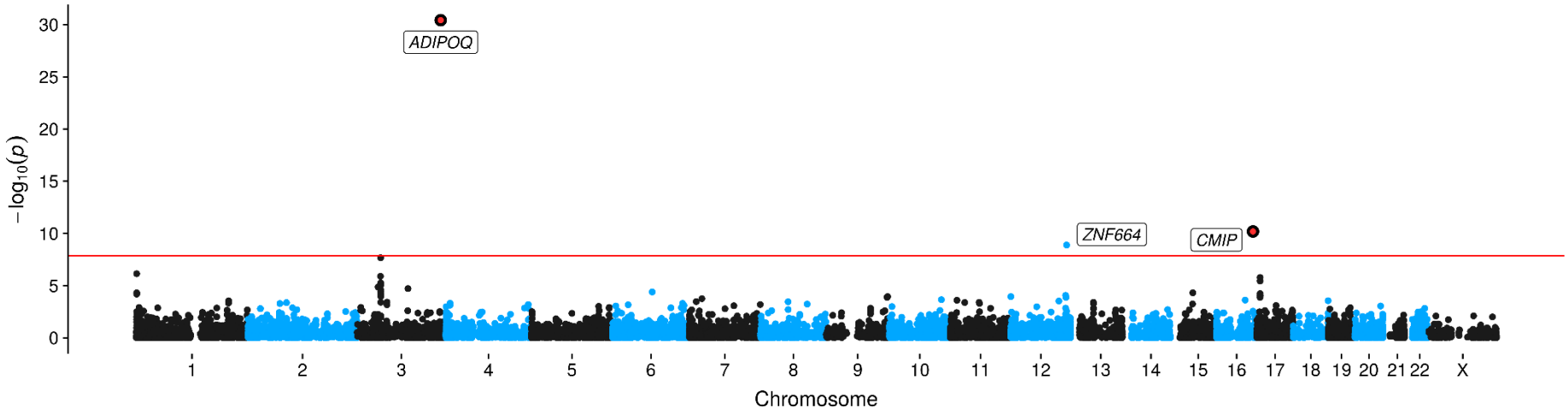
Education

Years of Schooling

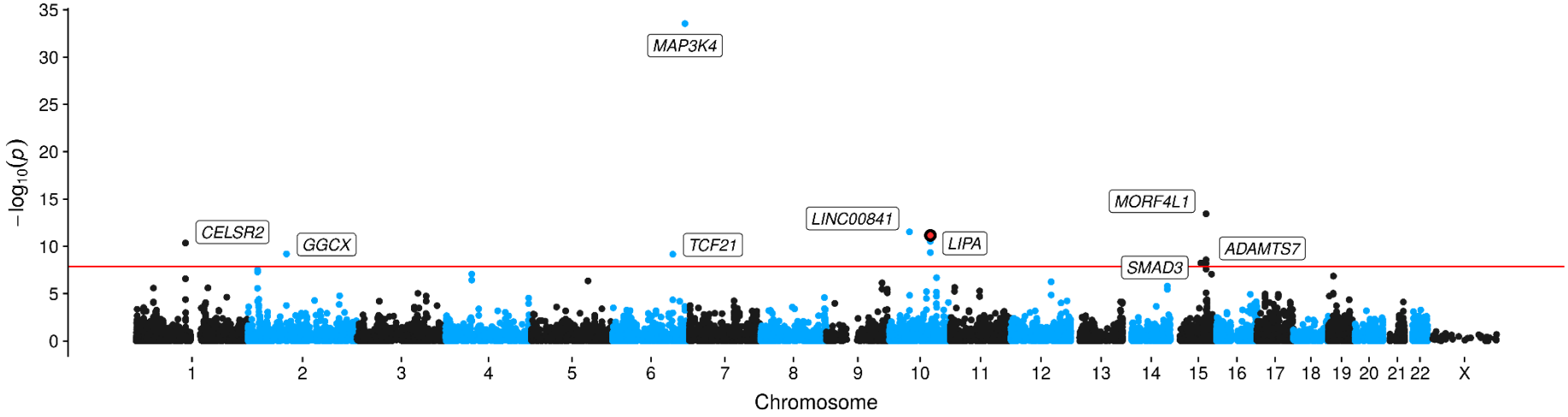


Cardiovascular

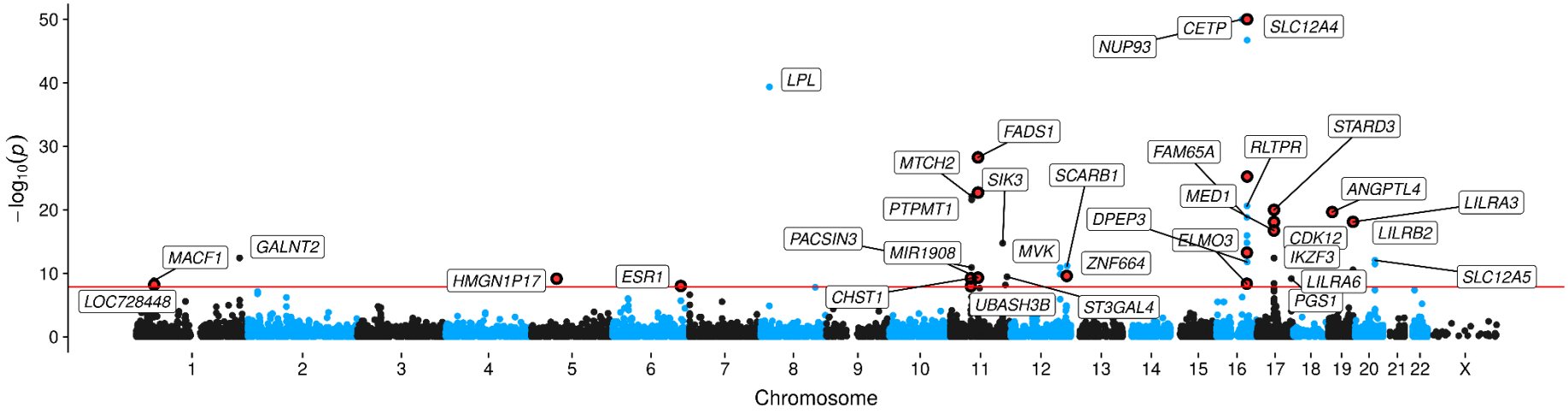
Adiponectin



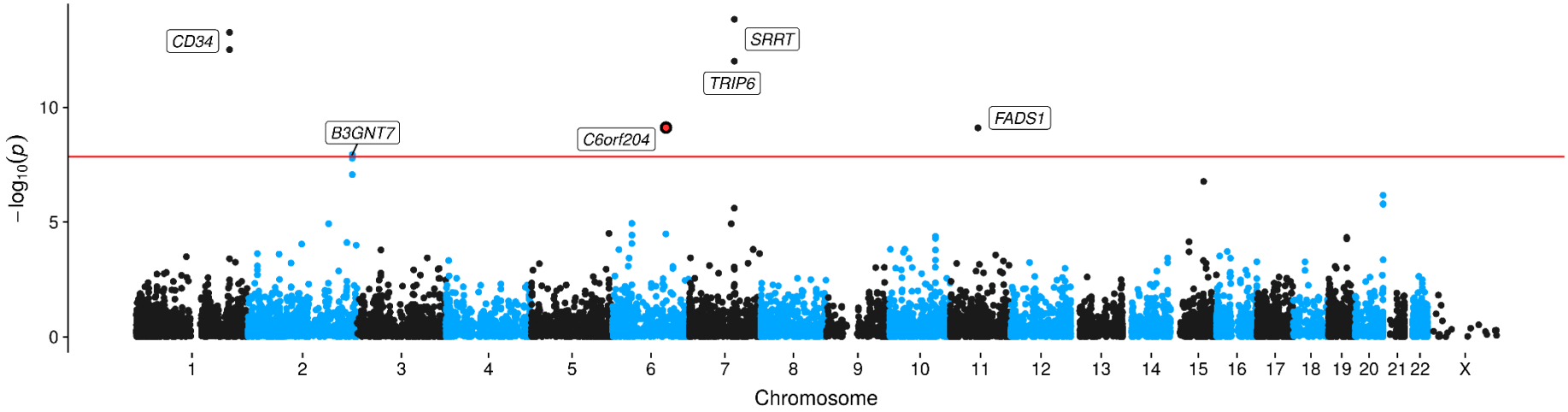
Coronary heart disease



HDL Cholesterol



Heart rate


CD34
SRRT
TRIP6
B3GNT7
C6orf204
FADS1
10
5
0
$-\log_{10}(p)$
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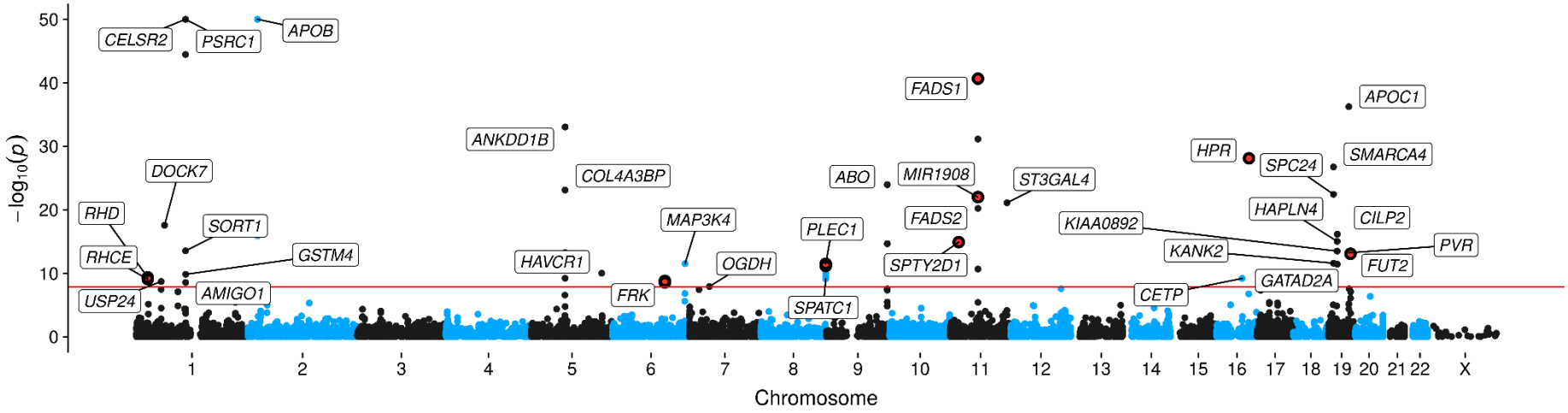
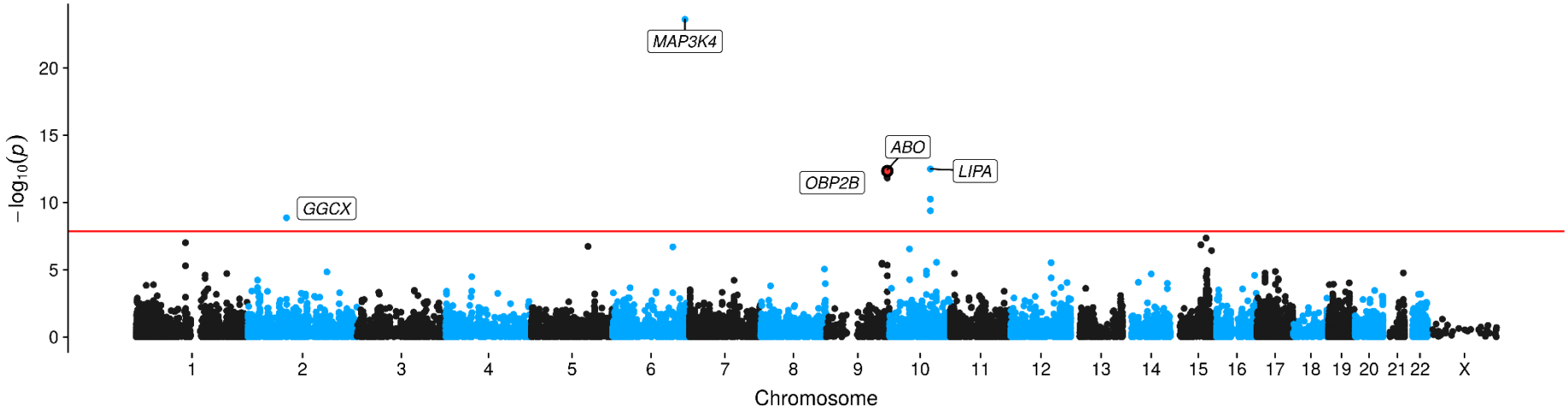
18
19
20
21
22
X
Chromosome

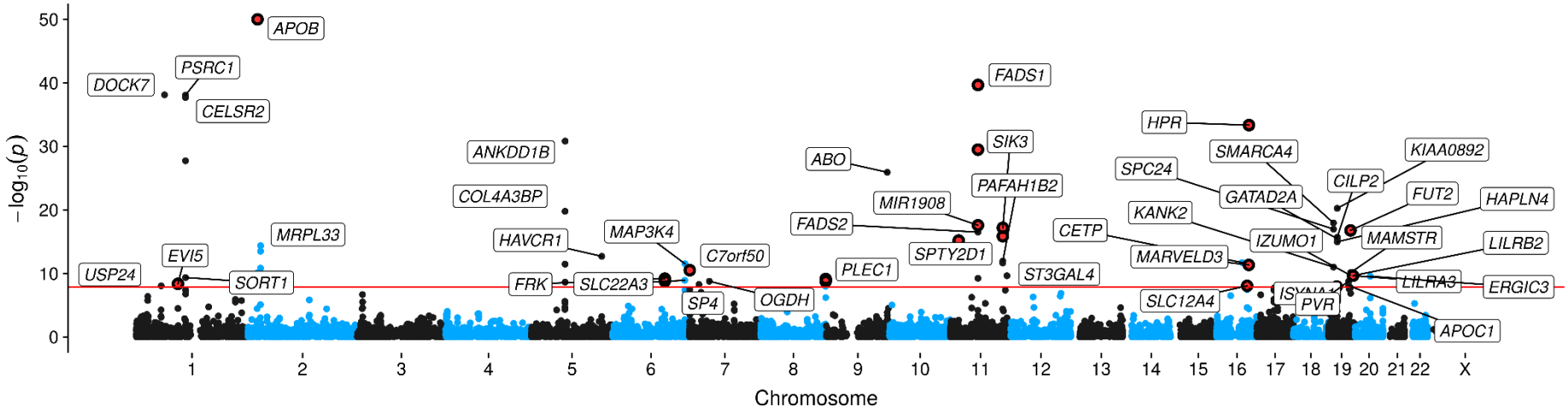
LDL Cholesterol



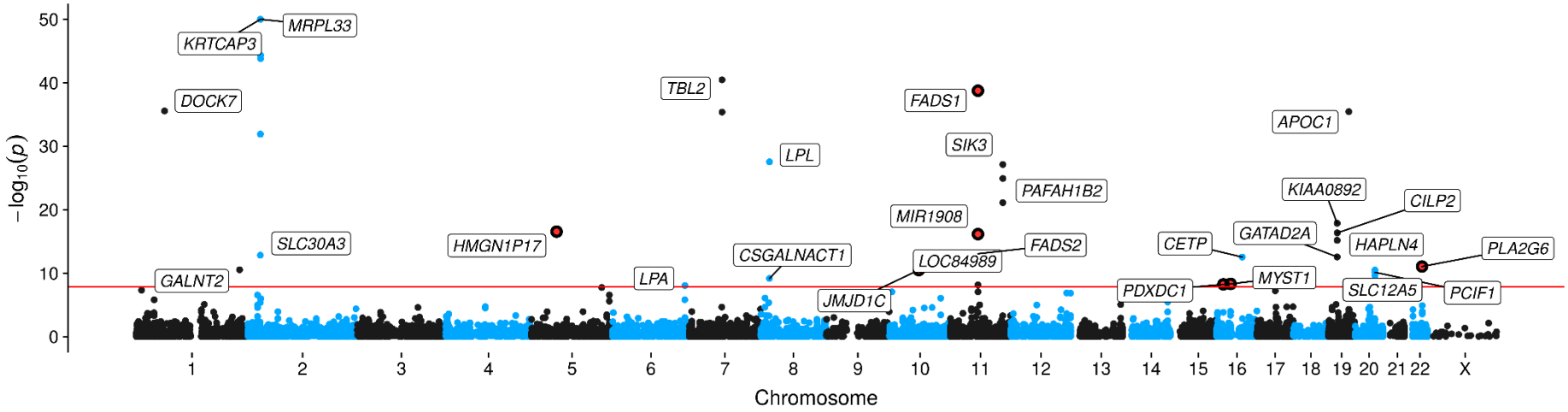
Myocardial Infarction



Total Cholesterol

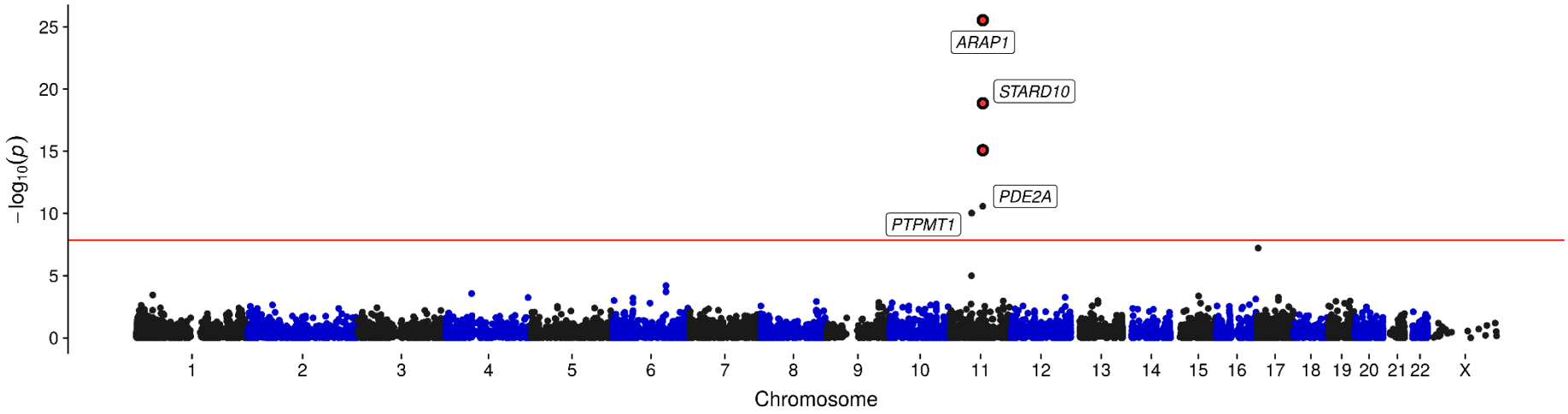


Triglycerides

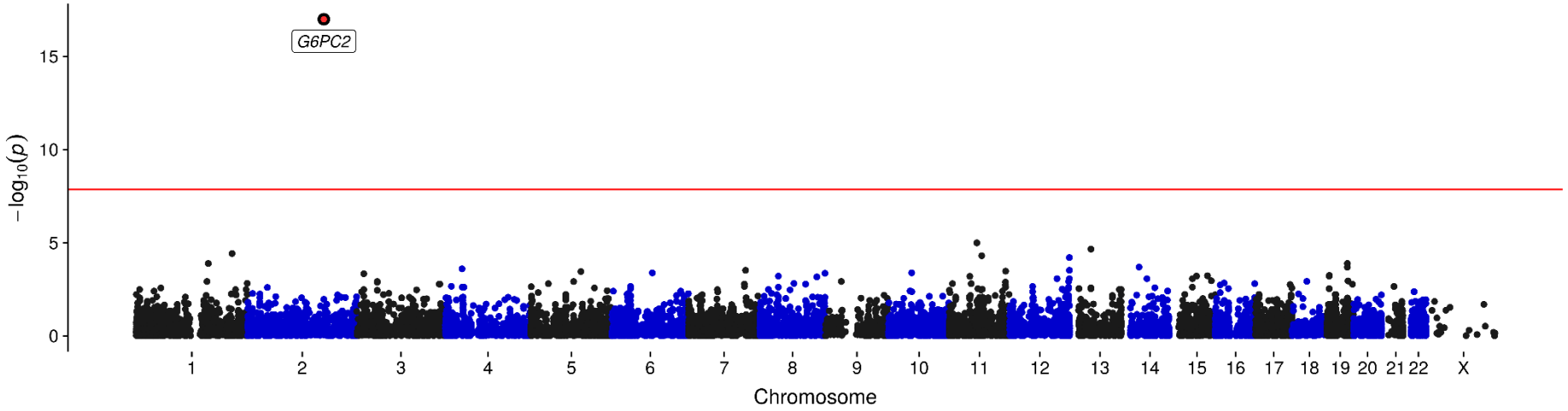


Glycemic

Fasting proinsulin



HOMA-B


G6PC2
15
10
5
0
$-\log_{10}(p)$
1
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16
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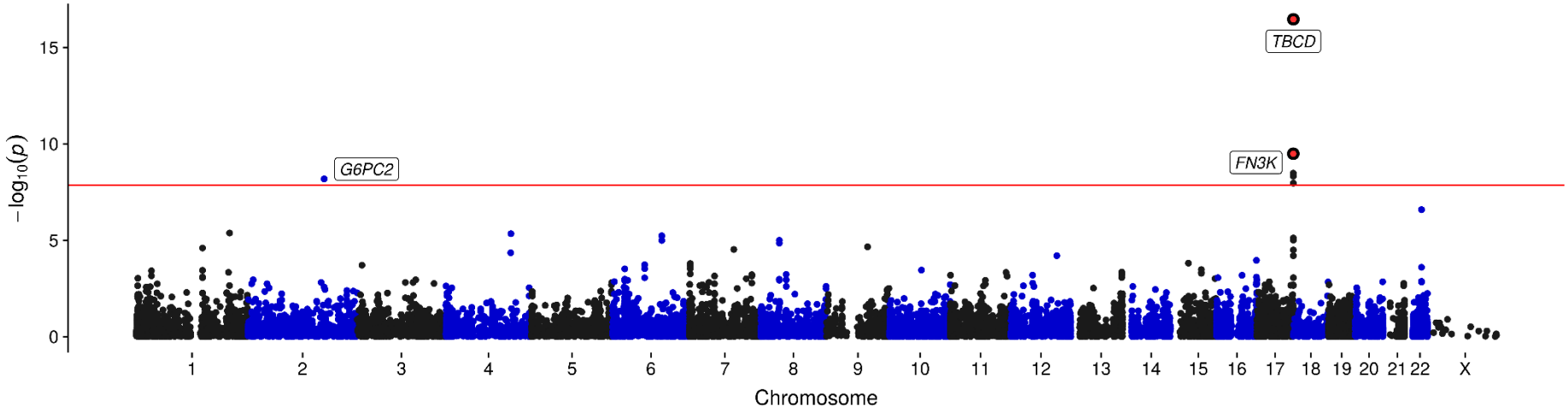
18
19
20
21
22
X
Chromosome

HbA1C


TBCD
FN3K
G6PC2
15
10
5
0
$-\log_{10}(p)$
1
2
3
4
5
6
7
8
9
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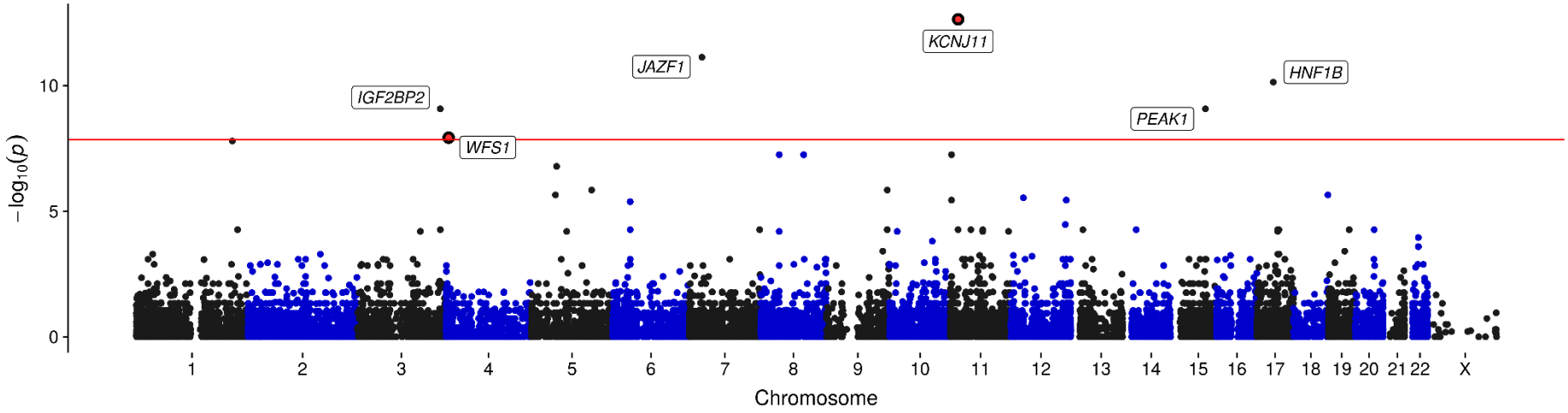
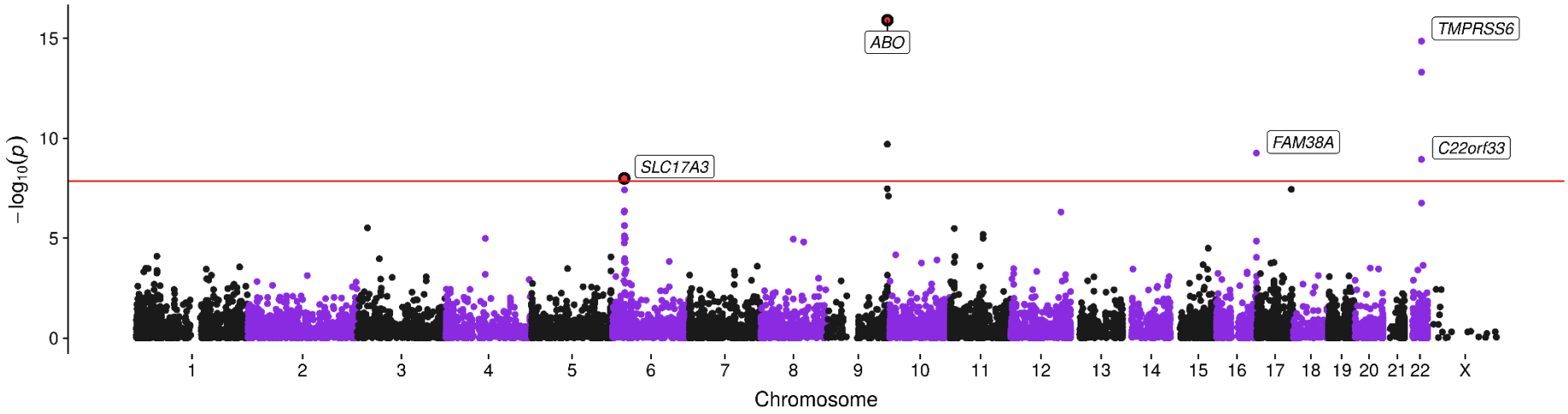
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

Type 2 diabetes

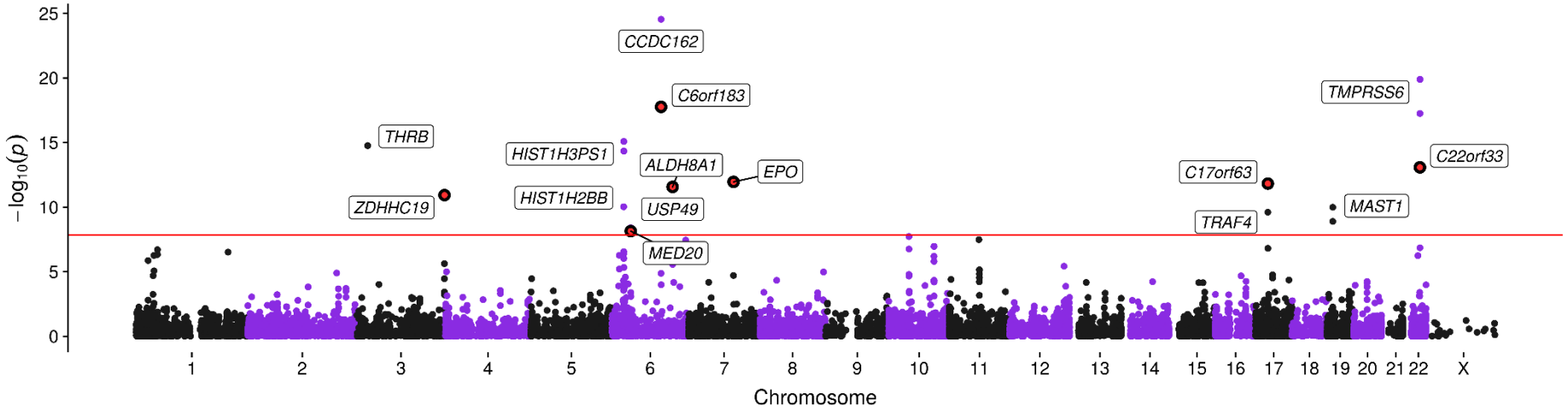


Haemotological

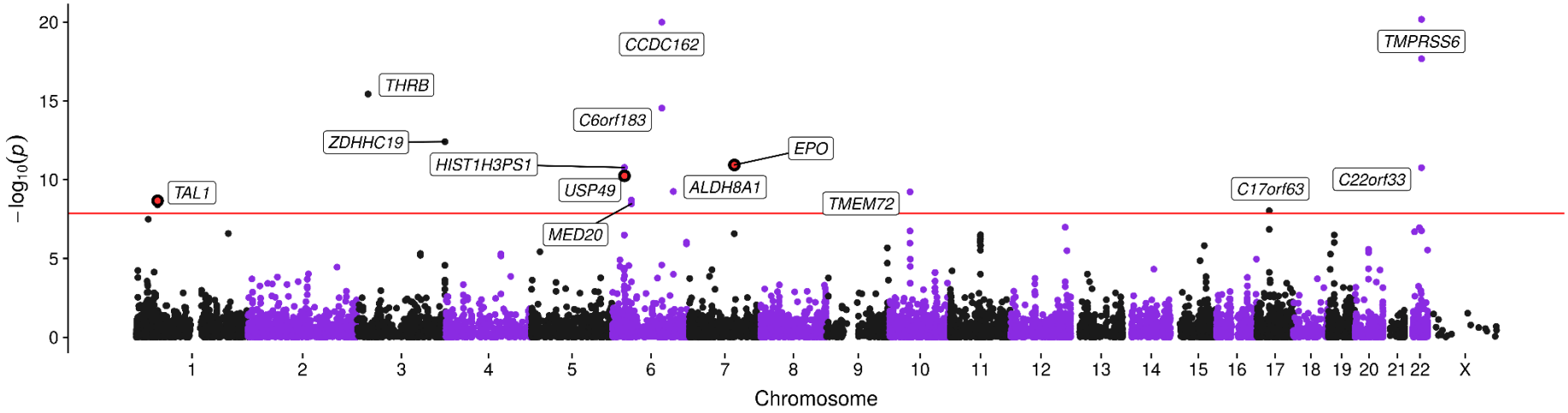
Haemoglobin concentration



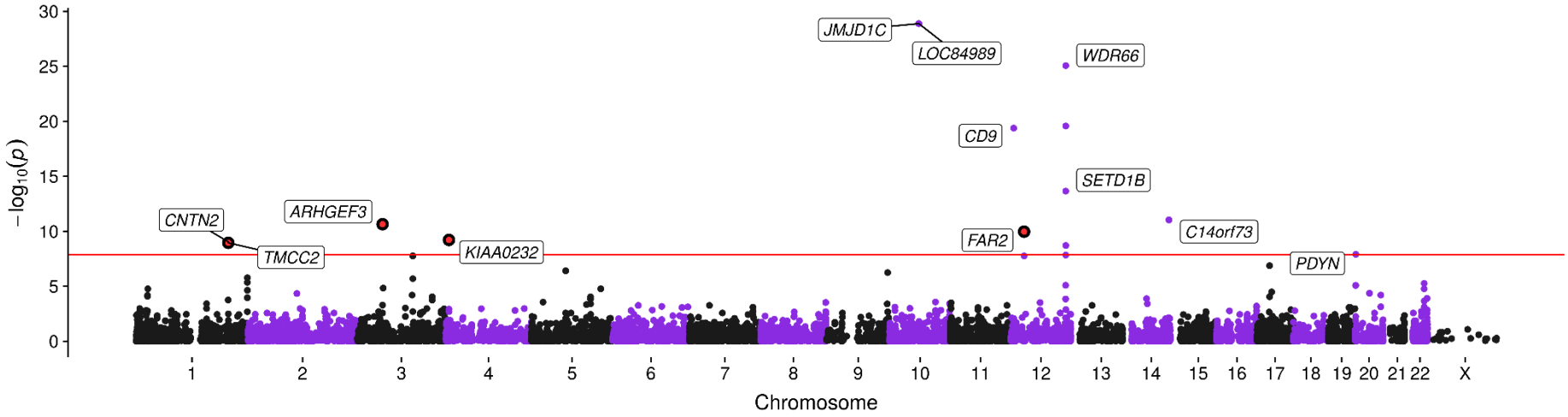
Mean cell haemoglobin



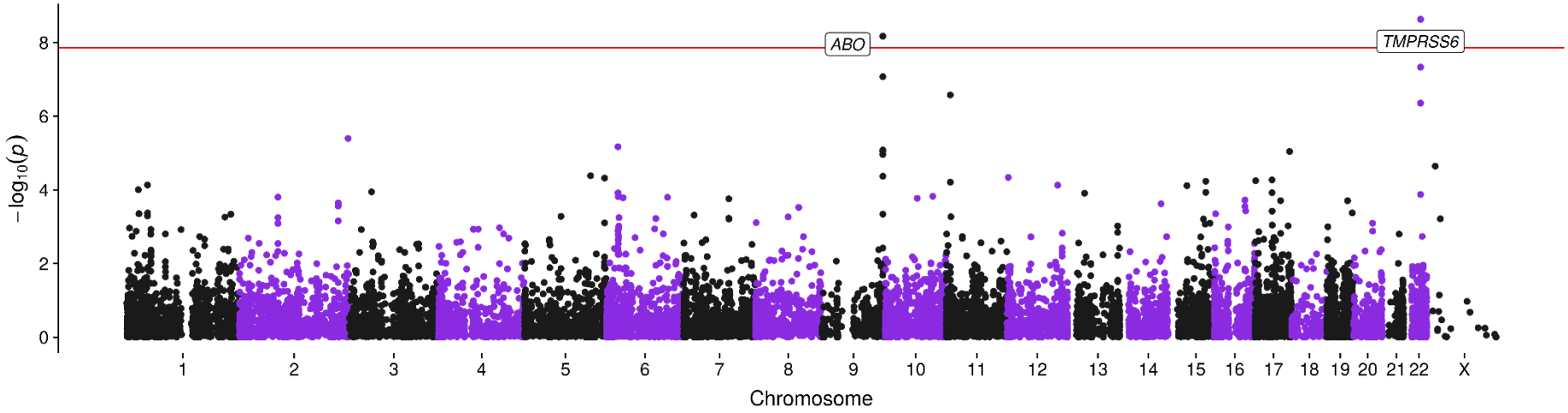
Mean cell volume



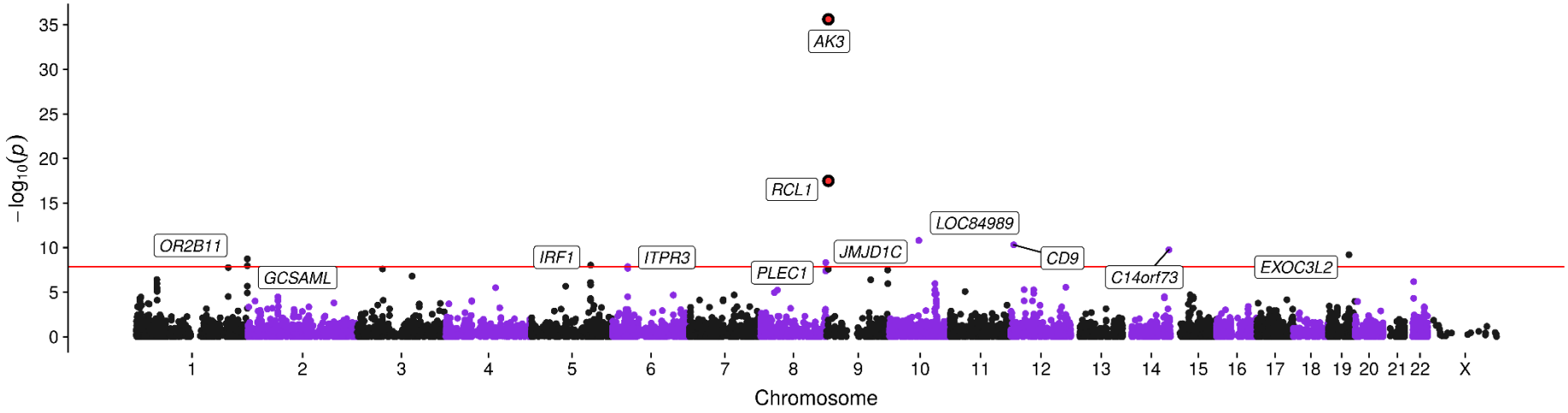
Mean platelet volume



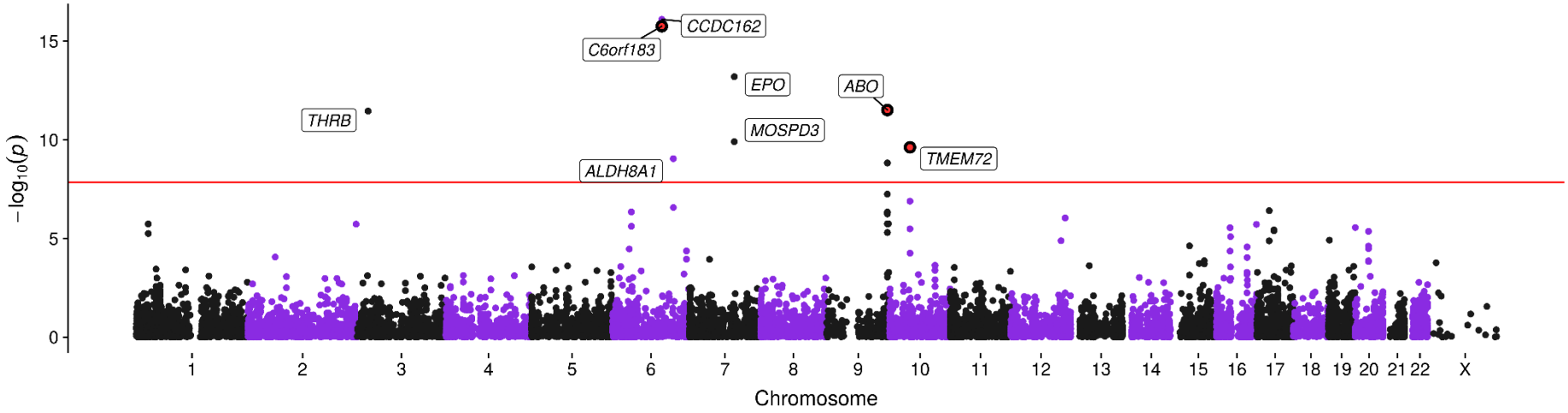
Packed cell volume



Platelet count

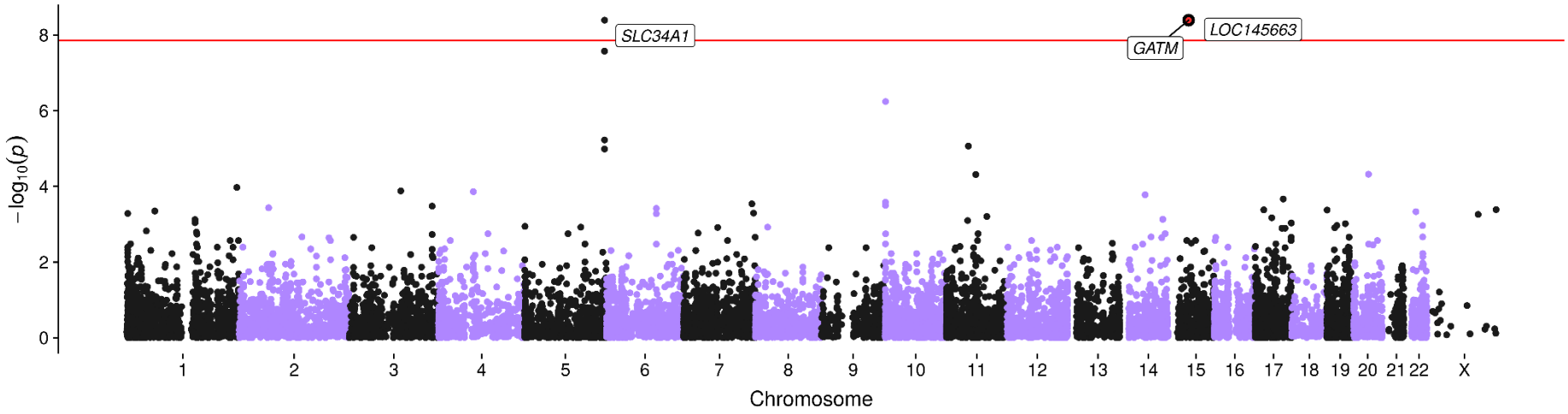


Red blood cell count

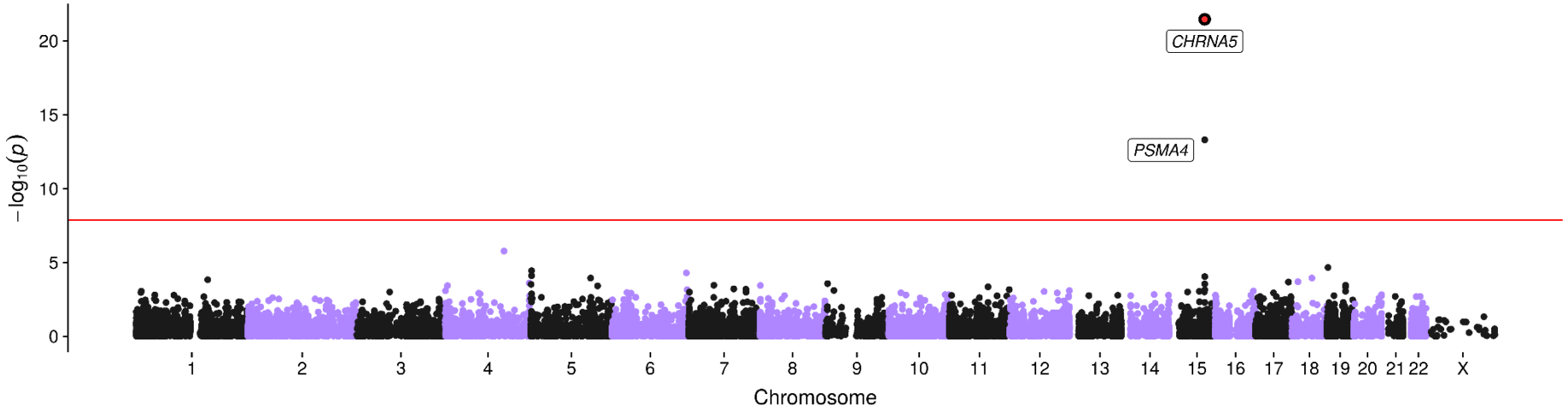


Kidney

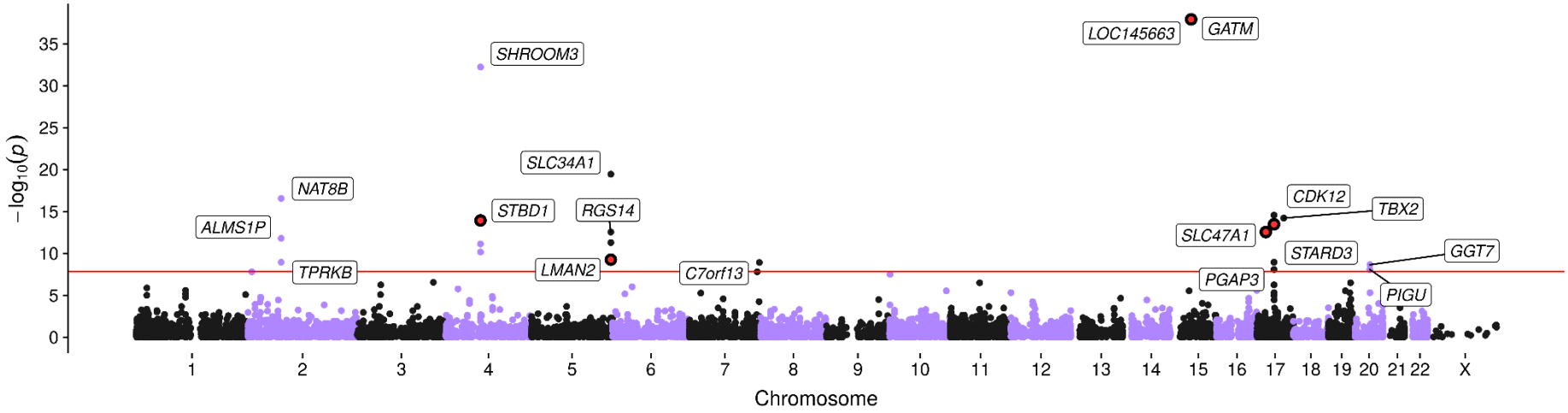
Chronic kidney disease



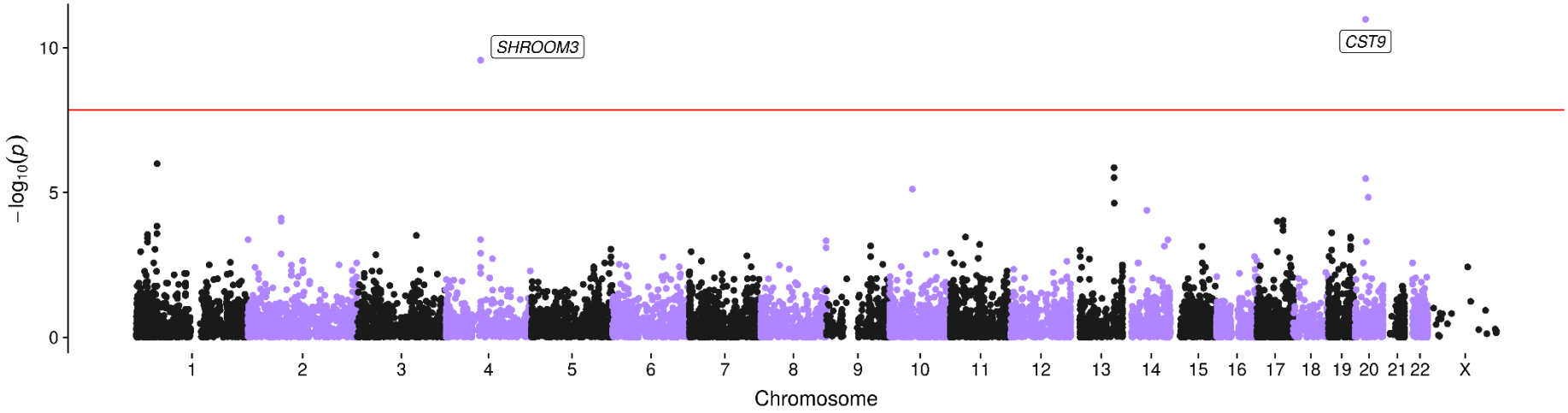
Microalbuminuria



Serum creatinine

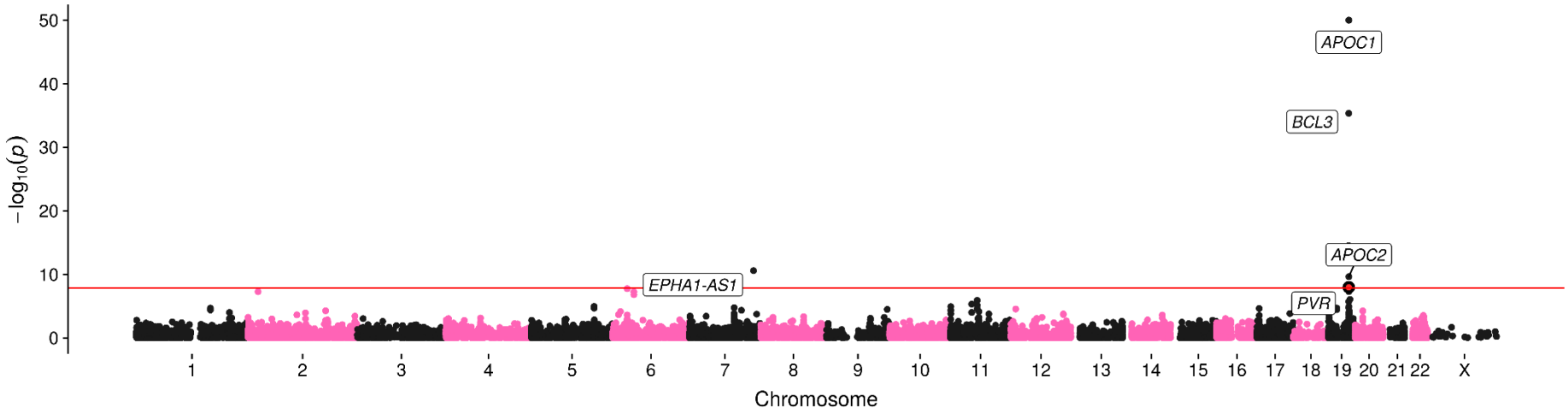


Serum cystatin C

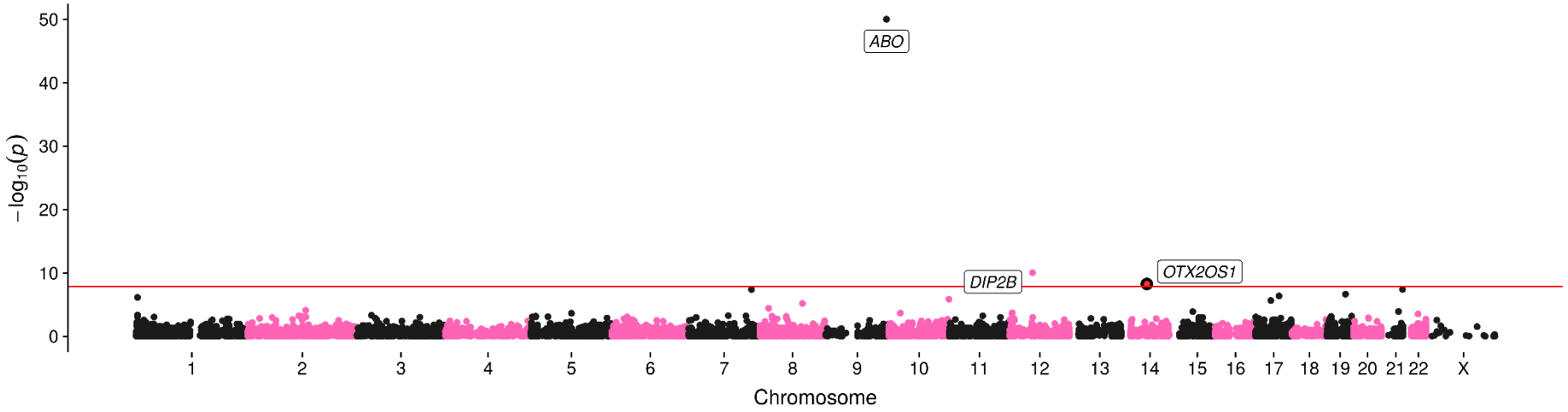


Psychiatric / neurological

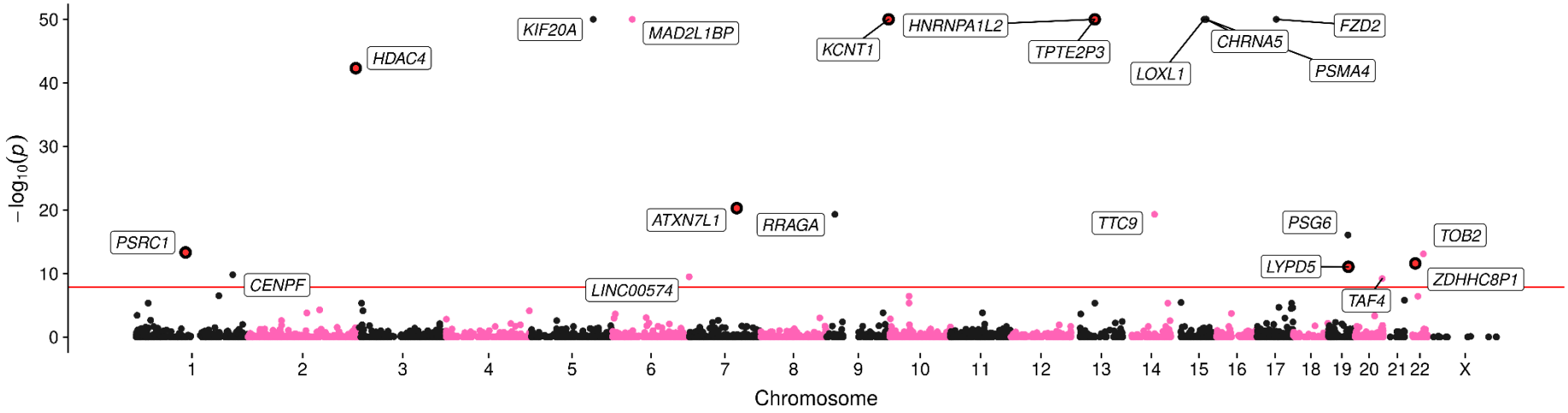
Alzheimer's disease



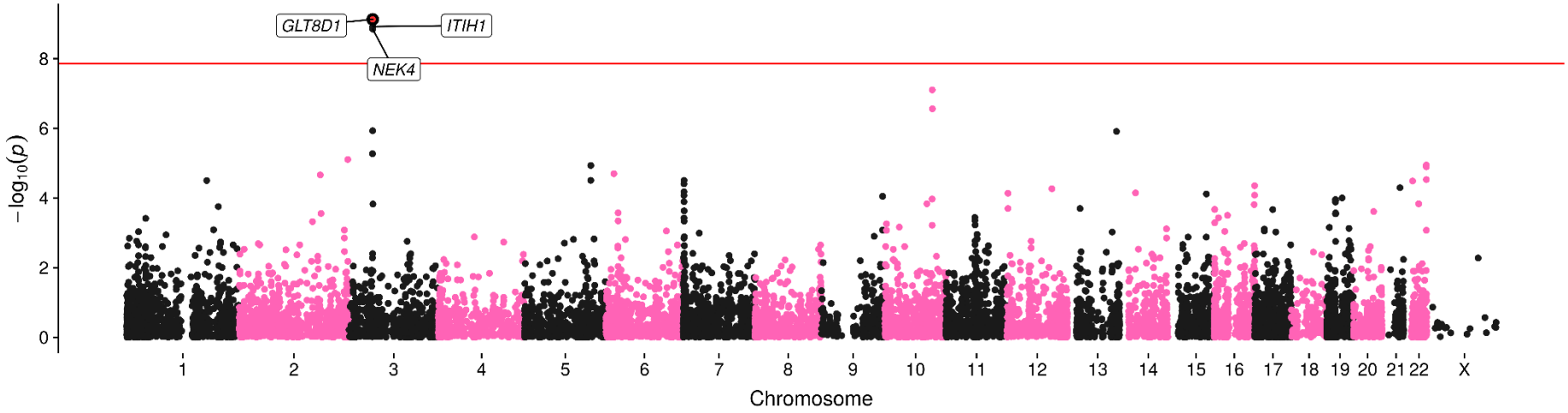
Anorexia nervosa



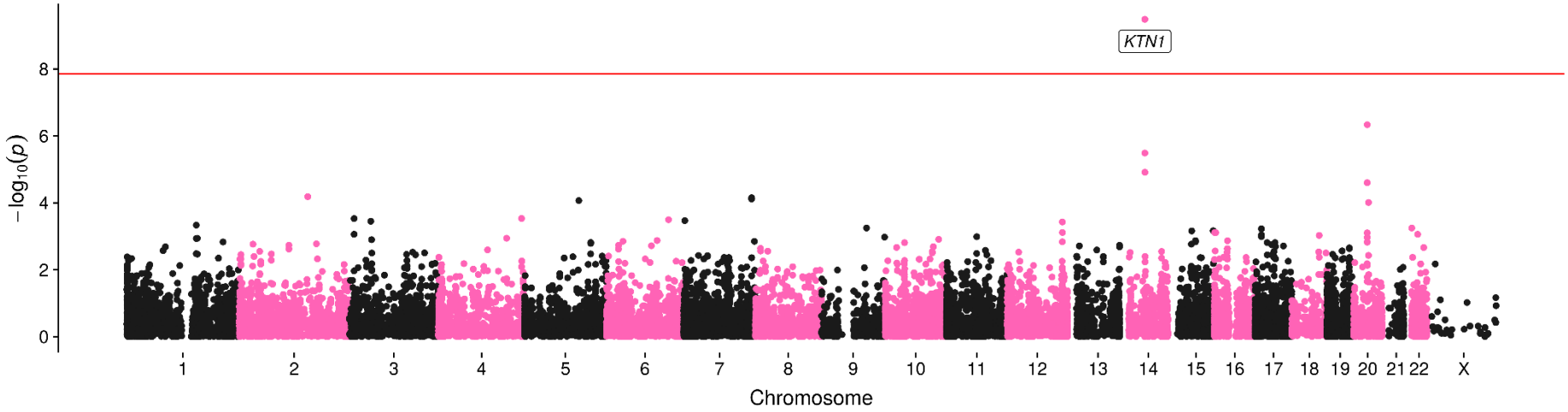
Parkinson's disease



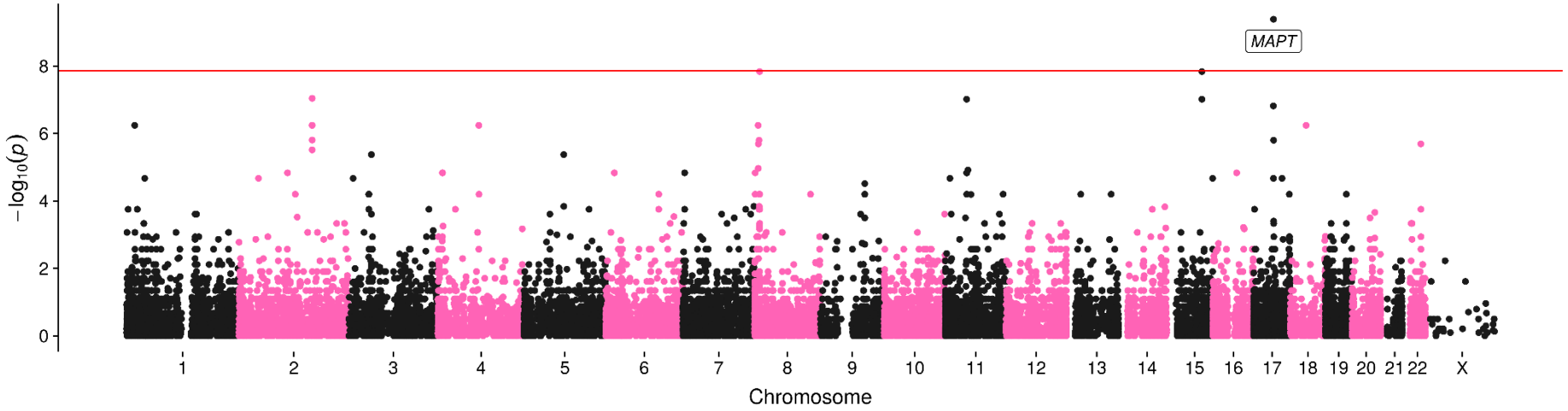
PGC cross-disorder traits



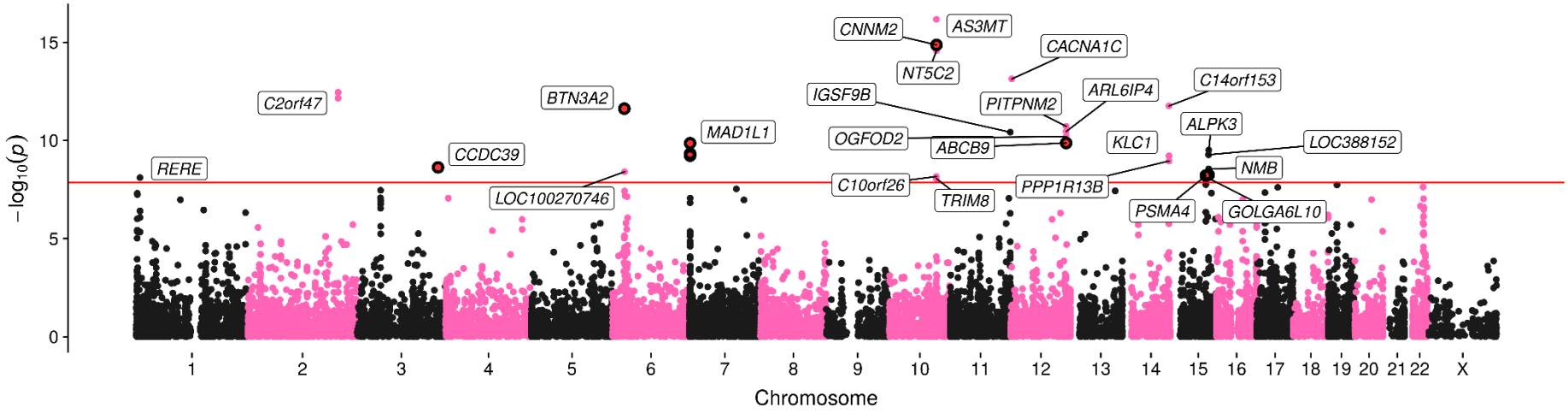
Putamen volume



Neuroticism

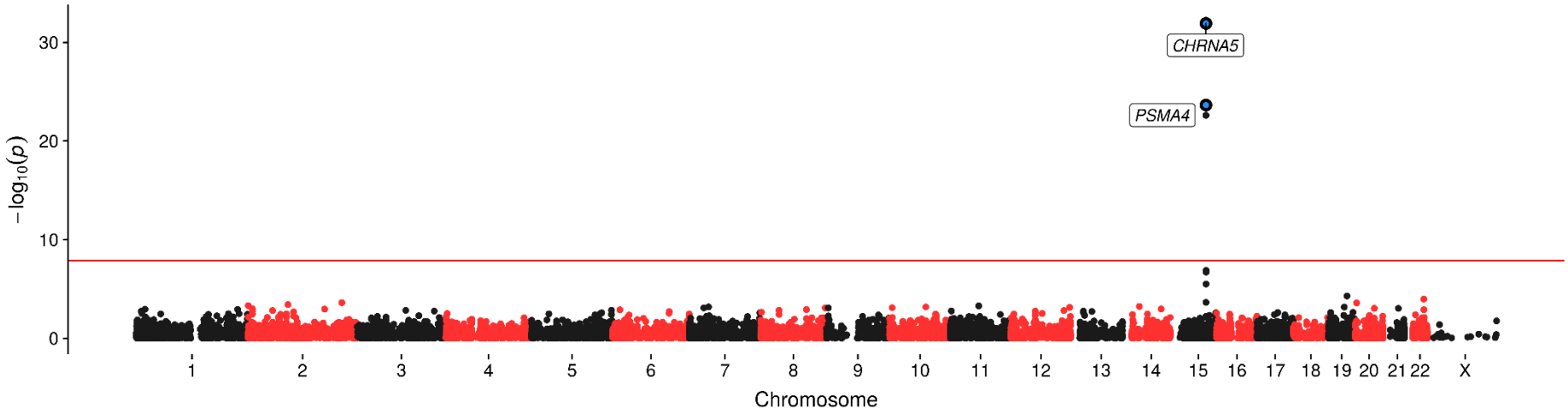


Schizophrenia

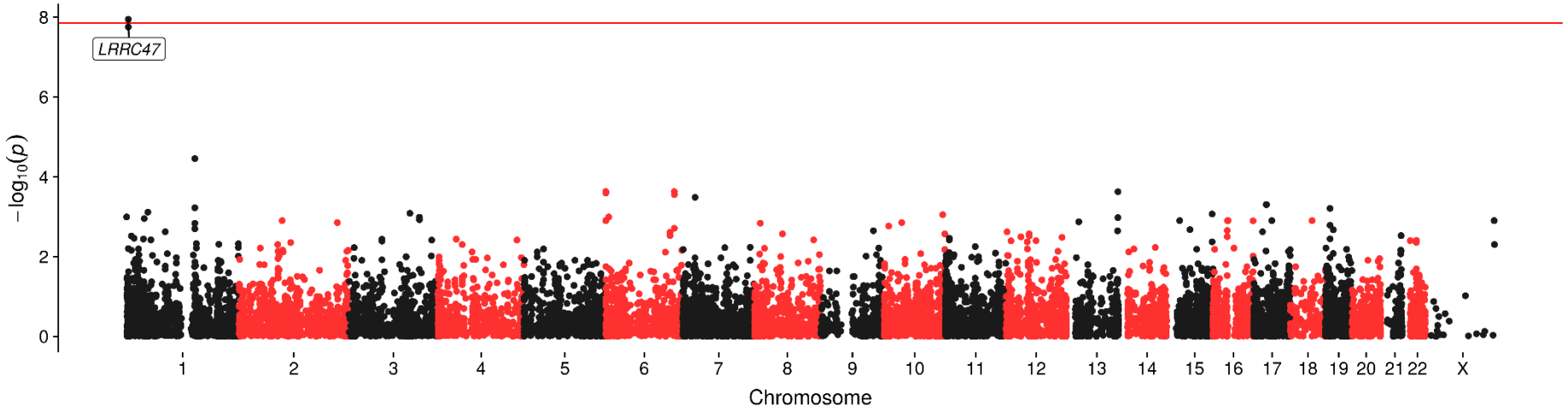


Other

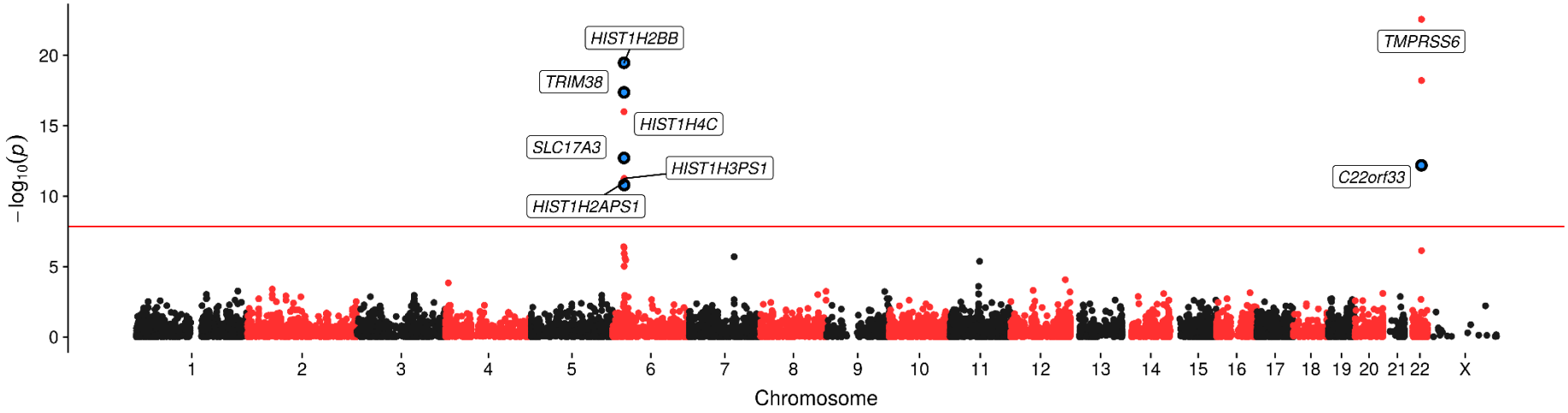
Cigarettes smoked per day



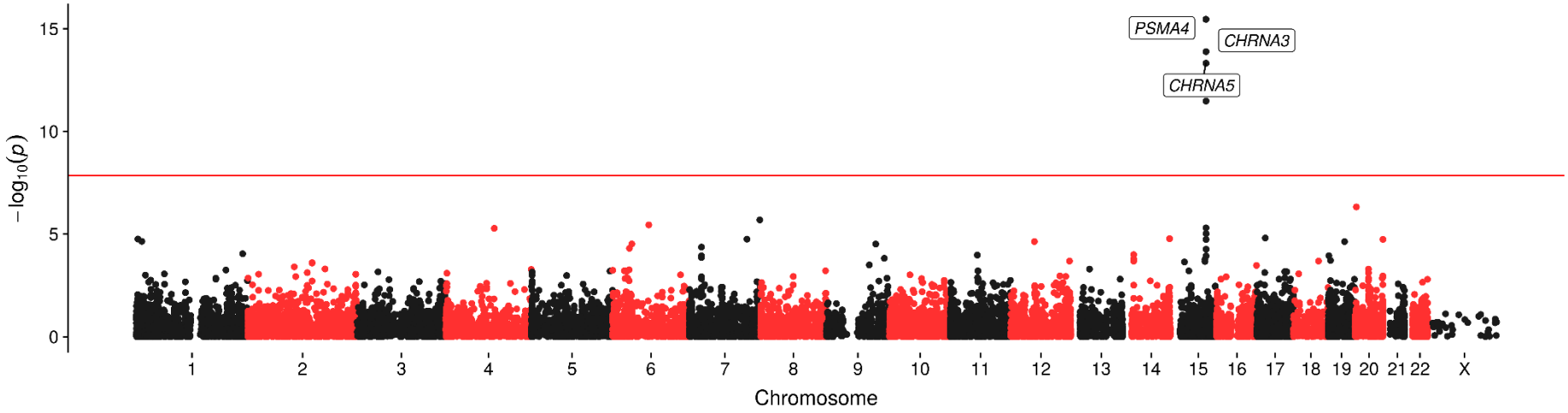
Copper


LRRC47
8
6
4
2
0
$-\log_{10}(p)$
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

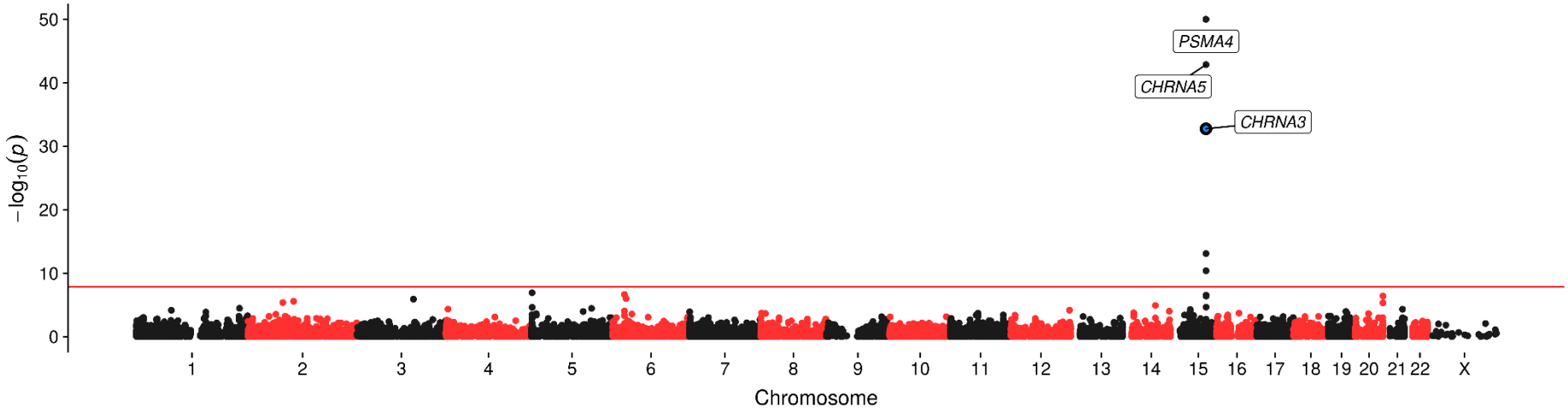
Iron


HIST1H2BB
TRIM38
HIST1H4C
SLC17A3
HIST1H3PS1
HIST1H2APS1
TMPRSS6
C22orf33
20
15
10
5
0
$-\log_{10}(p)$
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

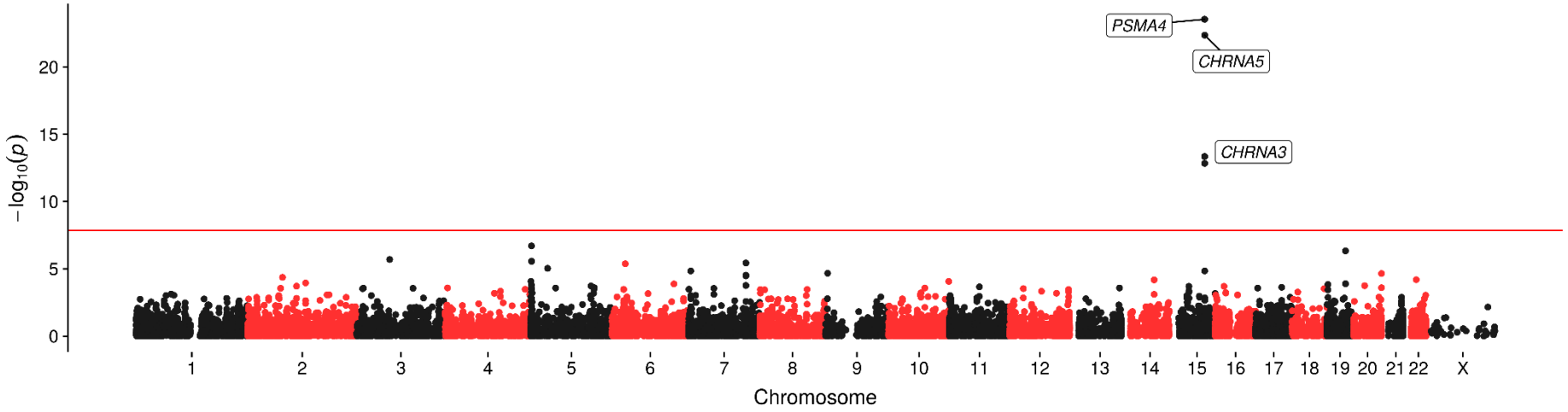
Lung adenocarcinoma



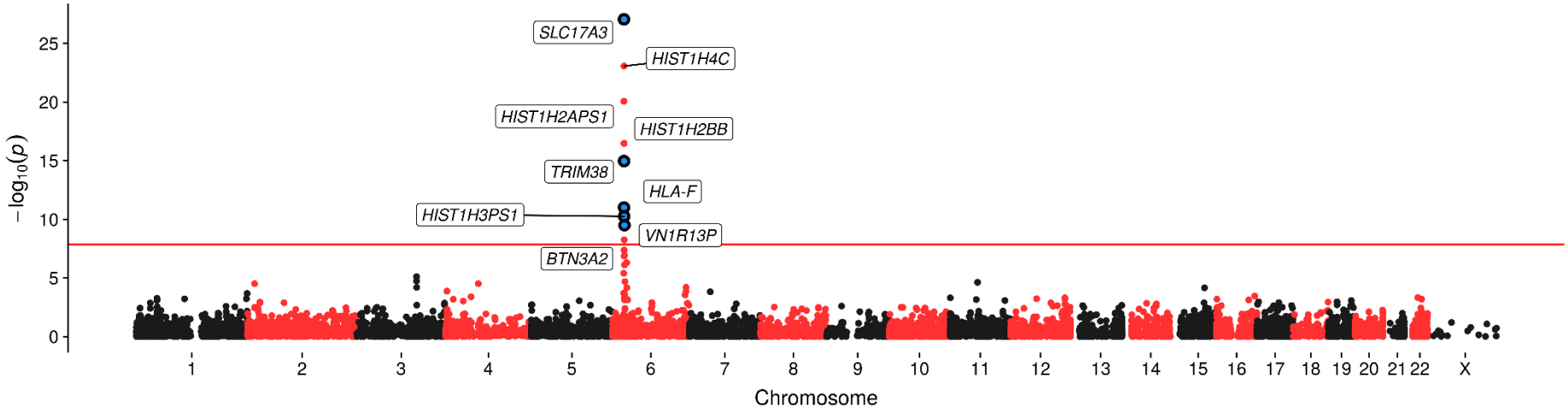
Lung cancer


PSMA4
CHRNA5
CHRNA3
50
40
30
20
10
0
$-\log_{10}(p)$
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome

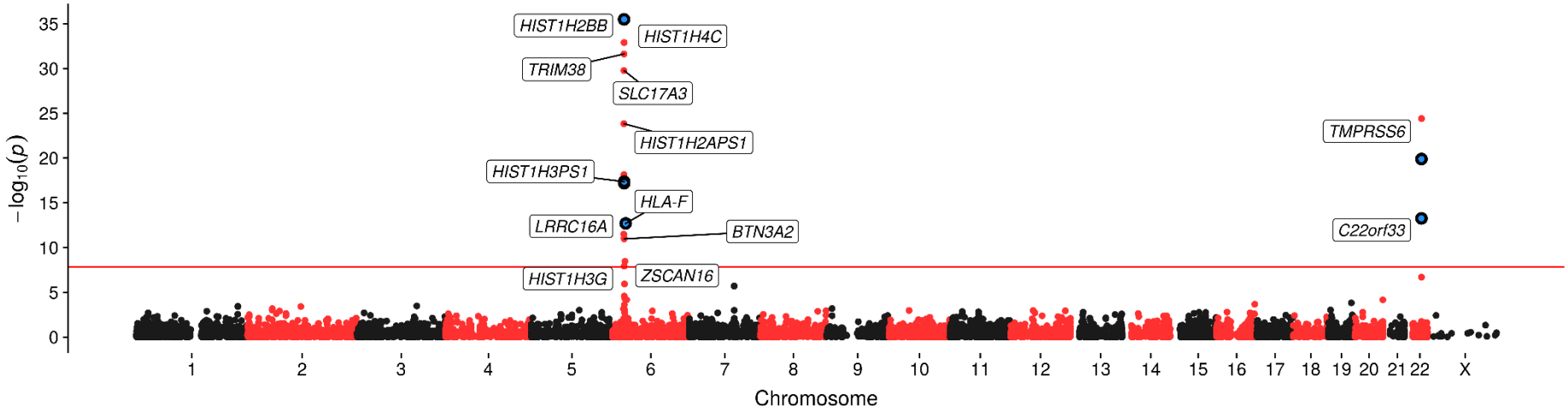
Squamous cell lung cancer



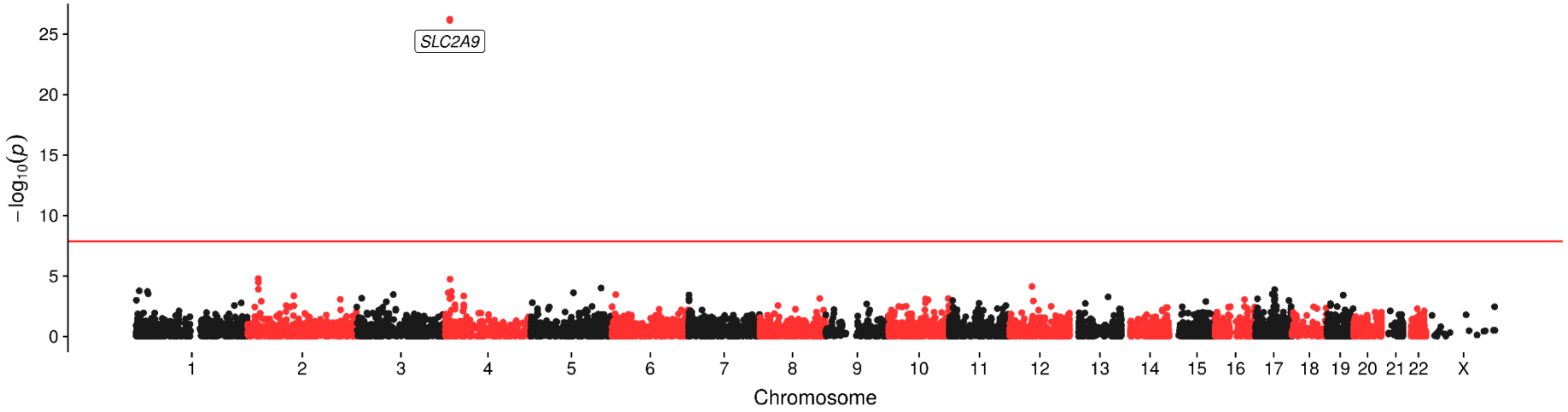
Transferrin



Transferrin Saturation



Urate


SLC2A9
25
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15
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$-\log_{10}(p)$
1
2
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4
5
6
7
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9
10
11
12
13
14
15
16
17
18
19
20
21
22
X
Chromosome