

Bone & Joint Research



Supplementary Material

10.1302/2046-3758.135.BJR-2023-0271.R1

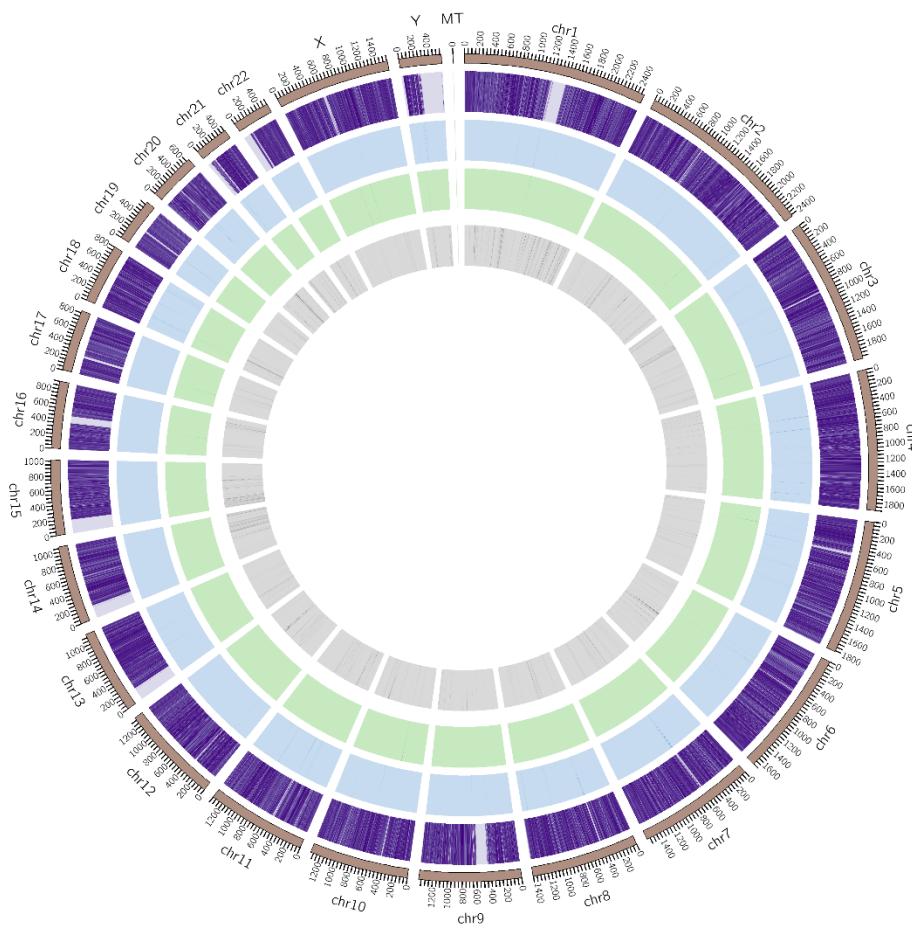


Fig a. The outermost circle is the scale presentation according to the length of the corresponding chromosome; the following three circles (from outside to inside) represent the methylation background display of CpG, CHG, and CHH in the corresponding chromosome.

Genebody Methylation Level

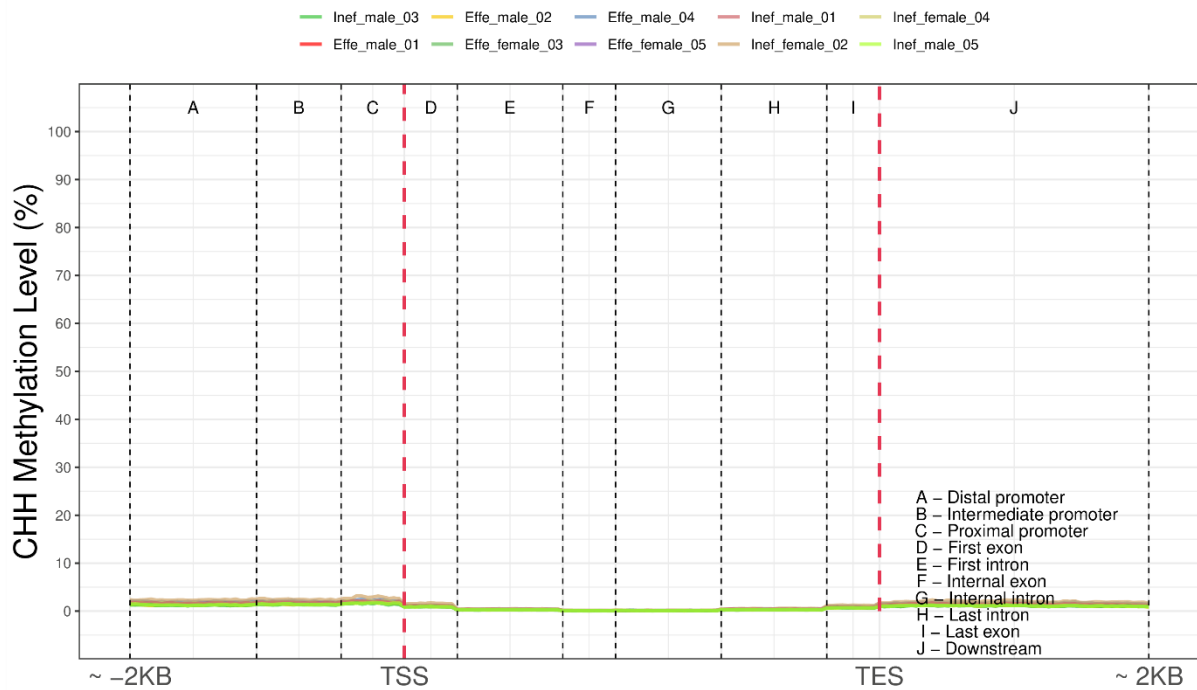


Fig c. The distribution trend of CHH in samples. The x-axis represents the different functional regions of the gene body. The y-axis represents the average methylation levels. TES, transcription end site; TSS, transcription start site. Effe refers to chondroitin sulphate responder, Inef refers to chondroitin sulphate non-responder.

Table i. The joint dysfunction index criterion.

Items	Grade	Score
Arthralgia during nocturnal rest (Q1)	None	0
	Pain without affected sleep	1
	Pain with affected sleep, need to take drug	2
Arthralgia on walking (Q2)	None	0
	Pain with more than 15 mins up/downhill (stairs) or walking	1
	Pain with less than 15 mins up/downhill (stairs) or walking	2
Morning stiffness (Q3)	None	0
	Less than 15 mins morning stiffness of extremities joint	1
	More than 15 mins morning stiffness of extremities joint	2
Maximum distance walked (Q4)	Walk more than 1,000 m	0
	Walk only 500 to 1,000 m	1
	Walk less than 1,000 m or only around the bedroom and home	2
Activities of lower limb (Q5)	Squats freely	0
	Squats difficulties or knee flexion less than 90°	1
	No squats or knee flexion more than 90°	2

The joint dysfunction index included five items: Q1 to Q5. Each item was divided into three grades with the total 0 to 10 scores.

Table ii. Primers used in quantitative reverse transcriptase polymerase chain reaction detection.

Gene symbol	Primer sequence
<i>GAPDH</i>	5'-GCACCGTCAAGGCTGAGAAC-3'(S)
	5'-TGGTGAAGACGCCAGTGGGA-3'(AS)
<i>CHL1</i>	5'-TATTTGGCAACTACTGGGACTCTT-3'(S)
	5'-CGCCGTGGACTCTGTTACTCA-3'(AS)
<i>RIC8A</i>	5'-AGGGAGAAAACCTGTCAGAACTT-3'(S)
	5'-AACTCGGGCACTGTGGATACT-3'(AS)
<i>SOX12</i>	5'-GTGAGAAATGGGGAGAACGC-3'(S)
	5'-CGGTGAGATACAGGTAGTGAGGG-3'(AS)
<i>ACP1</i>	5'-AGGCTACCAAGTCCGTGCTG-3'(S)
	5'-CTGAGATGTTTTGATCGGTTACAAG-3'(AS)

ACP1, acid phosphatase 1; AS, antisense; CHL1, cell adhesion molecule L1 like; GAPDH, glyceraldehyde 3-phosphate dehydrogenase; RIC8A, RIC8 guanine nucleotide exchange factor A; S, sense; SOX12, SRY-box transcription factor 12.