for sample in input\_ER4 input\_G1E

do

bowtie2 -x /Users/cmdb/qbb2020-answers/week5/chr19 -U ${sample}.fastq -S ${sample}.sam -p 6

samtools view -bSo ${sample}.bam ${sample}.sam

samtools sort ${sample}.bam -o ${sample}.sorted.bam

samtools index ${sample}.sorted.bam

done

macs2 callpeak -t CTCF\_ER4.bam -c input\_ER4.bam --format=BAM --name=ER4 --gsize=138000000 --tsize=26

macs2 callpeak -t CTCF\_g1e.bam -c input\_g1e.bam --format=BAM --name=g1e --gsize=138000000 --tsize=26

bedtools intersect -a /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/g1e\_summits.bed -bed

bedtools intersect -wa -a Mus\_musculus.GRCm38.94\_features.bed

-b /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed /Users/cmdb/qbb2020-answers/week5/g1e/g1e\_summits.bed -bed

Mus\_musculus.GRCm38.94\_features.bed

bedtools intersect -wa -wb -a Mus\_musculus.GRCm38.94\_features.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed /Users/cmdb/qbb2020-answers/week5/g1e/g1e\_summits.bed -bed

losses:

bedtools intersect -v -a /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/g1e\_summits.bed > ER4\_differences.bed

bedtools intersect -v -a /Users/cmdb/qbb2020-answers/week5/g1e/ g1e\_summits.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed > g1e\_differences.bed

bedtools intersect -v -a Mus\_musculus.GRCm38.94\_features.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_summits.bed > ER4\_losses.bed

bedtools intersect -a Mus\_musculus.GRCm38.94\_features.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/ER4\_peaks.narrowPeak > ER4\_overlaps.bed

(cmdb)

bedtools intersect -a Mus\_musculus.GRCm38.94\_features.bed -b /Users/cmdb/qbb2020-answers/week5/g1e/g1e\_peaks.narrowPeak > g1e\_overlaps.bed

sort -r -k 5 ER4\_peaks.narrowPeak | head -n 100 > top100peaks.bed

bedtools getfasta -fi /Users/cmdb/qbb2020-answers/week5/chr19.fa -bed /Users/cmdb/qbb2020-answers/week5/g1e/top100peaks.bed > /Users/cmdb/qbb2020-answers/week5/g1e/top100.fa

meme-chip -meme-maxw 20 -oc memes top100.fa

meme-chip -meme-maxw 20 -oc tomtom /Users/cmdb/qbb2020-answers/week5/g1e/top100.fa -db /Users/cmdb/qbb2020-answers/week5/motif\_databases/JASPAR/JASPAR\_CORE\_2016.meme

cd tomtom

cd meme\_out

epstopdf logo1.eps strong.pdf