

Since the paper is a bit long, I only selected the most essential part.

Skip the first paragraph and start to discuss the paper from paragraph 2, **“modulation of EPI”**

**Skip paragraph H3K27ac affect EPI and EEI and figure 5a-e and discuss figure 5f-j**

**Finish the discussion to Figure 6, (no need to read/discuss Figure 7)**

### Questions

1. What is the effect of enhancer-promoter interactions on oncogene expression?
2. Why are they comparing EPI between normal and cancer cells?
3. What is the definition of A and B compartments?
4. If the genome is divided into bins of 20Kb, how large are the genomic regions that contain 2 bins or 7 bins?
5. How many interactions be detected in EPI, based on the results reported in Fig2?
6. Why H3K27ac depletion leads to an overall loss of interactions in the A compartment and not in the B compartment?
7. Which genes are mainly affected by the depletion of H3K27ac?
8. Depletion of H3K27ac affects only EPI or also other components of the chromatin organization?
9. Do a low number of contacts in BCL11A affect gene expression and if yes why?
10. When chromosome 3 translocates next to chromosome 8, how does the enhancer influence MYC expression?
11. Why we can use SNP to distinguish the two haplotypes?
12. How the structure of the chromatin in chromosomal translocation influence MYC expression

## **Groups division**

**Figure 2**

**Figure 3**

**Figure 4a-f**

**Figure 4g-l**

**Figure 5f-j**

**Figure 6a-c**

**Figure 6 d and f (you can skip panel “e” if it is too complicated).**