

Propositions belonging to the doctoral thesis

## **Exploring Mitotic Chromosomes**

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1. CTCF binding is lost during prometaphase in human differentiated cell lines (this thesis)
2. While chromosome organization undergoes dramatic remodeling during mitosis, certain epigenetic characteristics, such as histone modifications and variants, are maintained (this thesis)
3. Organization of mitotic chromosomes can be diverse between cell types and species (this thesis)
4. Mitotic yeast chromosomes are organized by two independent types of cohesin, extruding cohesin and cohesive cohesin (this thesis)
5. The SisterC protocol can be applied to a wide array of research models to study the complex interplay between sister chromatid segregation and chromosome compaction from G2-phase to prometaphase (this thesis)
6. "Luck favors the prepared" (Louis Pasteur)
7. Obtaining both wet lab and computational skills allows scientists to think creatively in the era of complex genomics datasets
8. Being able to communicate your results is an essential skill in science
9. It is more productive to share data, resources and time with other scientists than to hide and protect results out of fear for competitors
10. Projects based on open-ended research questions can be just as fruitful as hypothesis driven studies
11. "I have never tried that before, so I think I should definitely be able to do that" (Astrid Lindgren/Pippi Longstocking)