

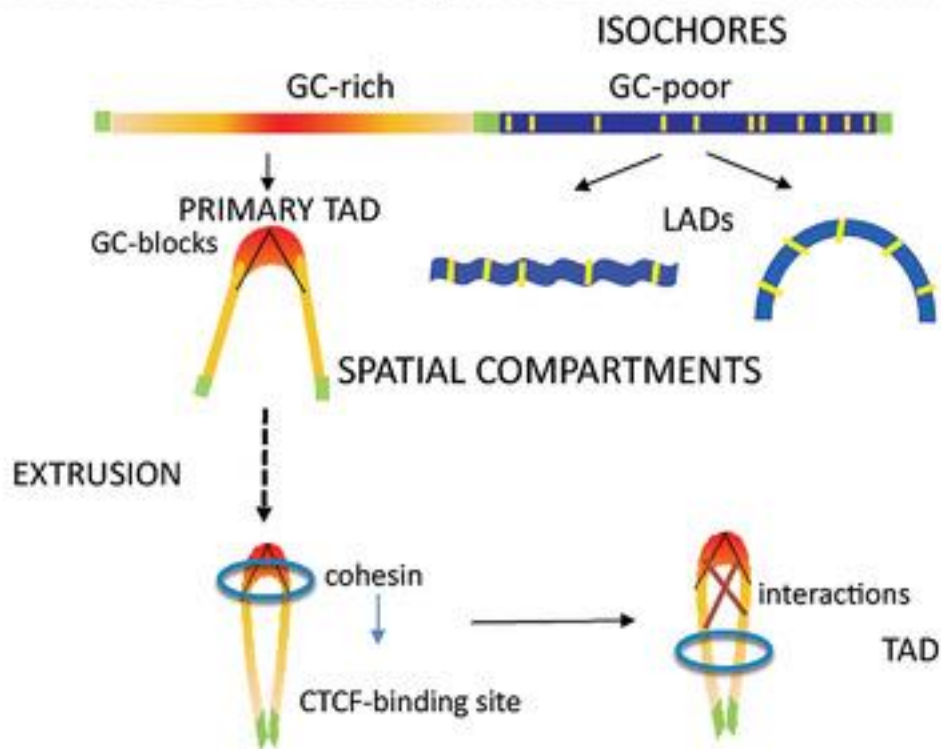
GENOMIC CODE

For decades non-coding DNA in our genome has been viewed as “junk” DNA, of which the role, if any, was elusive, even though increasing evidence in recent years has supported its role in gene regulation. Also the biological significance of the base composition of the genome, with unevenly distributed, GC-rich “gene-rich” regions versus AT-rich “gene-poor” regions, named isochores, is still under debate.

This review in BioEssays (<https://onlinelibrary.wiley.com/doi/full/10.1002/bies.201900106>) sheds light on the most recent advances in our understanding of the “genomic code” and shows how base composition is the precursor of genome 3D architecture (A and B compartments, TADs, LADs...), restoring the reputation of the 98% of our once called “selfish” DNA.

This is further evidence that Nature does not waste resources; the burden of such a large genome for “only” 20,000 genes has turned out to be an evolutionary resource for better tuning of the genome organization and functioning.

THE GENOMIC CODE A PERVERSIVE ENCODING/MOULDING OF CHROMATIN



The genomic code solves the « non-coding DNA » mystery