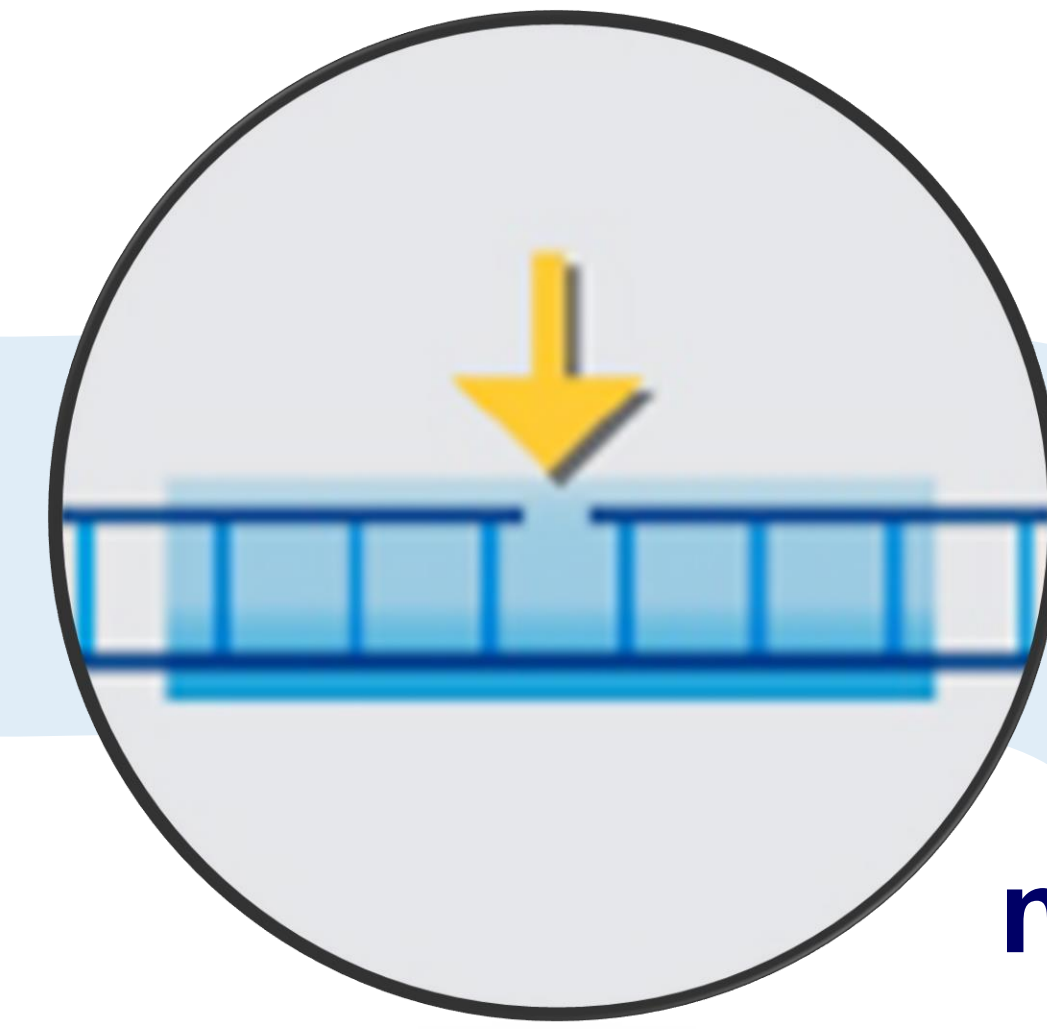




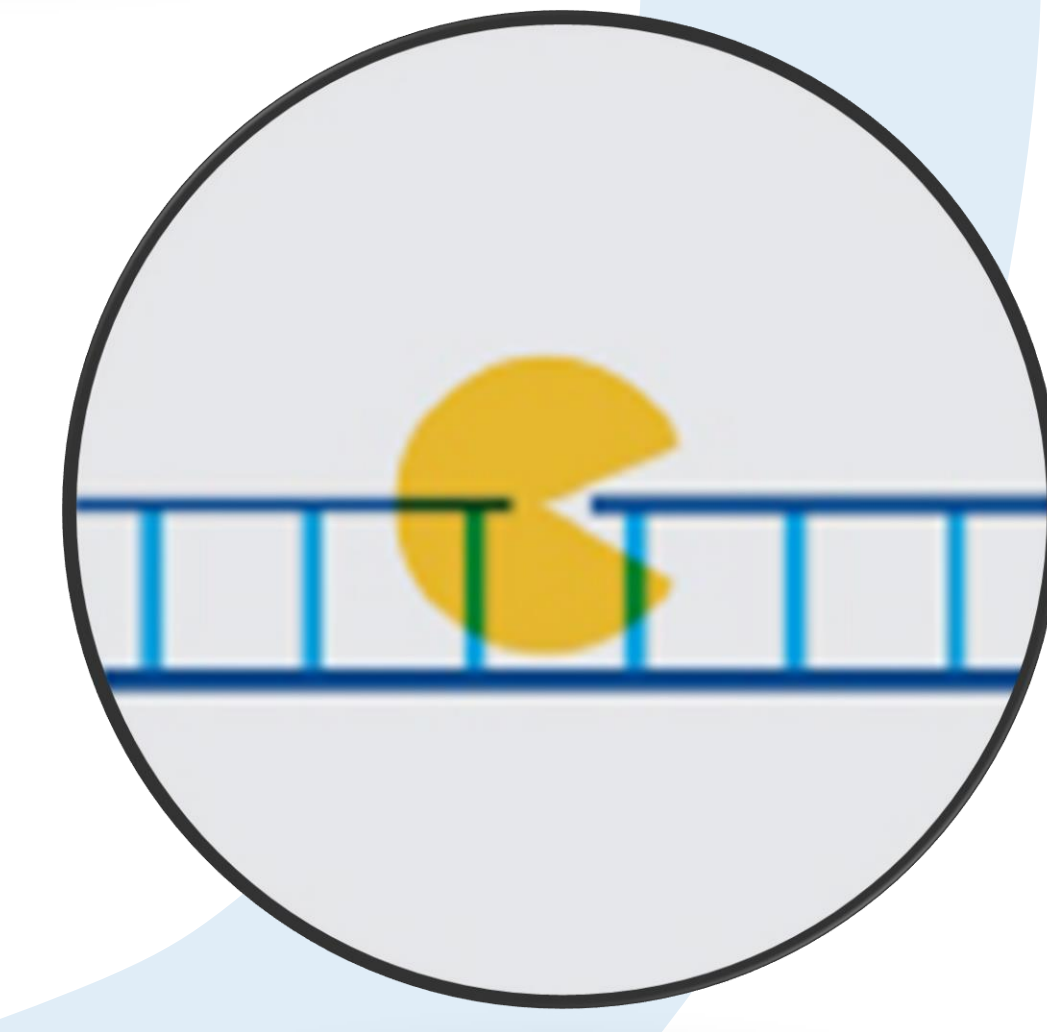
Isolation of High Molecular Weight DNA



Nt.BspQI 5'...GCTCTTCN<sup>▼</sup>...3'  
3'...CGAGAAGN...5'

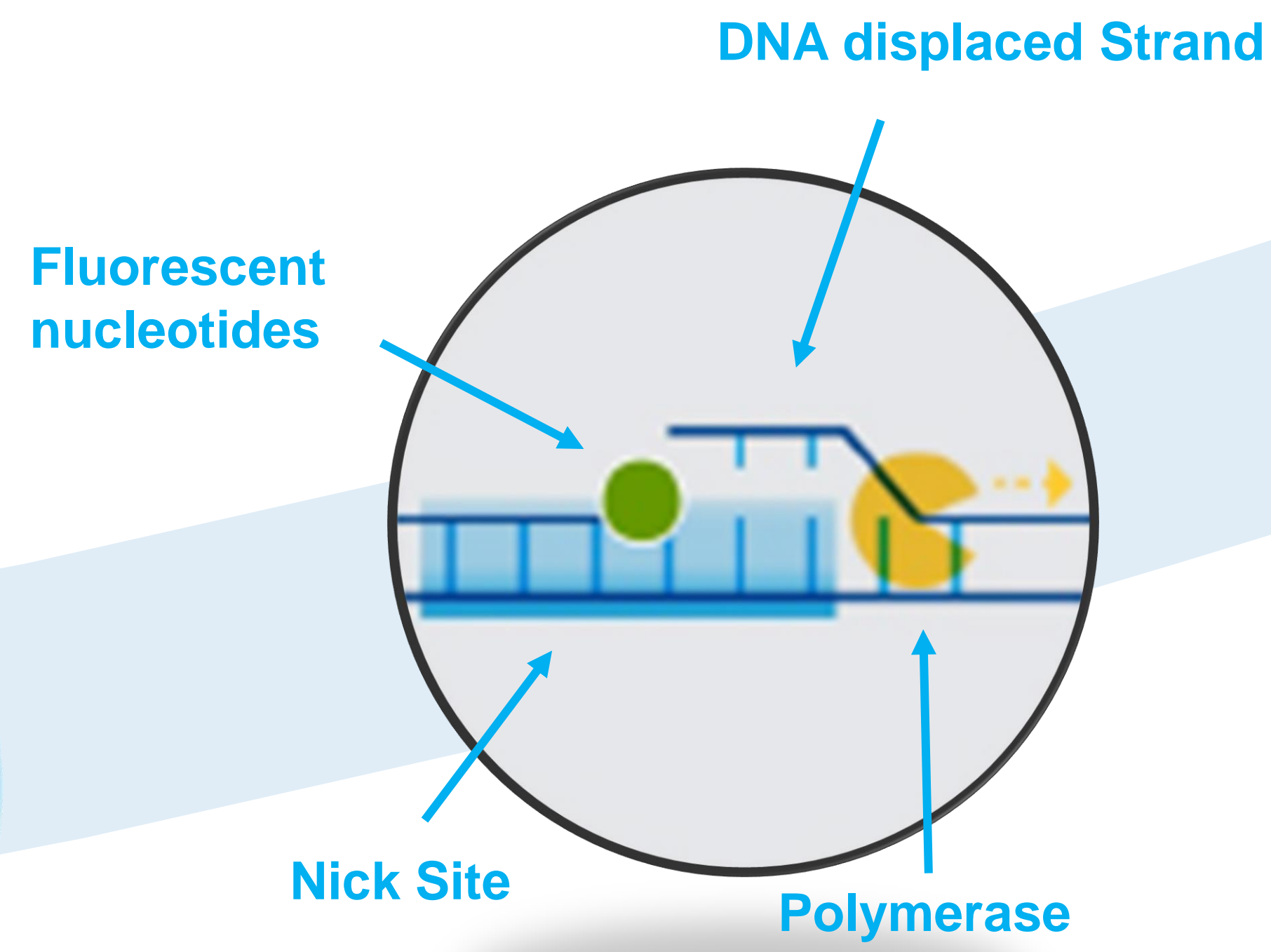
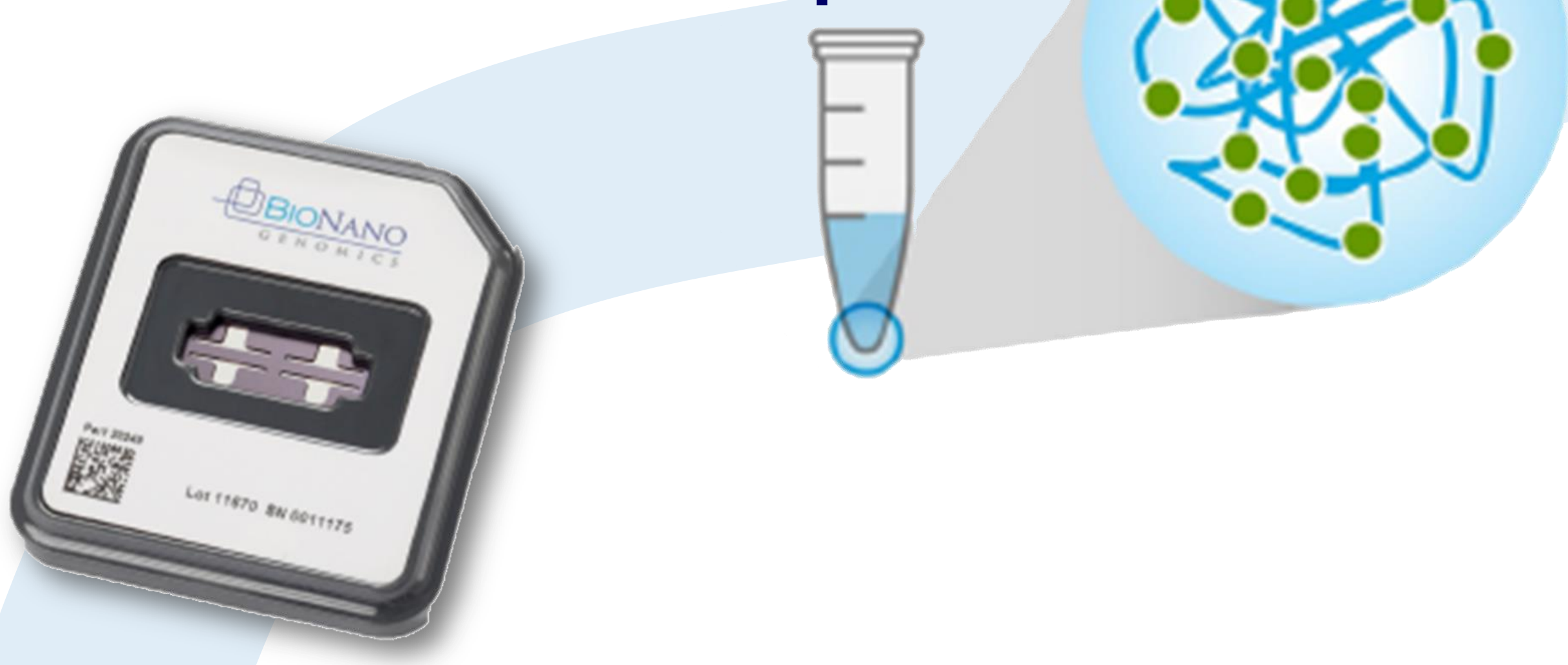
Nb.BssSI 5'...CACGAG...3'  
3'...GTGCT<sup>▲</sup>C...5'

A nicking enzyme creates single strand nicks at recognition sites

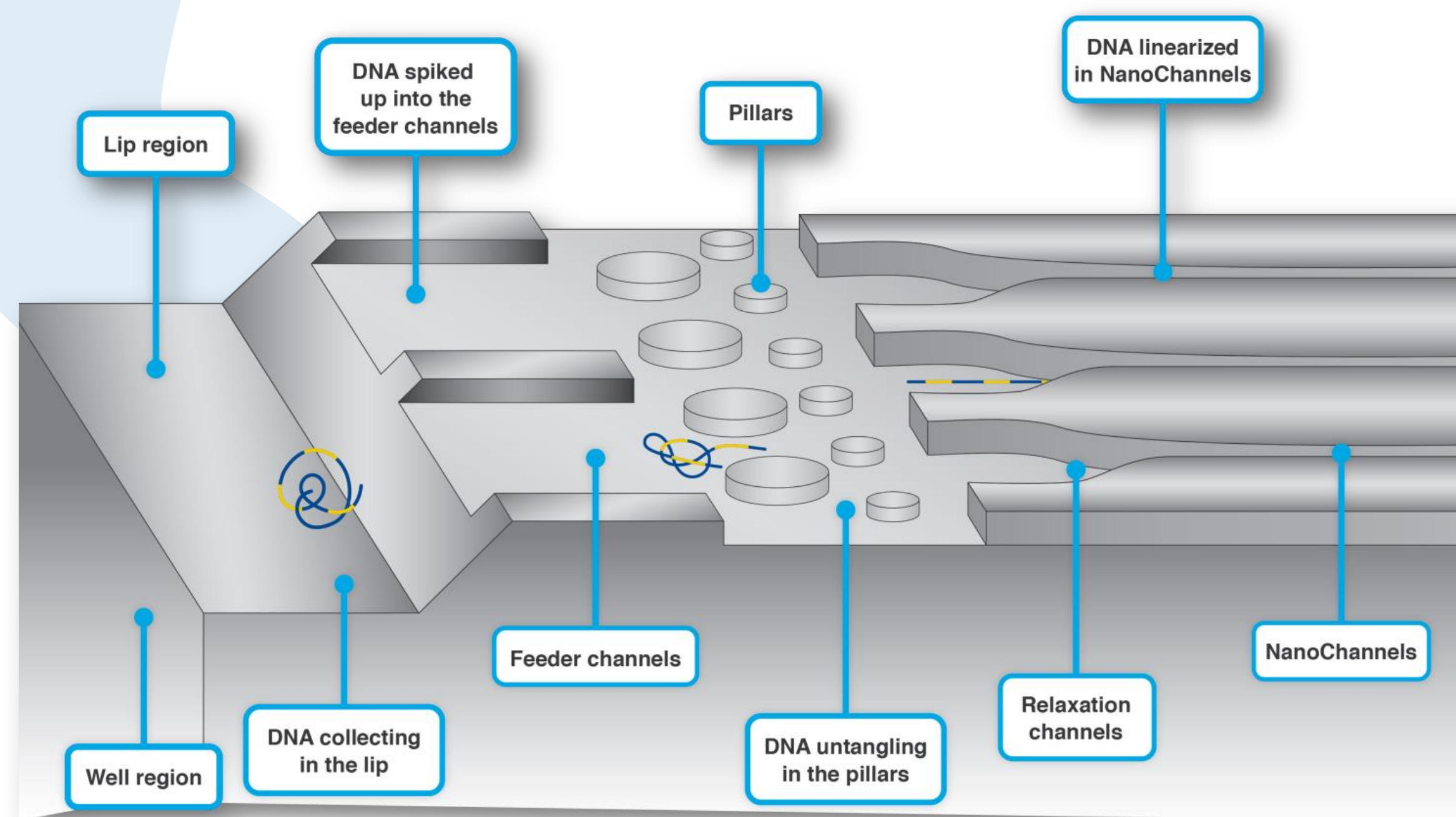


Polymerase initiates strand displacement and polymerization

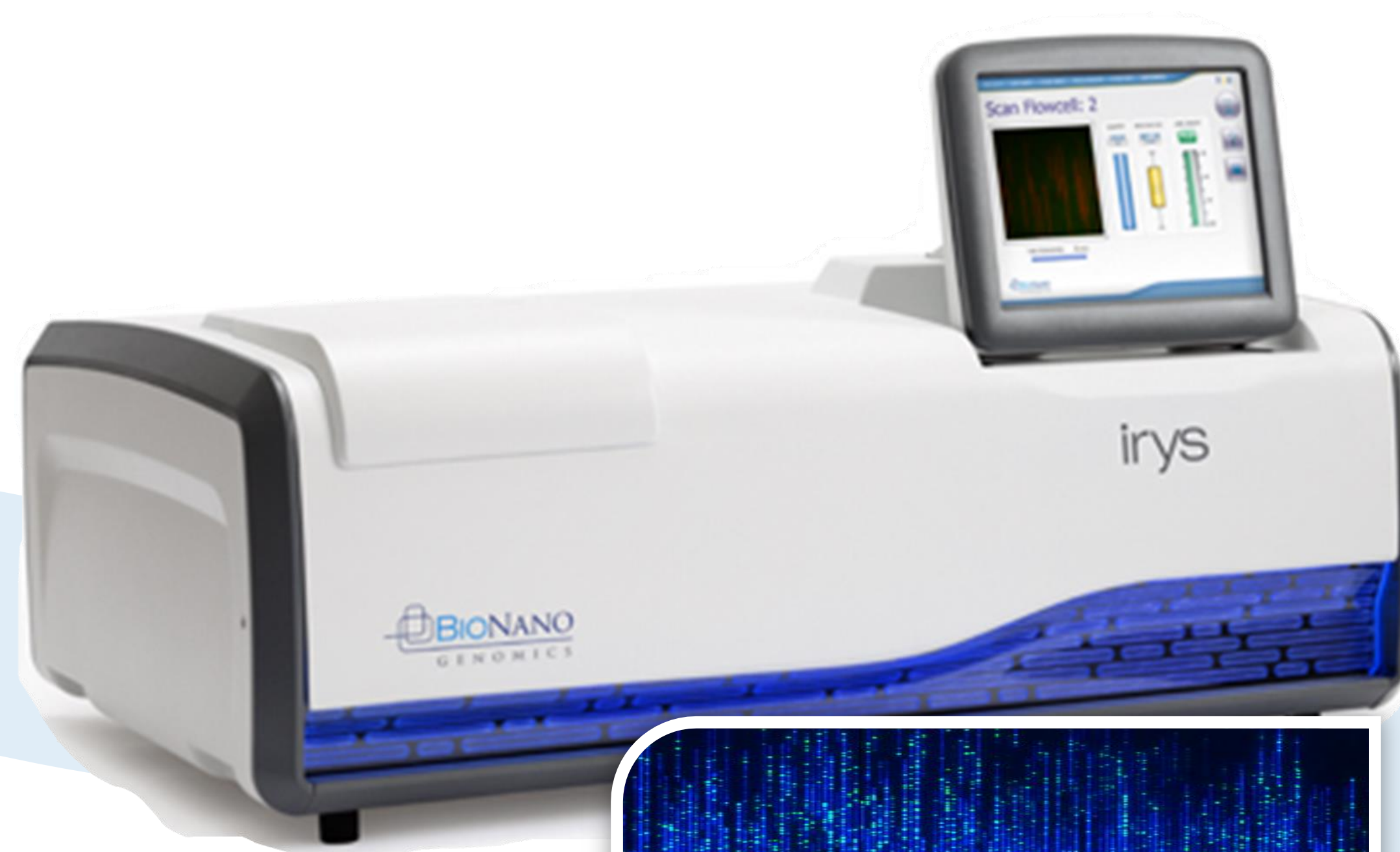
The nicked-labeled DNA is stained with YOYO-1 and loaded on a chip



Fluorescent nucleotides are incorporated to label enzyme recognition sites

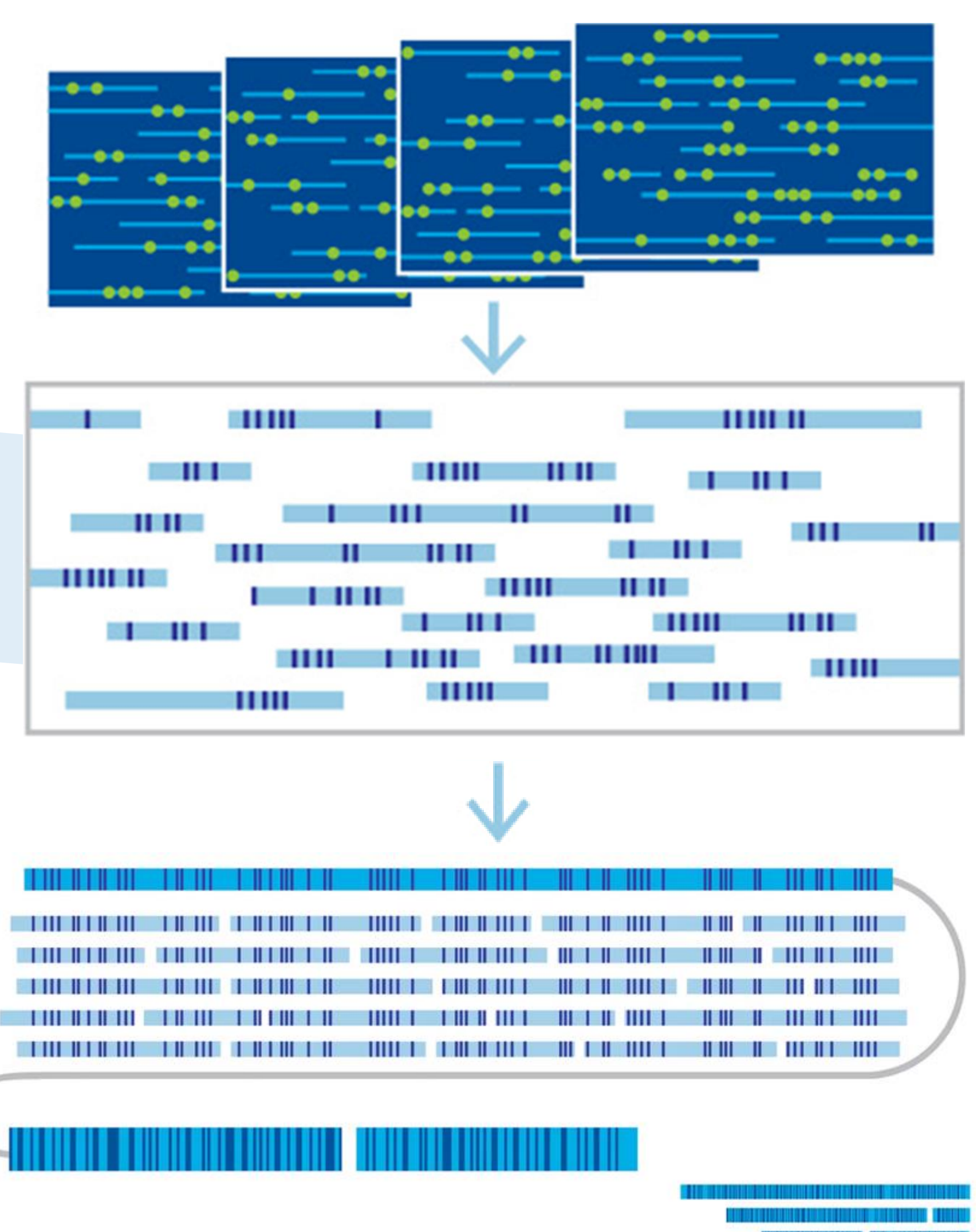


DNA molecules are linearized in the NanoChannels



The Irys System collects images of linearized DNA molecules

Algorithms convert images into digital molecules



De Novo assembly is made to construct a consensus genome map