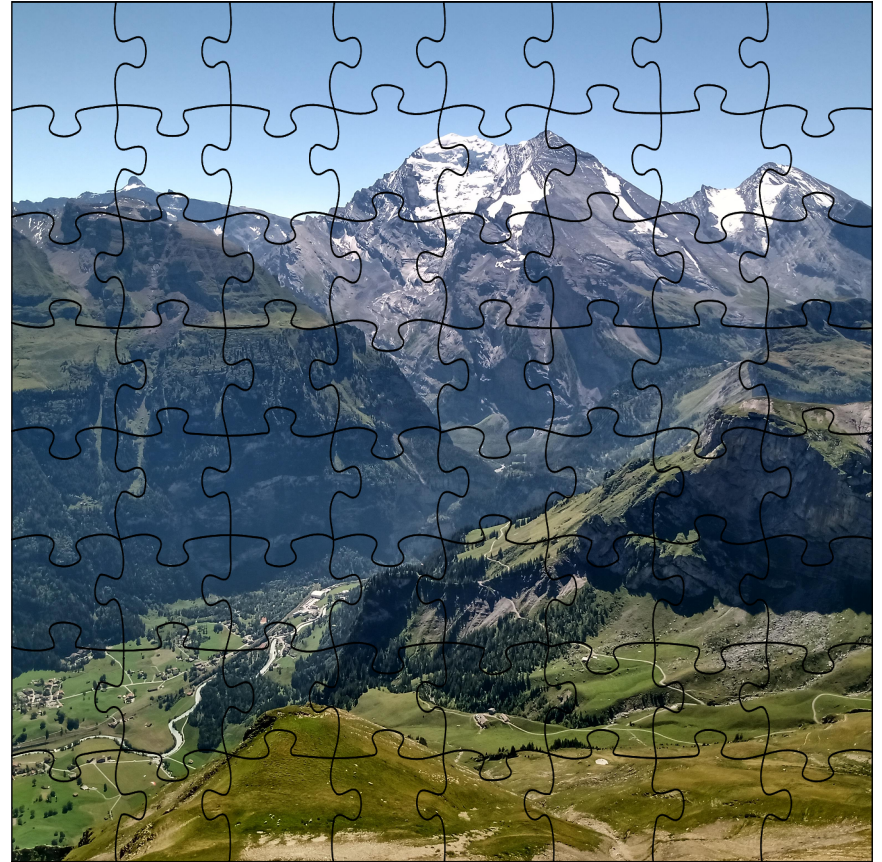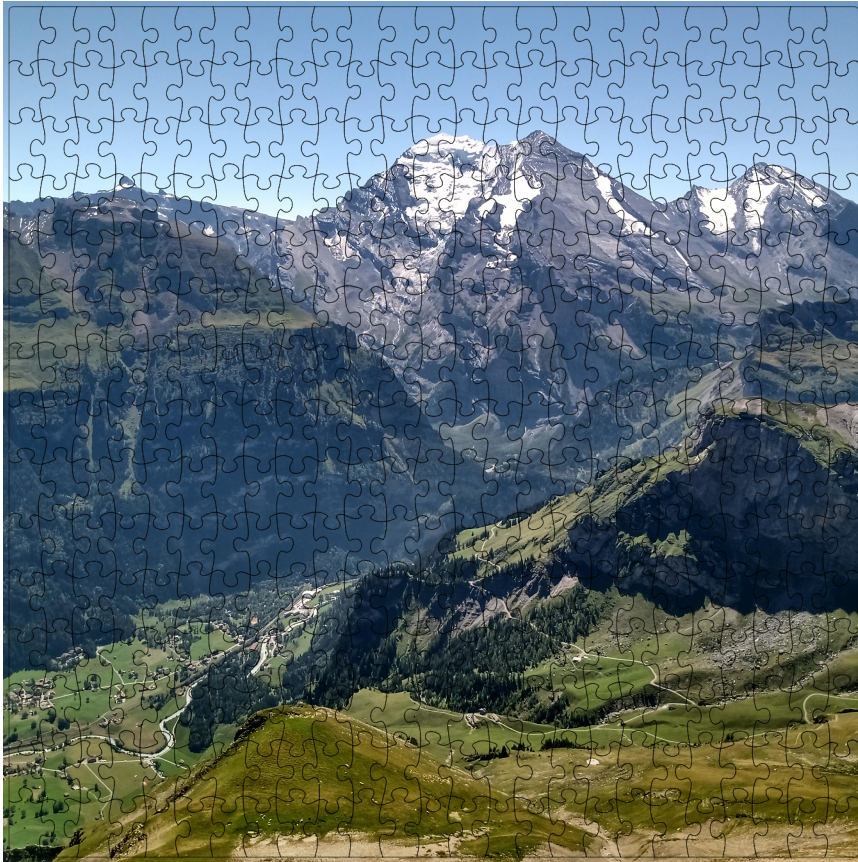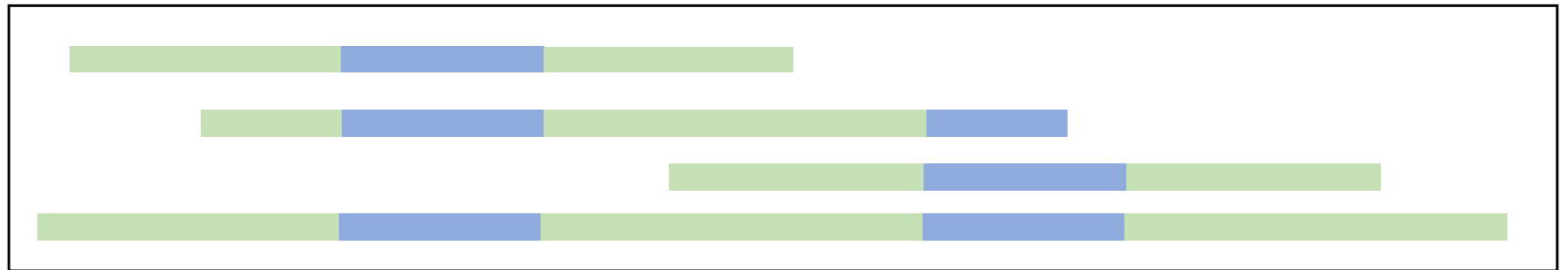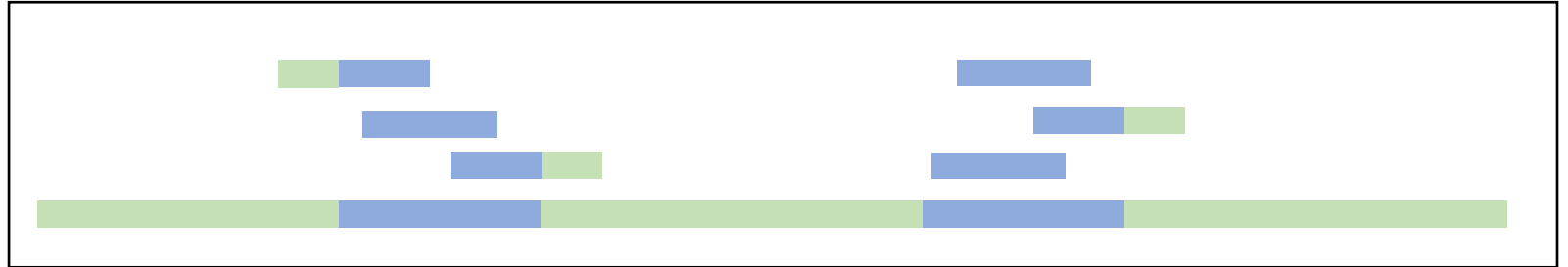# Long-read sequence analysis

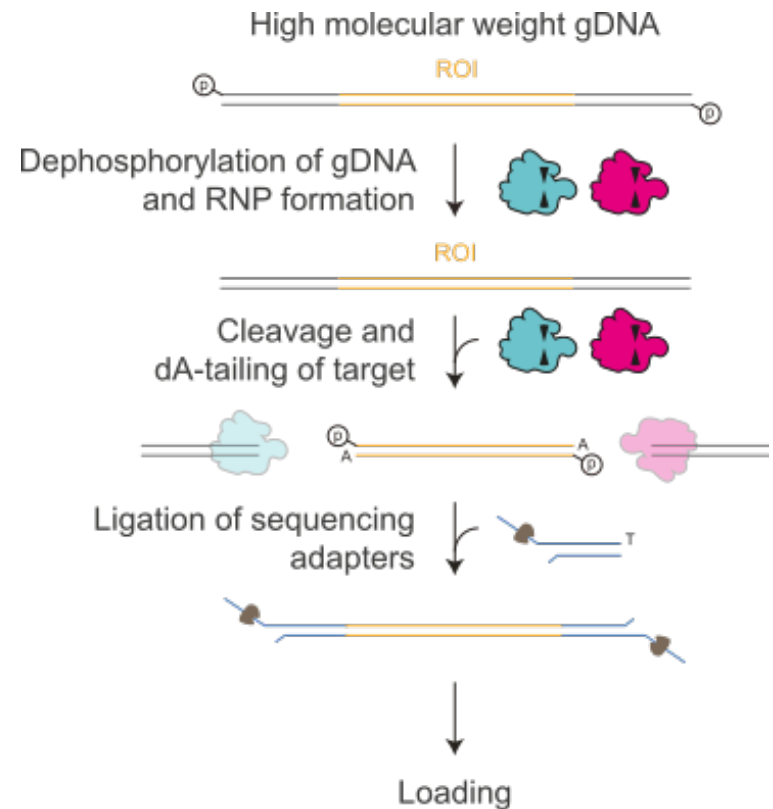**Applications**

Why long reads?

Applications

- (Genome/transcriptome) assembly
- Repeats/structural variation
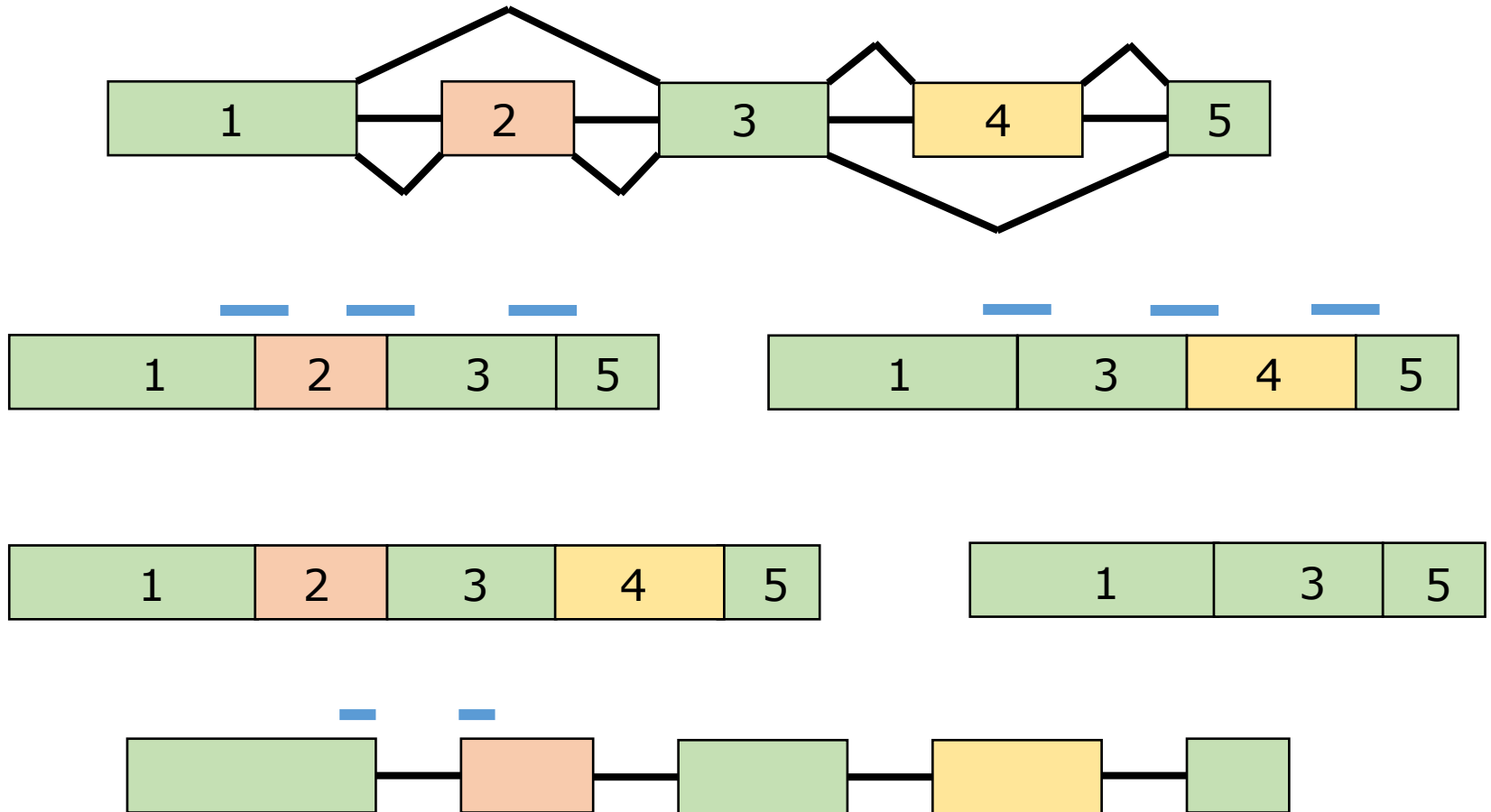- Haplotyping
- Splice variation

Mapping and assembly

New possibilities

- Cas9 based targeting (both PacBio & ONT)
- Adaptive sampling (ONT)
- Direct RNA (ONT)

High molecular weight gDNA

ROI

Dephosphorylation of gDNA and RNP formation

ROI

Cleavage and dA-tailing of target

Ligation of sequencing adapters

Loading

Isoform variation - project 1

Repeat expansion - project 2