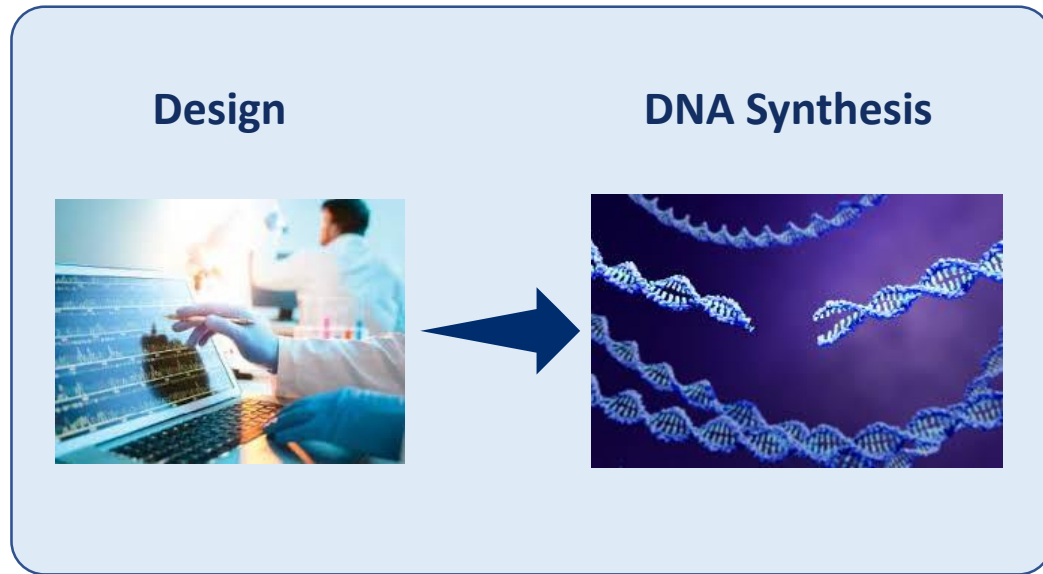


Our assembly technology



Our technology delivers high performance large DNA assembly



Therapeutics



Crops



Fuels and Chemicals



Environmental Remediation



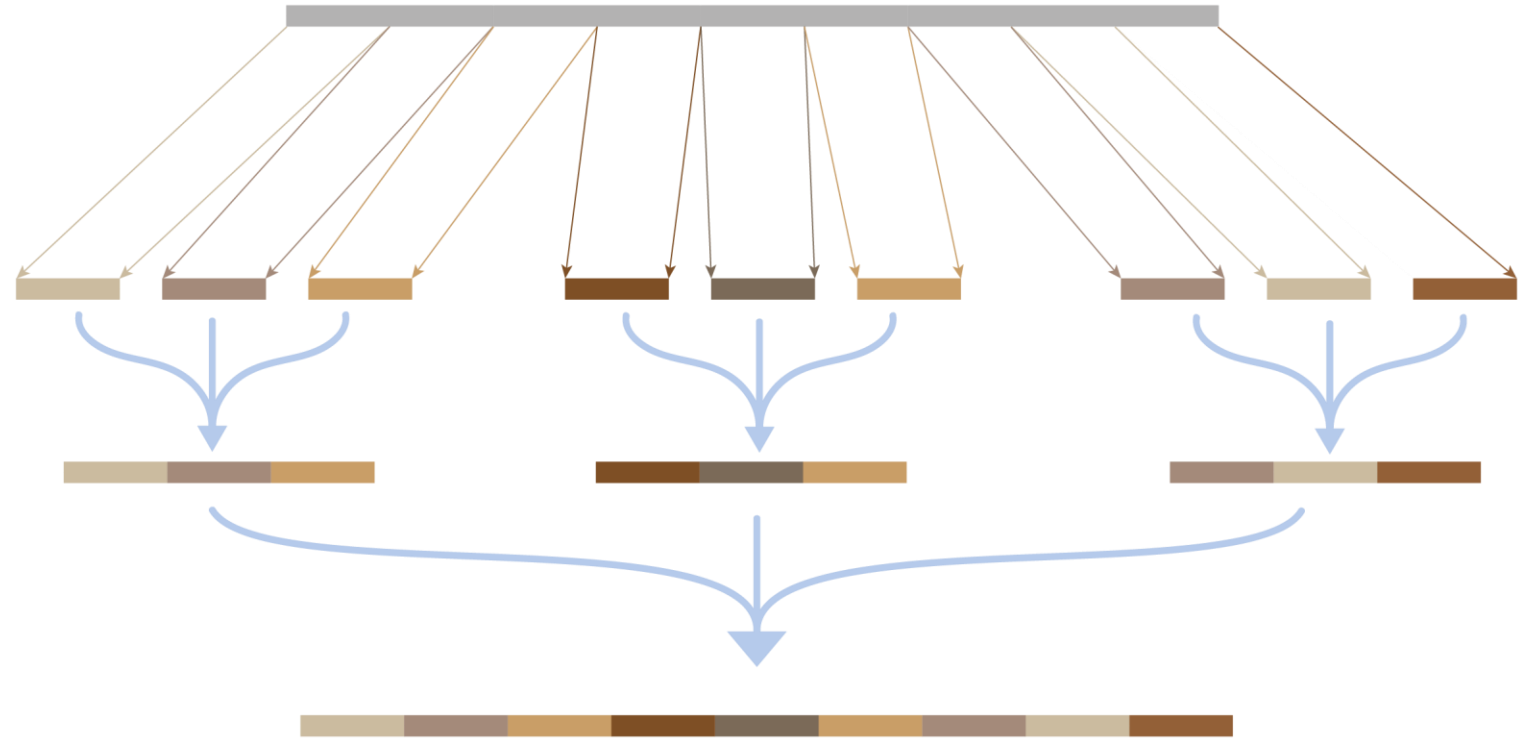
Hierarchical one-pot DNA assembly of any sequence

Sequence to be assembled

Short fragments synthesised

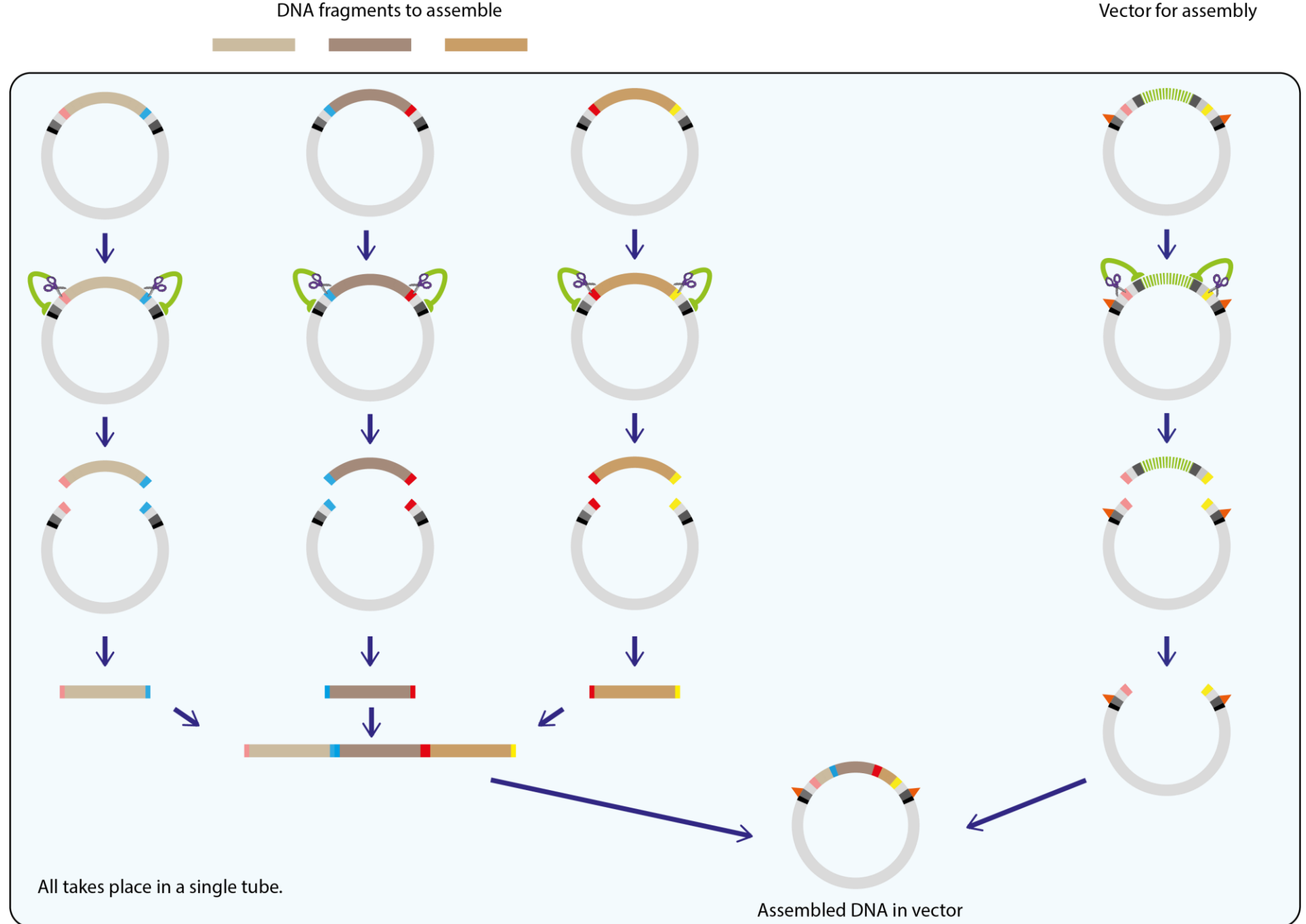
First round of assembly

Second round of assembly



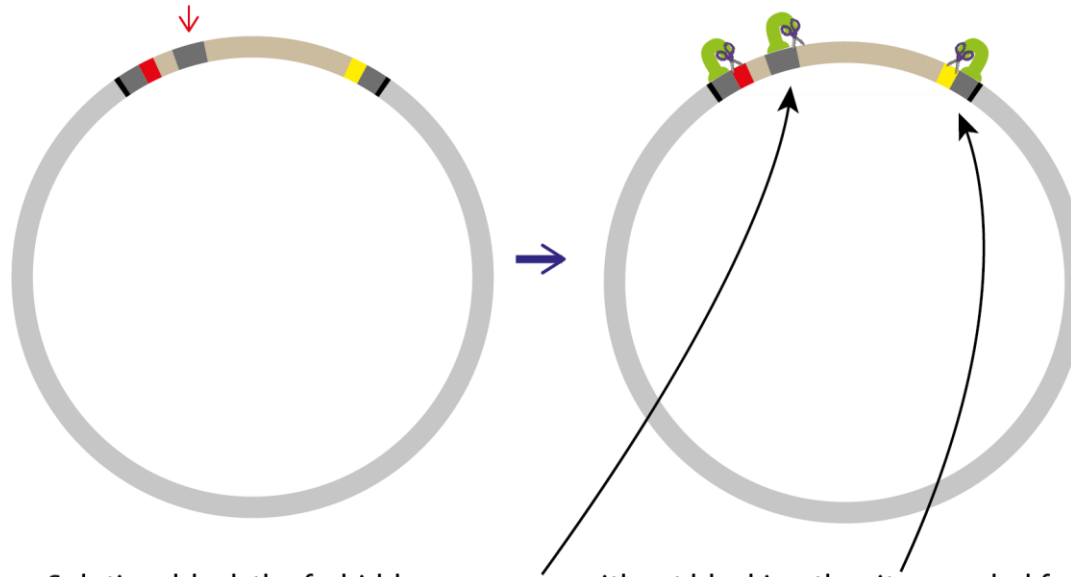
- can do multiple rounds
- assembly is a one pot reaction

1. Flexible assembly with only one type IIS restriction enzyme: Design of vectors with two outer and two inner type IIS sites. The outer are methylated and the inner cut during the assembly

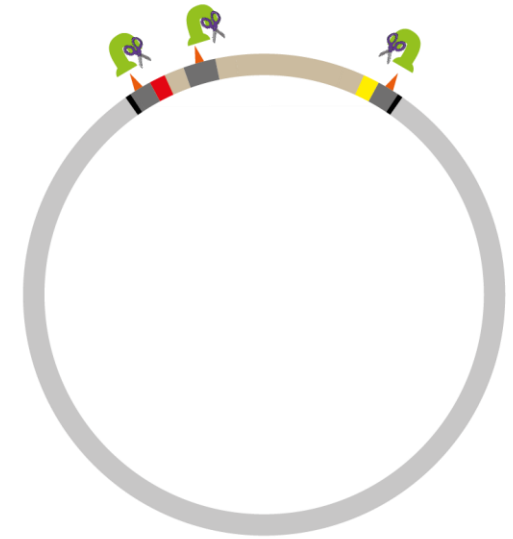


2. Assembly of fragments containing type IIS internal sites for the enzyme used during the assembly: Use of CRISPR/dCas9 to protect from methylation the flanking sites required for the assembly and methylases to methylate the internal sites

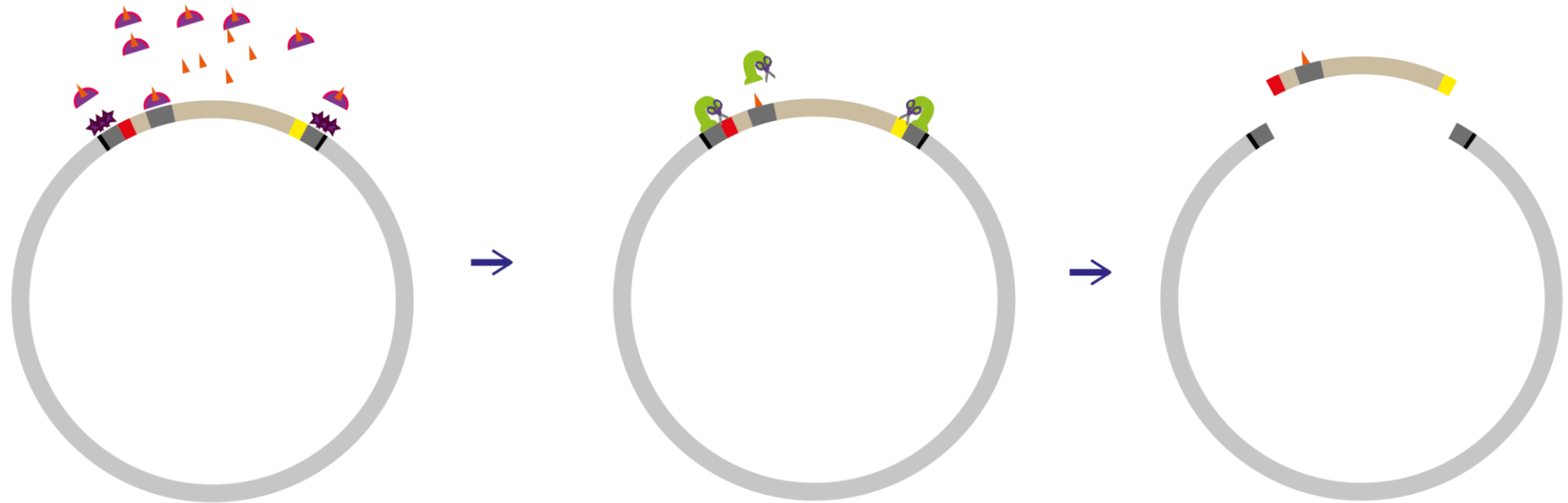
Problem: a forbidden sequence (↓) causes cutting up of the DNA to be assembled



All sites can be blocked, but then no fragment can be cut out



Solution: block the forbidden sequence without blocking the sites needed for the assembly process



Site specific protector prevents blocking