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### Activate

Transcriptional activator protein

CRISPR Transcriptional Activation

Catalytically inactive Cas9

gRNA

Target sequence

PAM sequence

Promoter

Gene of interest

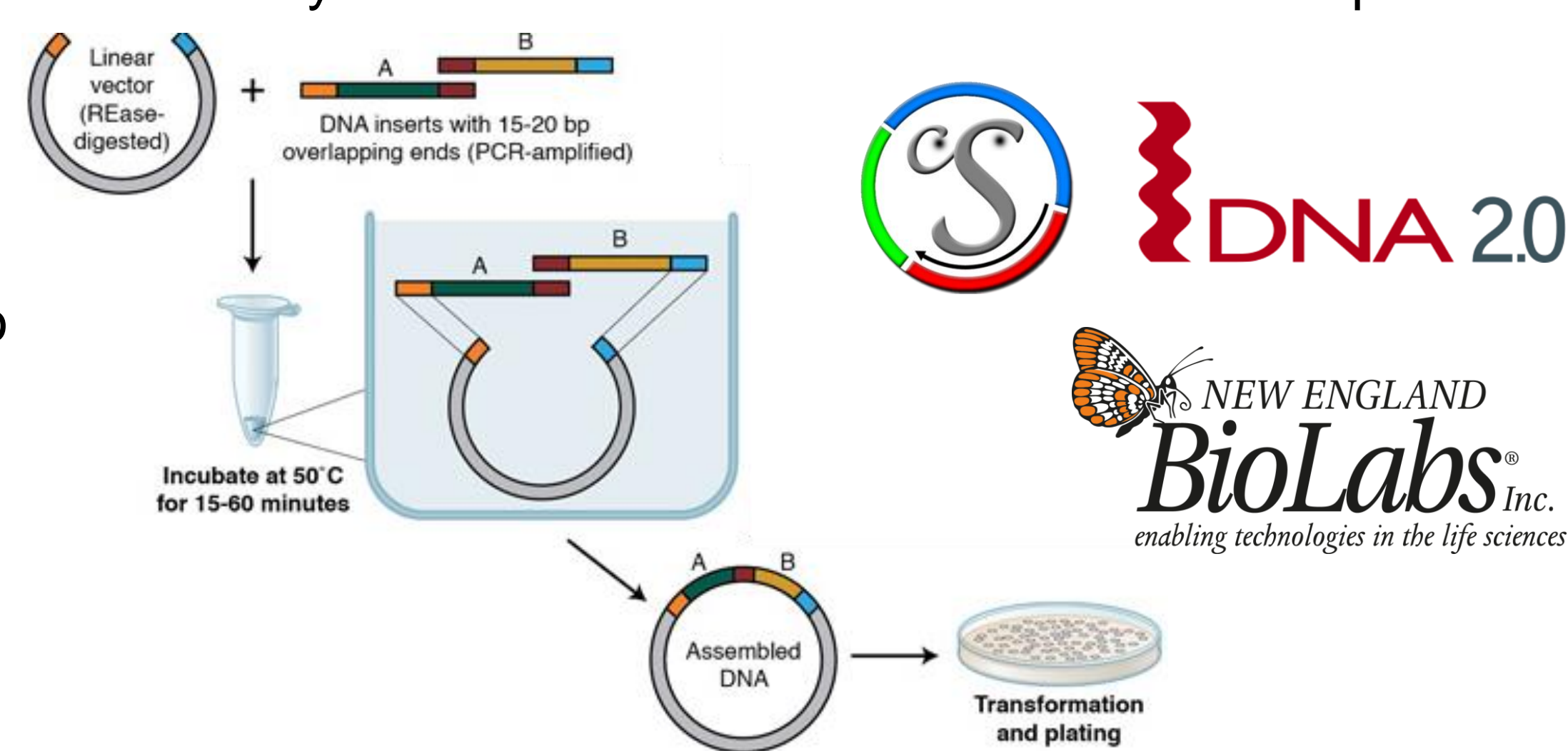
RNA Pol II

VP64

dCas9

Gene of interest

- Identify promoter and plasmid fragment to be amplified using NCBI gene bank
- Design primers to amplify required fragments
- Visualize promoter vector
- Design gRNA's to drive promoter region
- PCR to amplify desired fragments using designed primers
- Assemble fragments using Gibson Assembly
- Deliver promoter plasmid into bacterium
- Plate cells for multiplication /examine colonies
- Tranfect into cells
- Gene expression analysis
- GFP expression using a varying amount of CRISPR plasmid



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