

Molecular Techniques



What is PCR?

Polymerase

Chain

Reaction

Also check out this link for more in depth info about PCR [Polymerase Chain Reaction \(PCR\) - StatPearls - NCBI Bookshelf \(nih.gov\)](https://www.ncbi.nlm.nih.gov/pubs/bookshelf/2007/PCR.pdf)

Master molecular biology



SCHOOL
OF
MOLECULAR BIOLOGY

PCR



- PCR basics
- PCR setup
- PCR cycling parameters
- PCR enzyme attributes
- PCR methods
- PCR applications
- PCR troubleshooting

Bacterial transformation and competent cells



- Overview
- Transformation workflow
- Competent cell considerations
- Competent cell selection by applications
- Transformation troubleshooting
- Competent cell genotypes

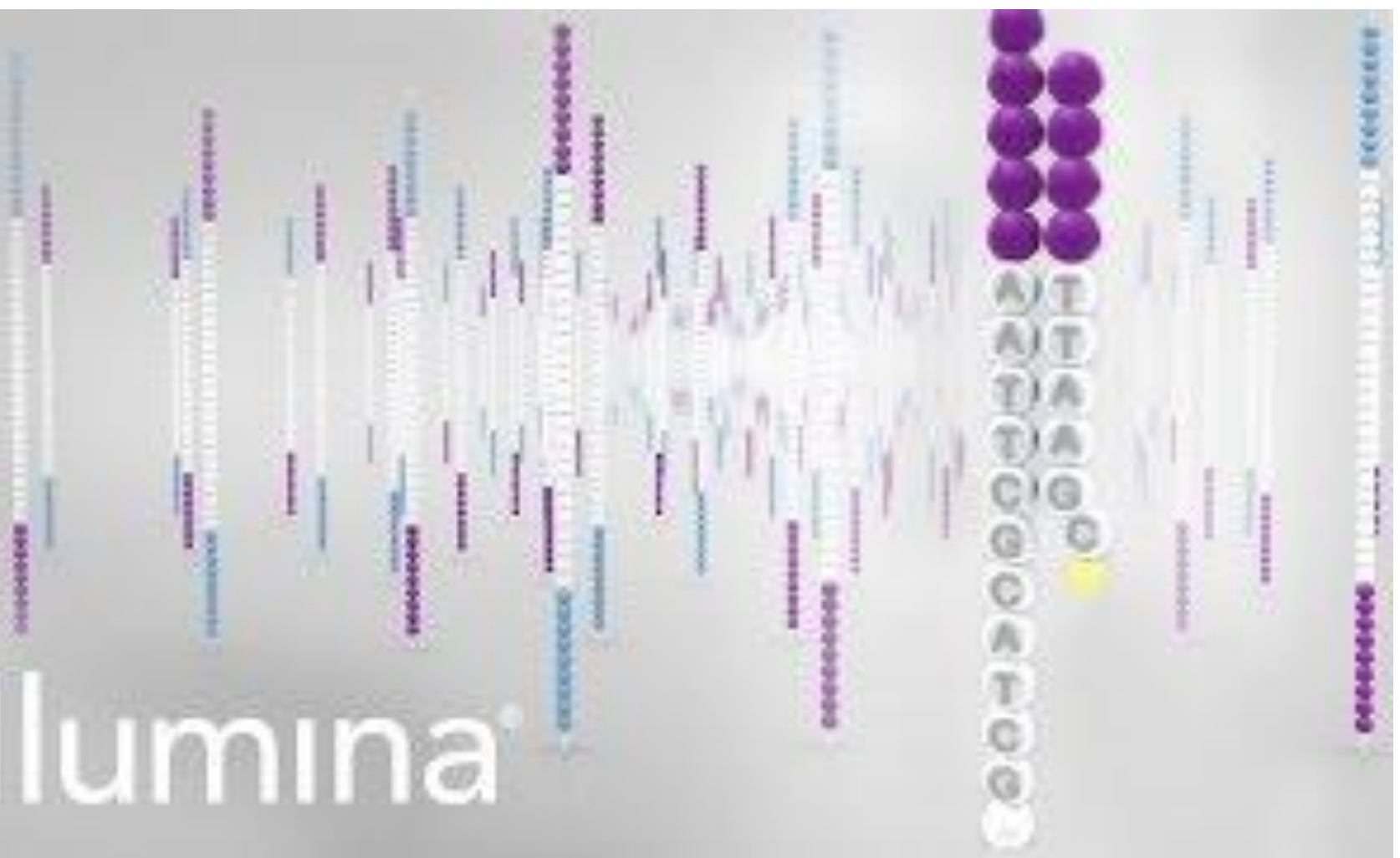
Please checkout the [PCR](#) and [Bacterial transformation and competent cells](#) sections of the ThermoFisher Scientific Molecular Biology Education Website

[Molecular Biology Education | Thermo Fisher Scientific - US](#)



What is Sanger Sequencing?

illumina



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A Detailed Look at Gibson Assembly

Exonuclease chews back 5' ends



Fragments anneal



Final Product



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Detailed Look at Golden Gate Assembly

reaction

of interest with Type IIS restriction sites

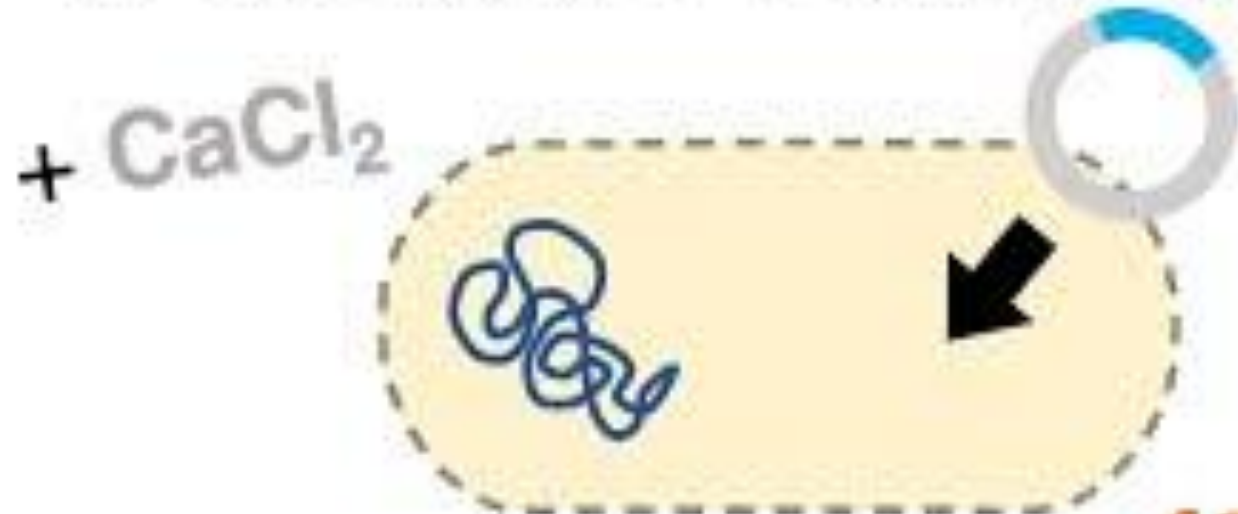
Insert 1

Insert 2

Type IIS
Enzyme

DNA Ligase

Heat-Shock



Transformation



addgene

**AGAROSE
GEL**

ELECTROPHORESIS

SDS-PAGE

