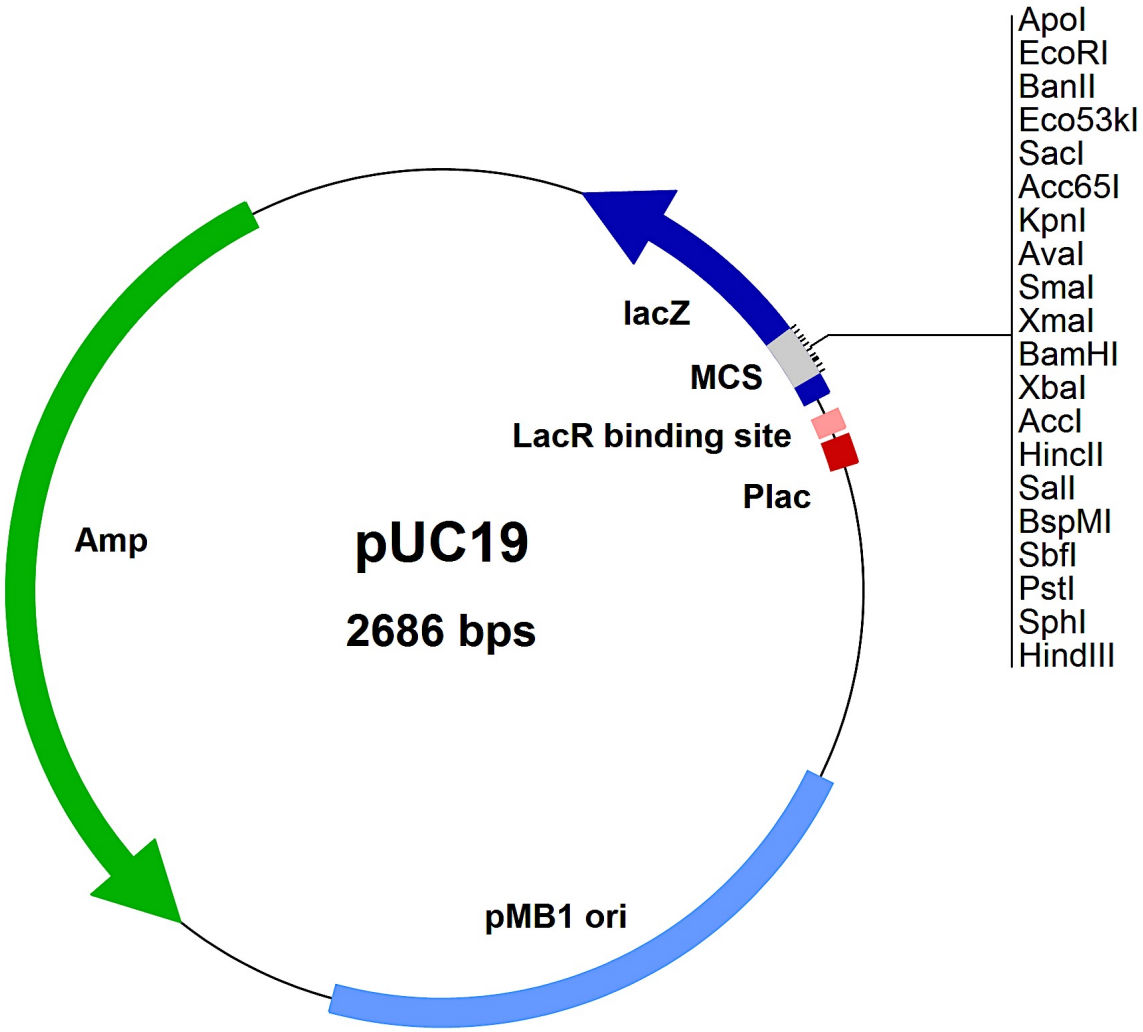
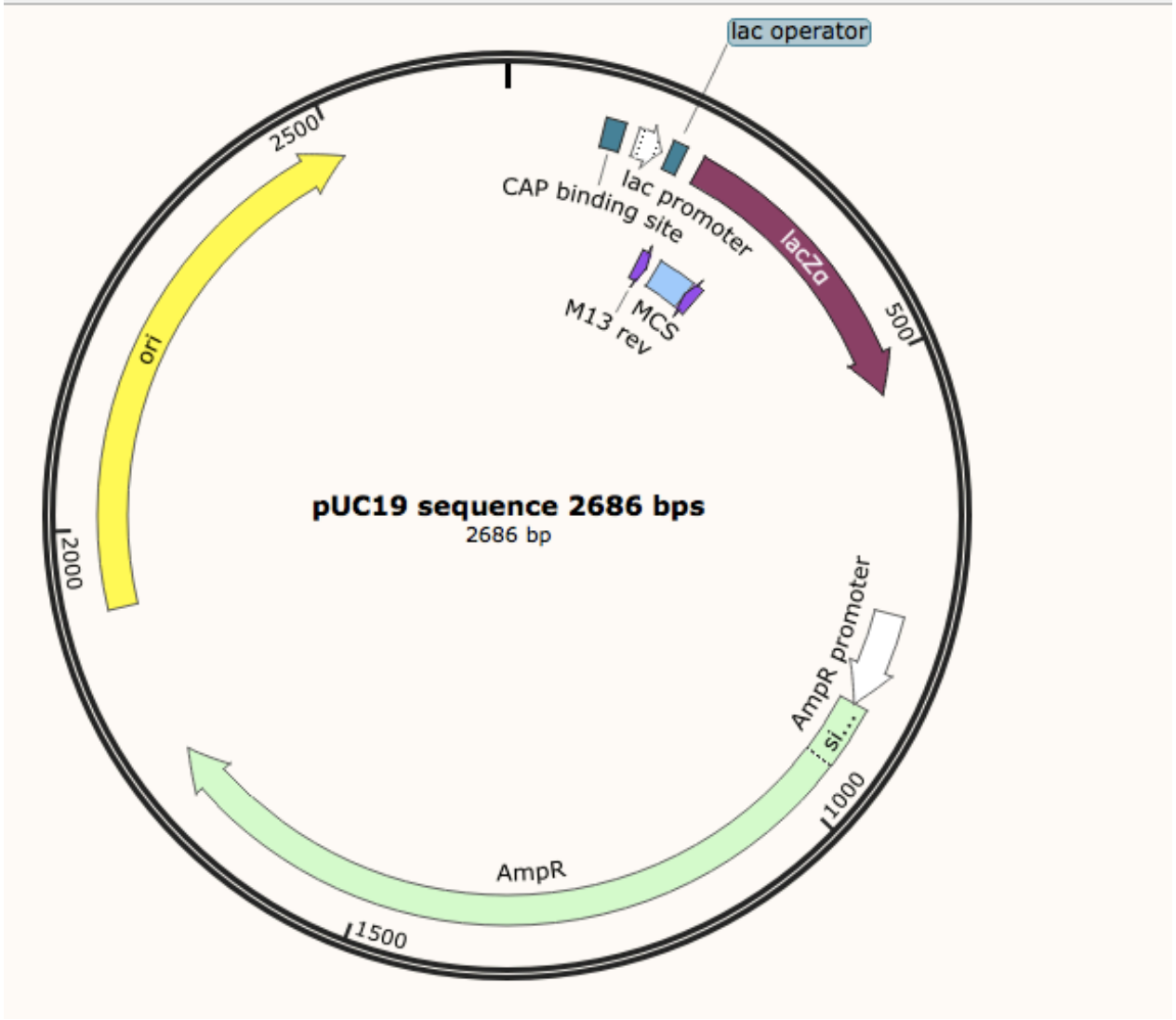
Cloning vectors

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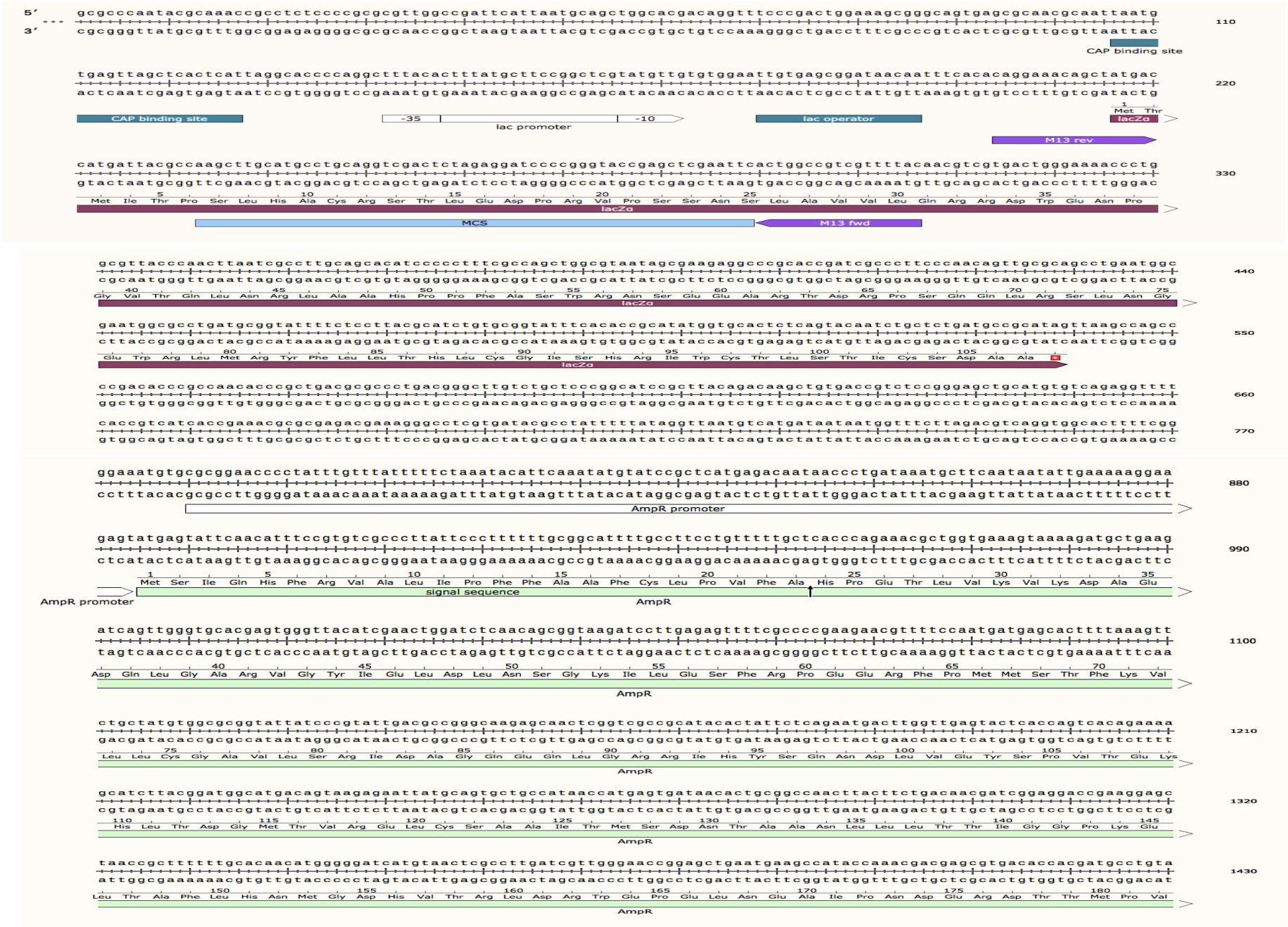
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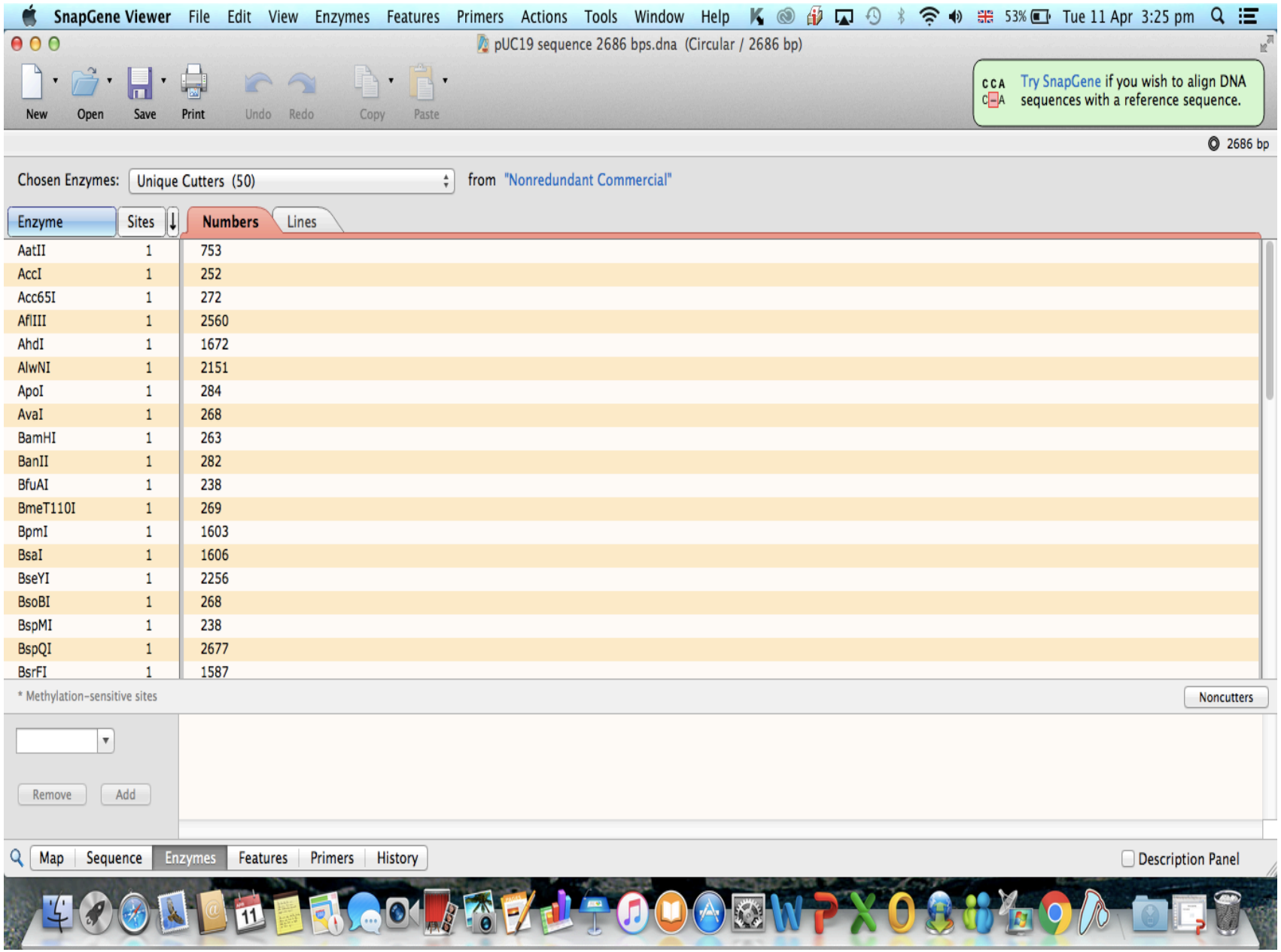
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- The useful properties of pBR322

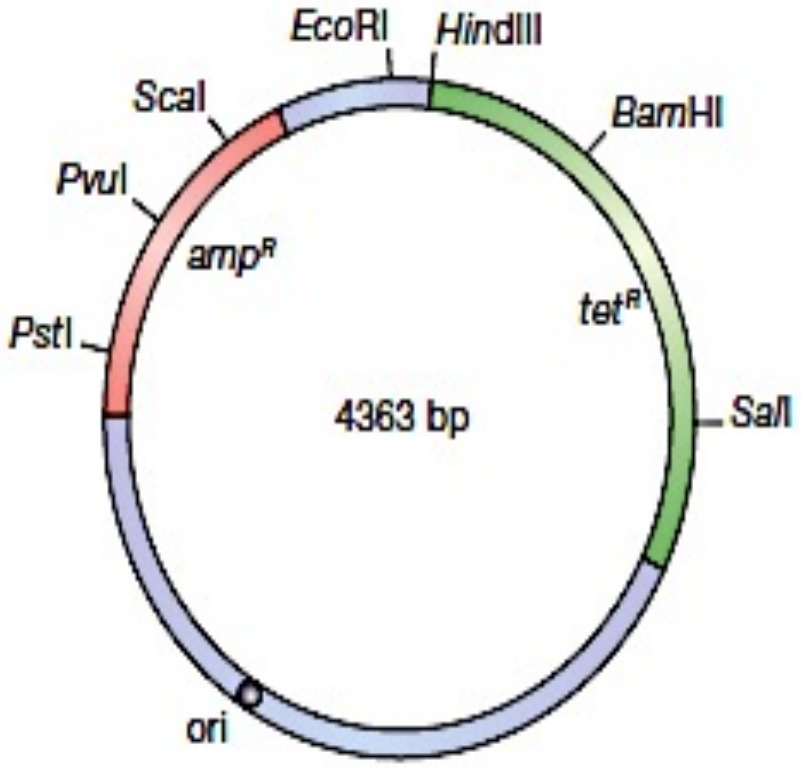
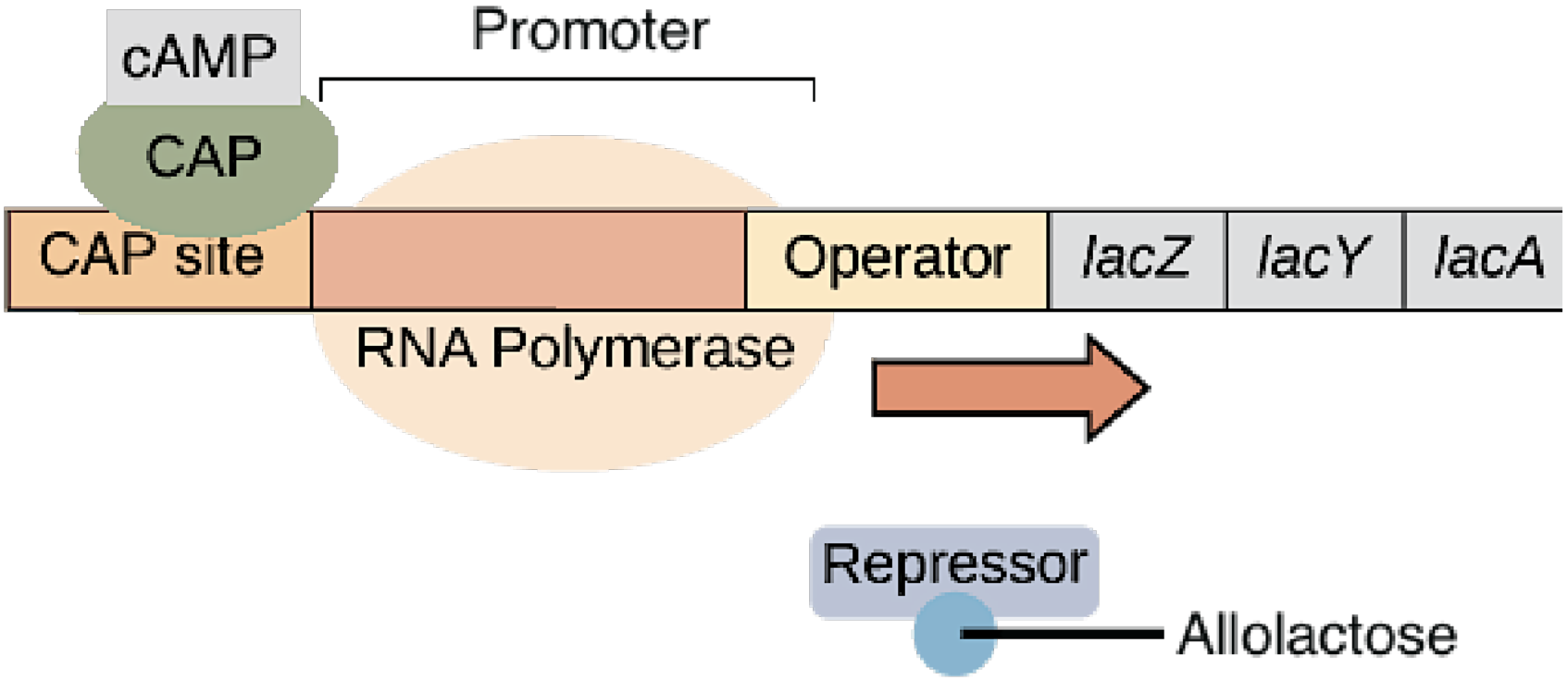


Figure 6.1

A map of pBR322 showing the positions of the ampicillin resistance (amp^R) and tetracycline resistance (tet^R) genes, the origin of replication (ori) and some of the most important restriction sites.

ilucose absent, lactose present:



- pUC8- aLac selection plasmid

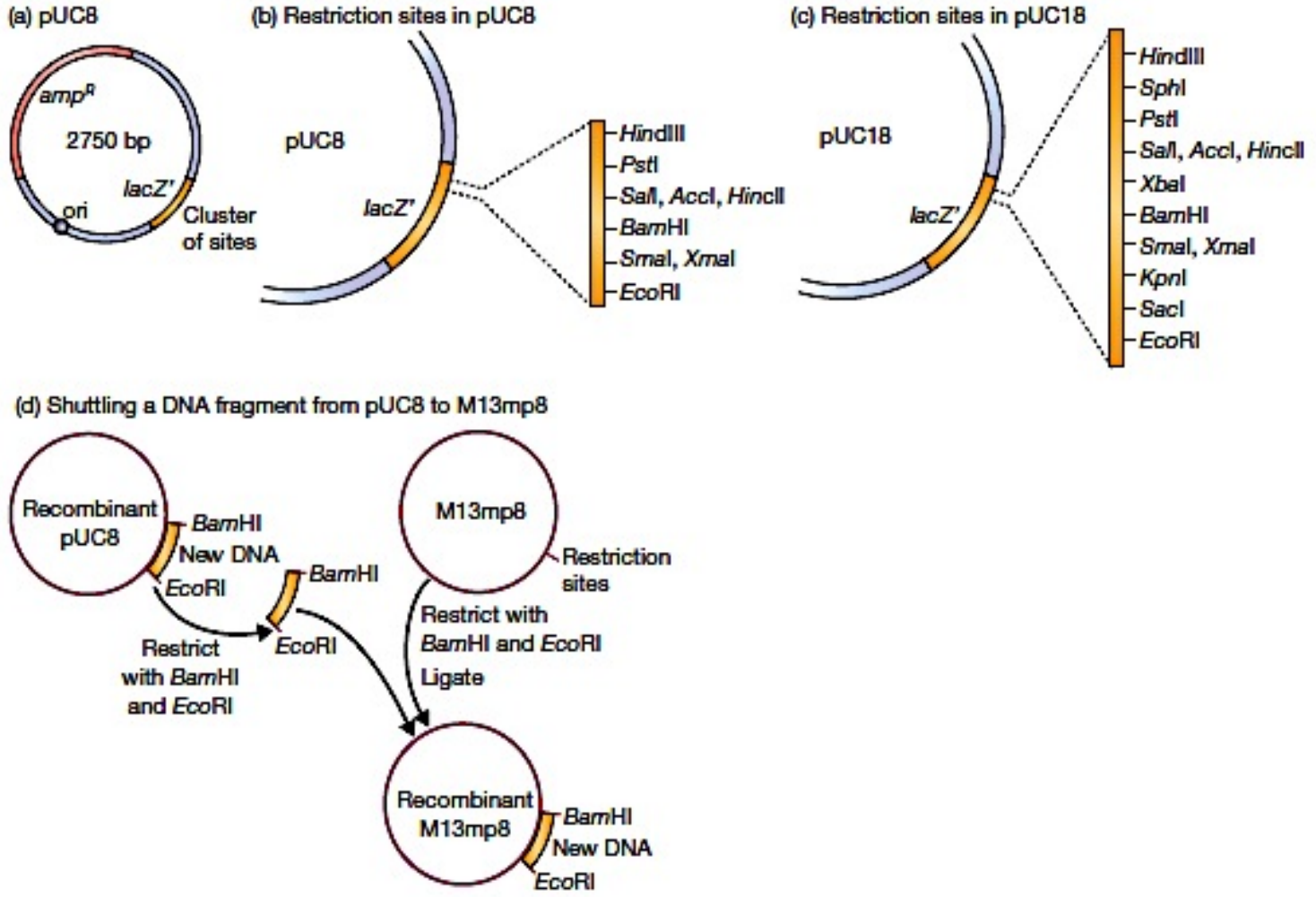
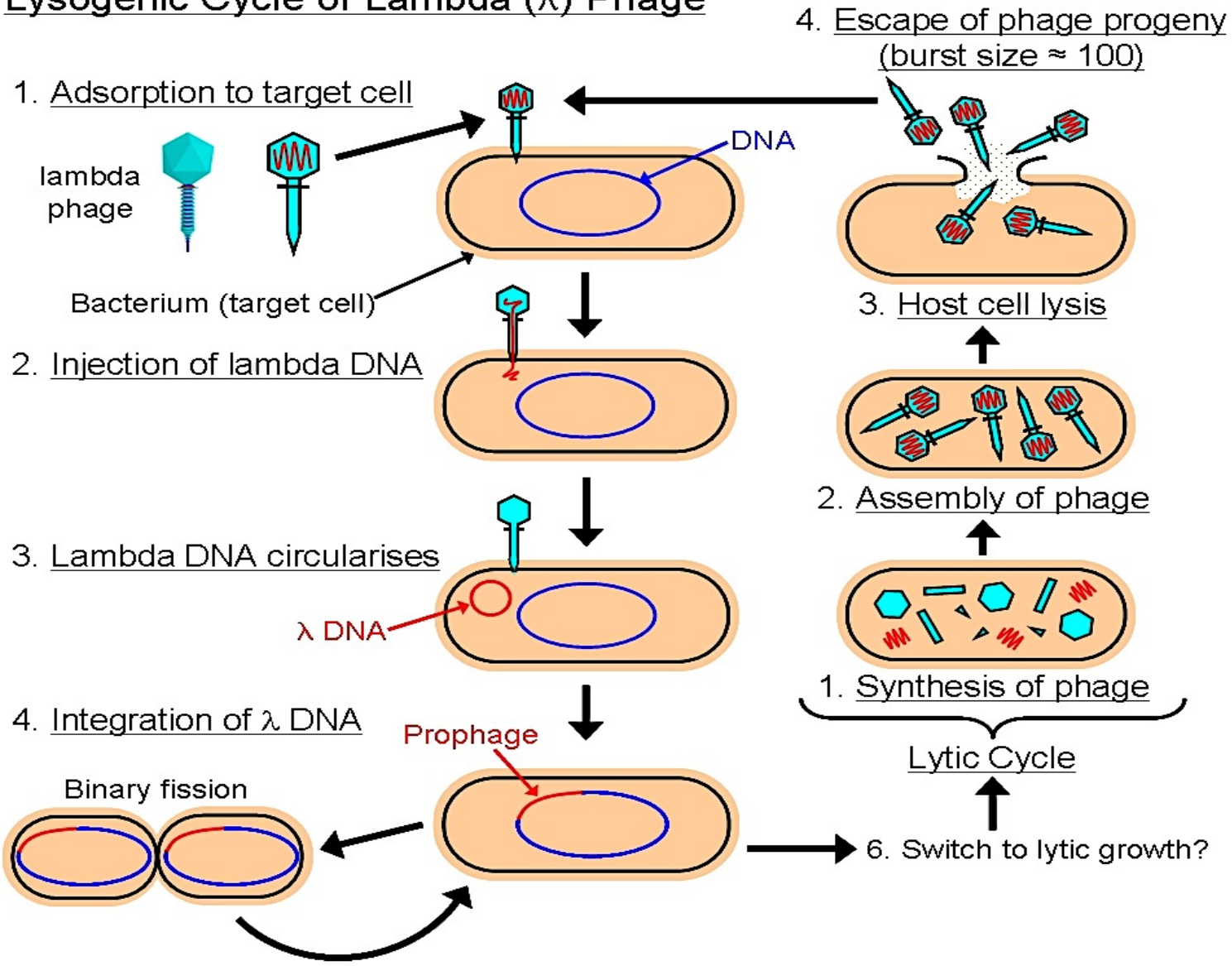


Figure 6.3

The pUC plasmids. (a) The structure of pUC8. (b) The restriction site cluster in the *lacZ'* gene of pUC8. (c) The restriction site cluster in pUC18. (d) Shuttling a DNA fragment from pUC8 to M13mp8.

- Blue-white screen

Lysogenic Cycle of Lambda (λ) Phage



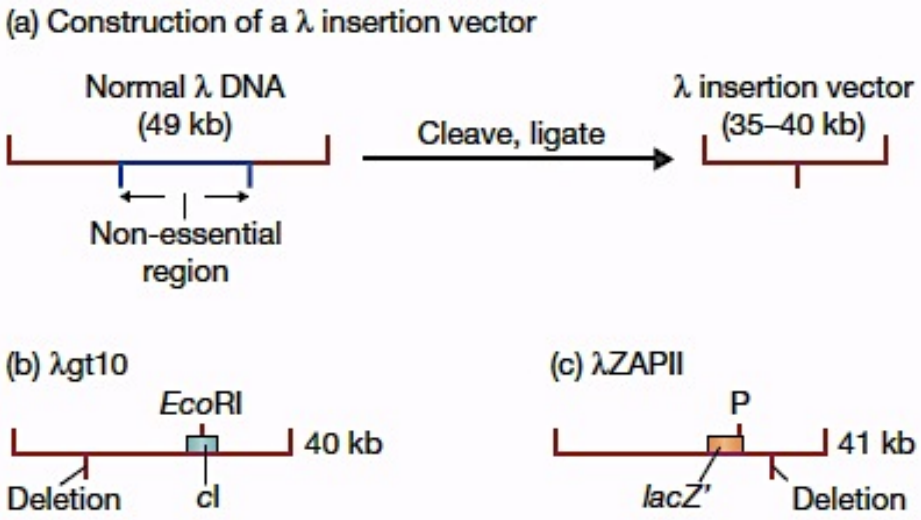


Figure 6.12

λ insertion vectors. P = polylinker in the *lacZ′* gene of λZAPII, containing unique restriction sites for *Sac*I, *Not*I, *Xba*I, *Spe*I, *Eco*RI, and *Xho*I.

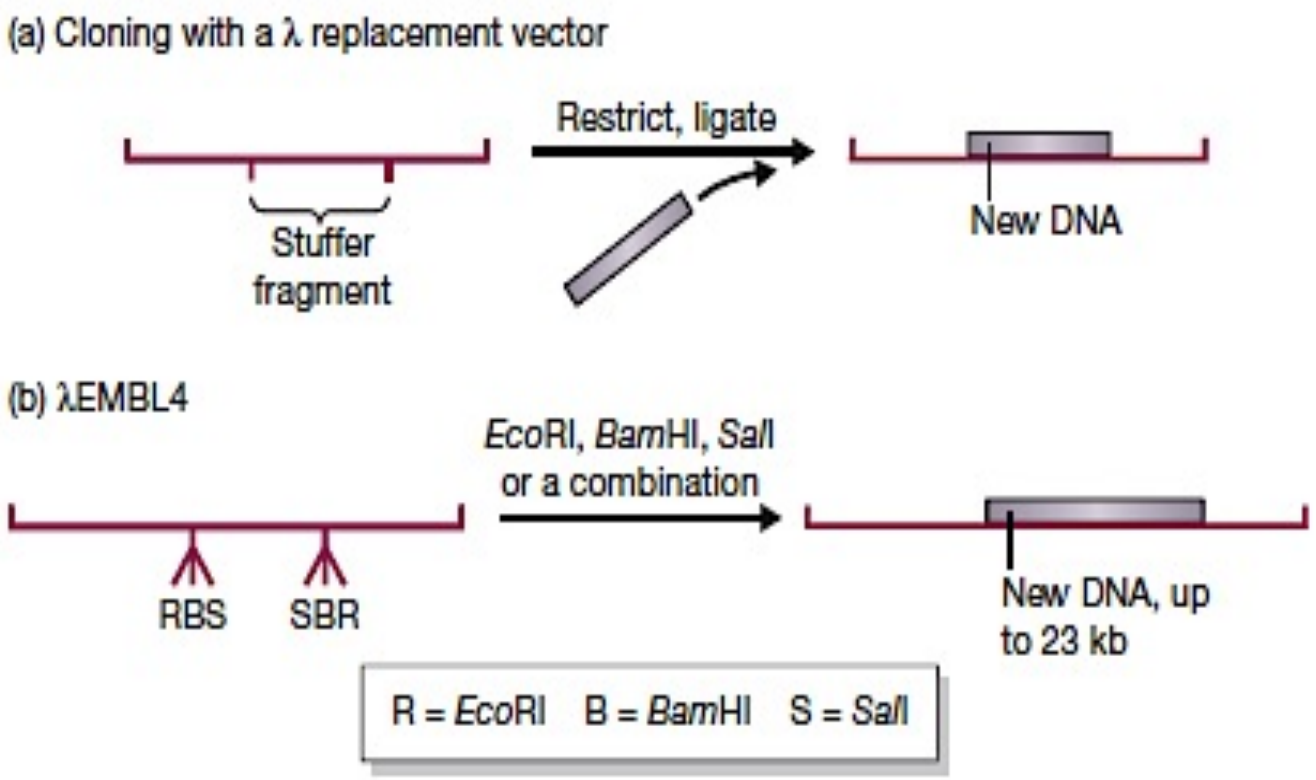


Figure 6.13

λ replacement vectors. (a) Cloning with a λ replacement vector. (b) Cloning with λEMBL4.

- Cosmid

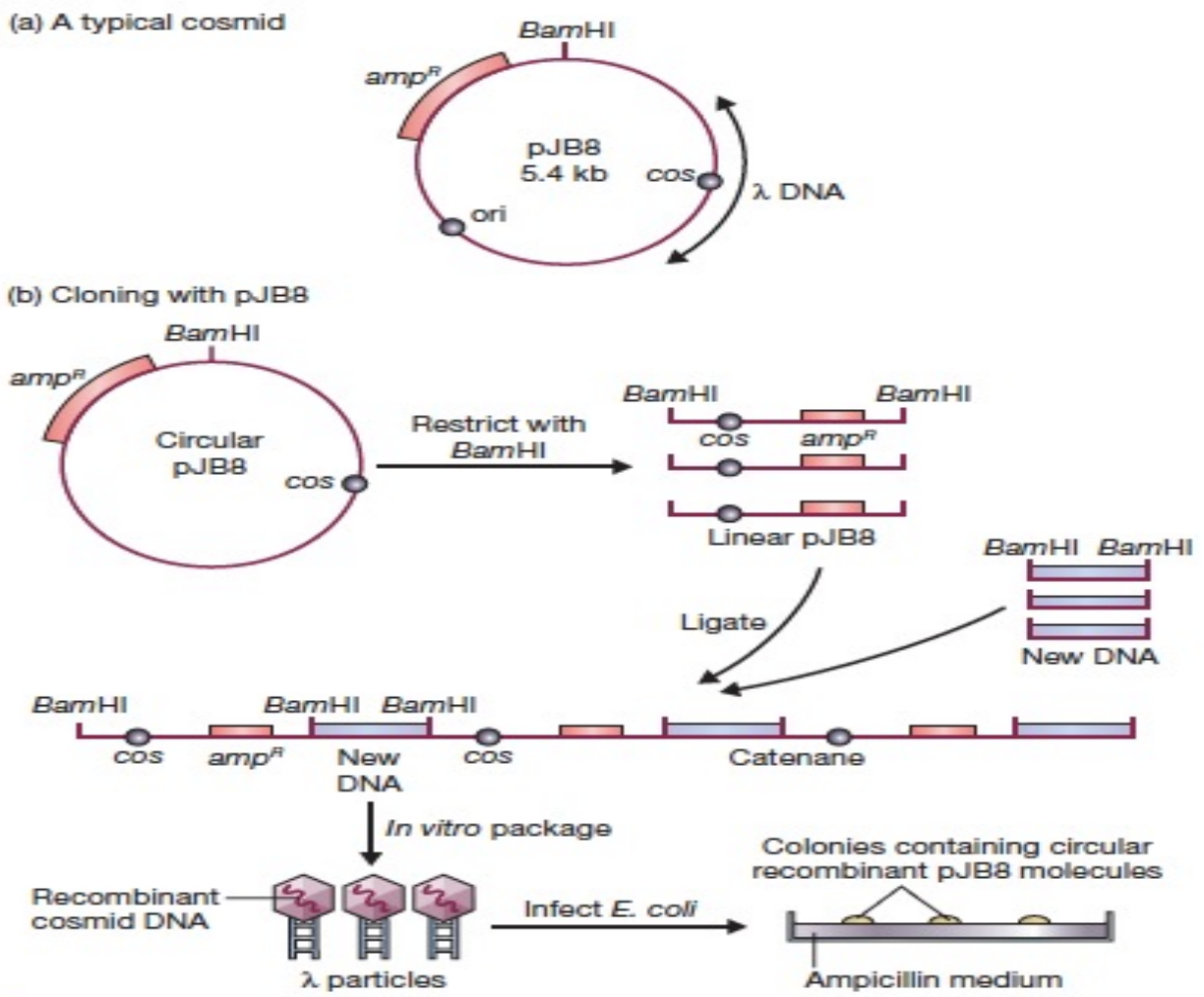


Figure 6.15

A typical cosmid and the way it is used to clone long fragments of DNA.