

Student Learning Objectives

By the end of this class you should understand the following:

- The concept and mechanics of cloning
- The purpose and methodology of gene cloning using restriction enzymes
- Methods relating to keeping libraries of genes
- The purpose and mechanics of PCR
- The purpose and conceptual operation of a Southern blot and microarray analysis

Support videos:

- PCR
 - http://www.youtube.com/watch?v=_YgXcJ4n-kQ
- TED
 - <http://www.youtube.com/watch?v=u8bsCiq6hvM>

Vocabulary:

- Clone
 - Embryo splitting
 - Nuclear transfer
 - Enucleated egg
- Recombinant DNA technology
 - Restriction enzyme
 - DNA ligase
 - Bacterial plasmid
 - Vector
 - Genomic library
 - Yeast artificial chromosome
- Polymerase chain reaction (PCR)
 - Probe
 - Taq DNA Polymerase
- Genetic Analysis
 - Southern blot
 - DNA microarray
 - cDNA