

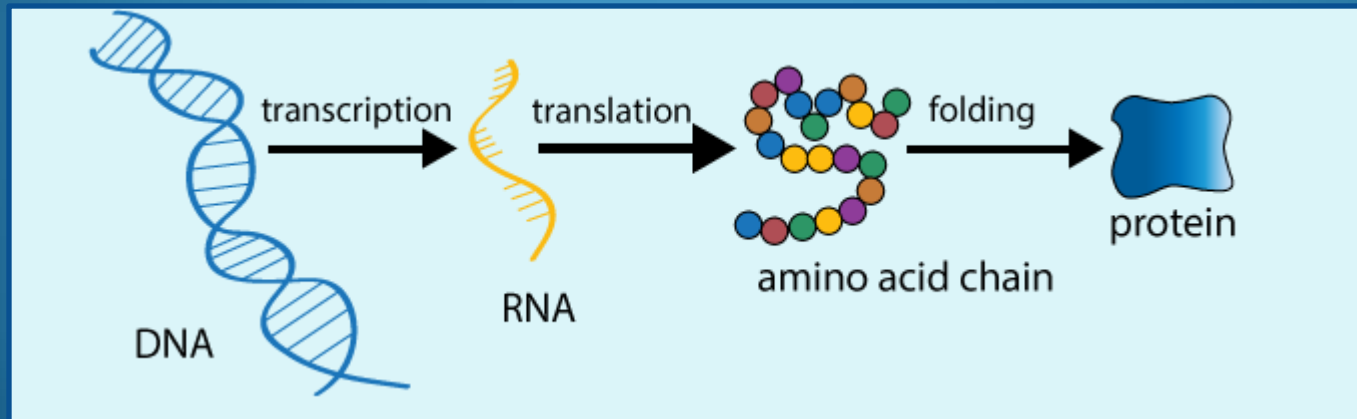
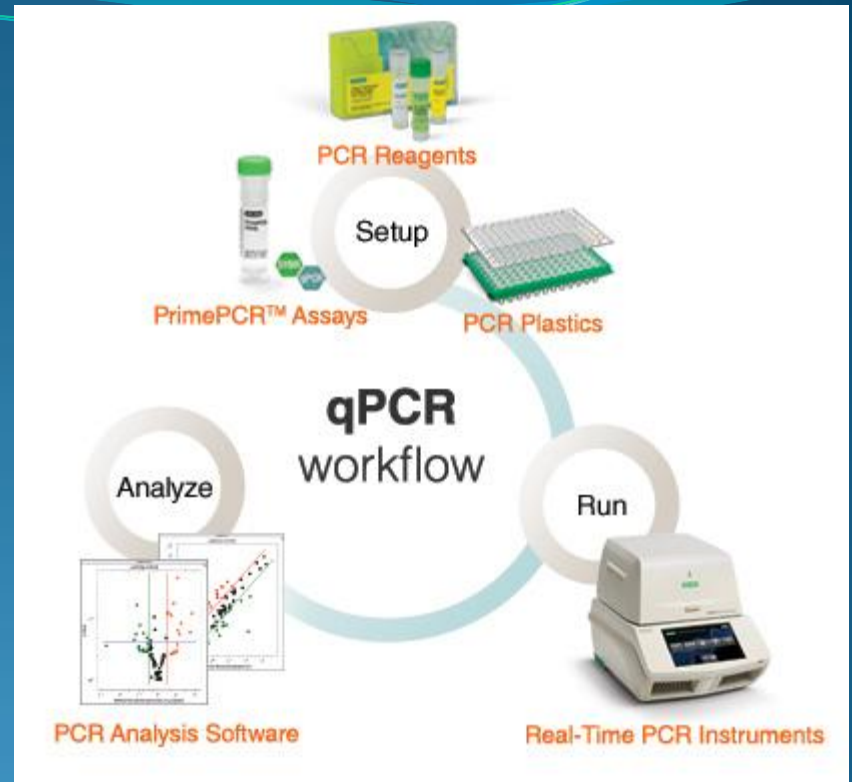
Different Applications of Real Time PCR

By
Dr/ Rania Ewida

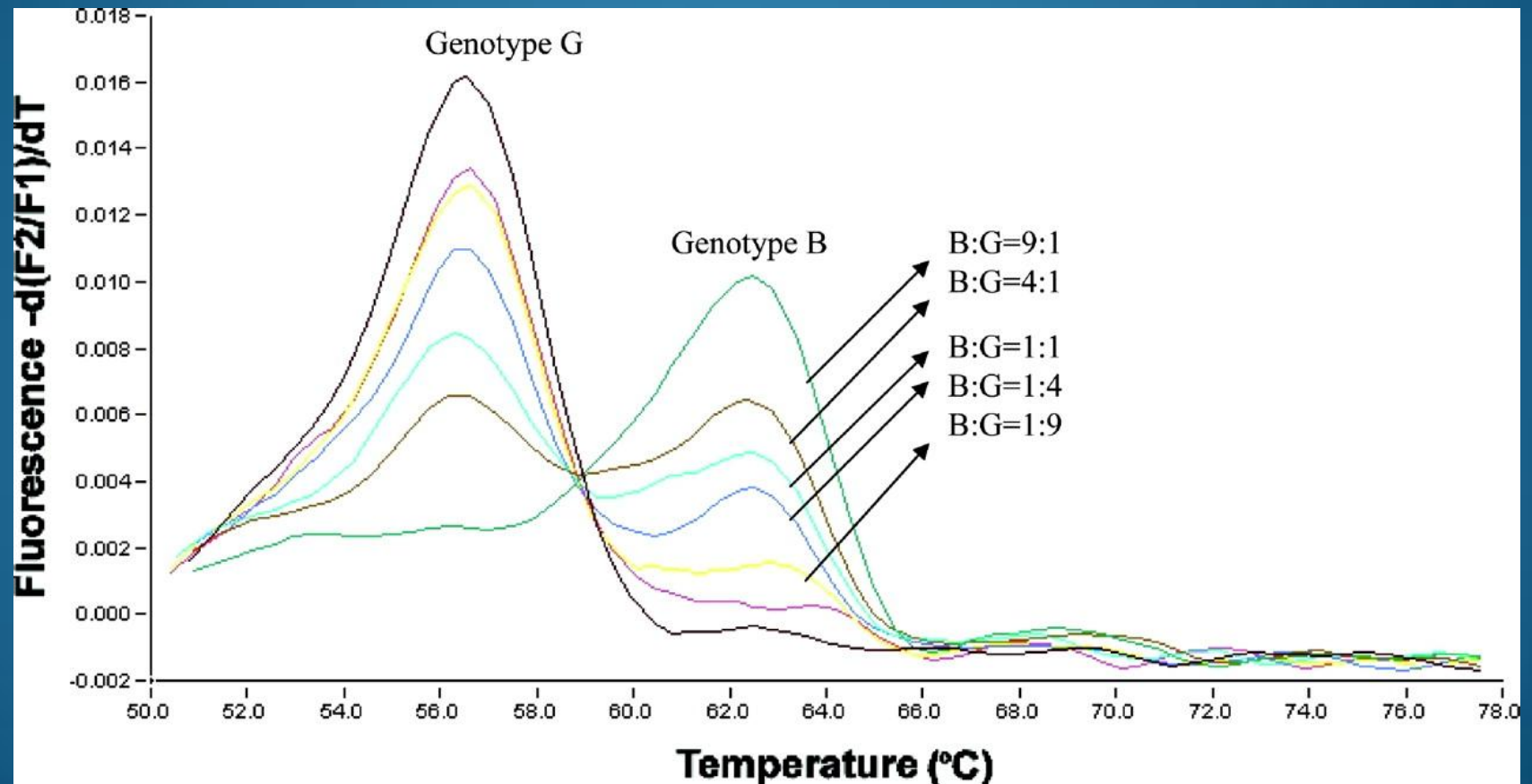
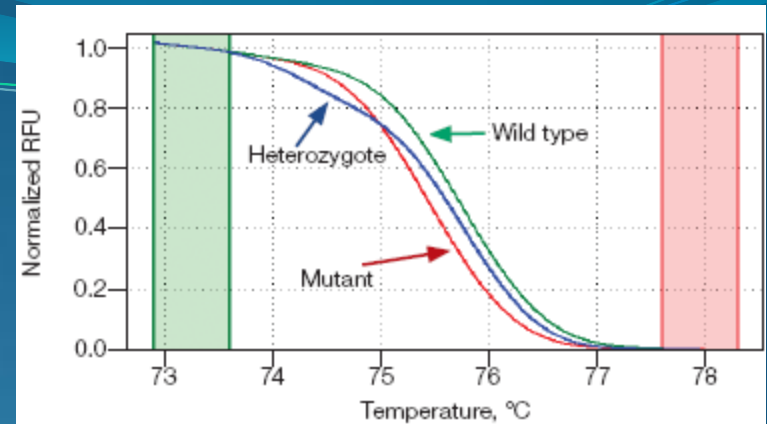
Diagnosis



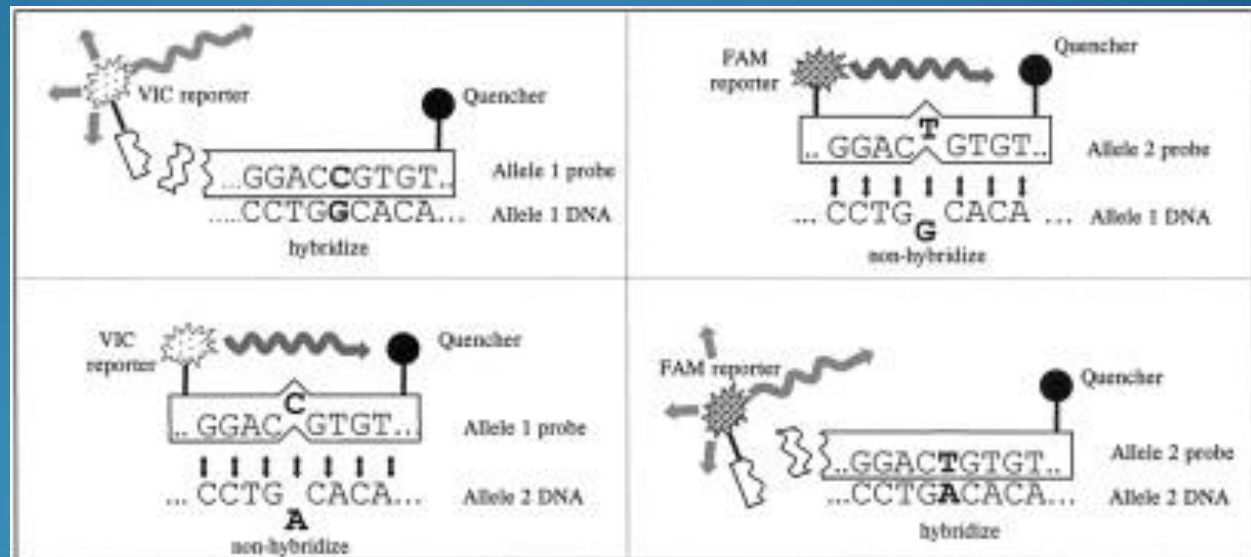
Gene expression



Genotyping



Single nucleotide polymorphism (SNP)



Food Safety



Genetically Modified Organisms (GMO)



GMO testing with
real-time PCR

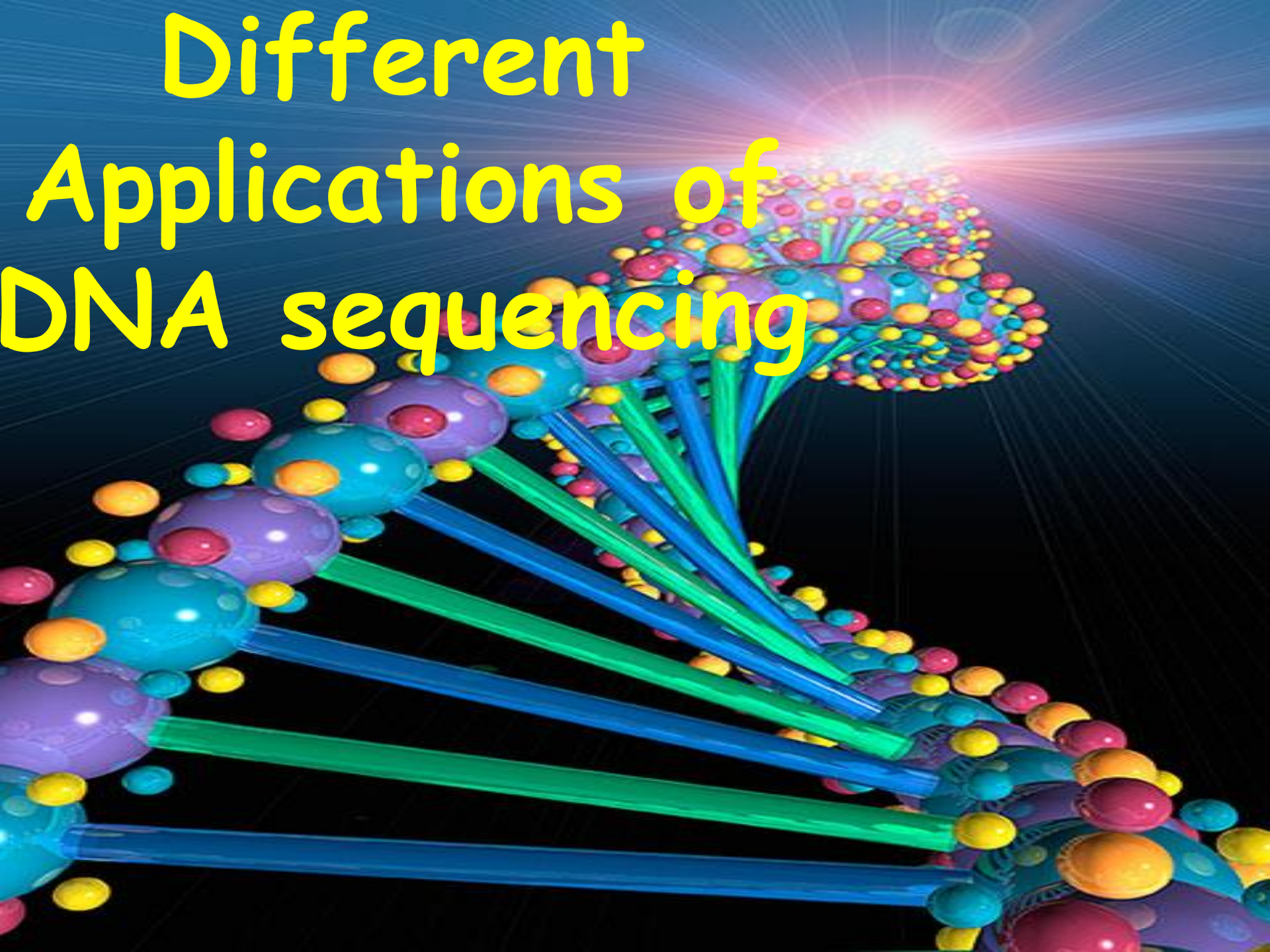
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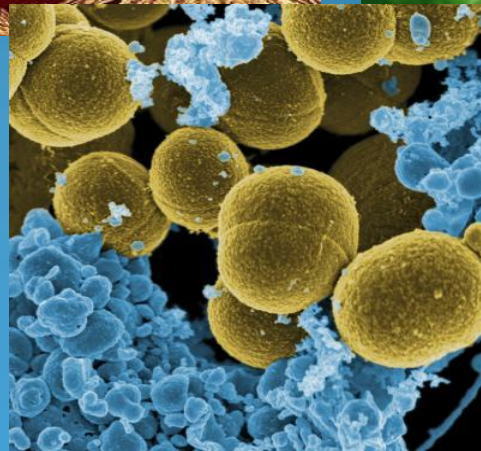
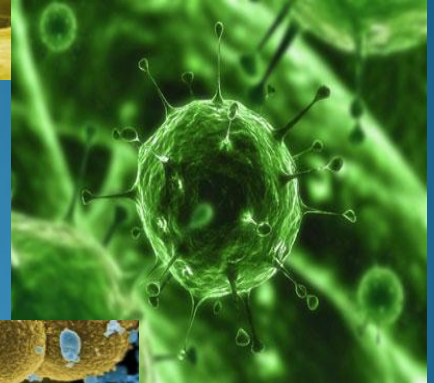
GMO Salmon



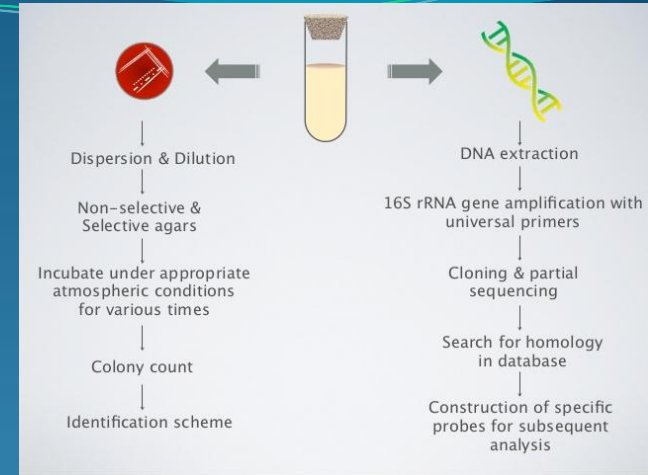
Different Applications of DNA sequencing



Diagnosis



Bacterial & Fungal identification



16s rRNA and its use

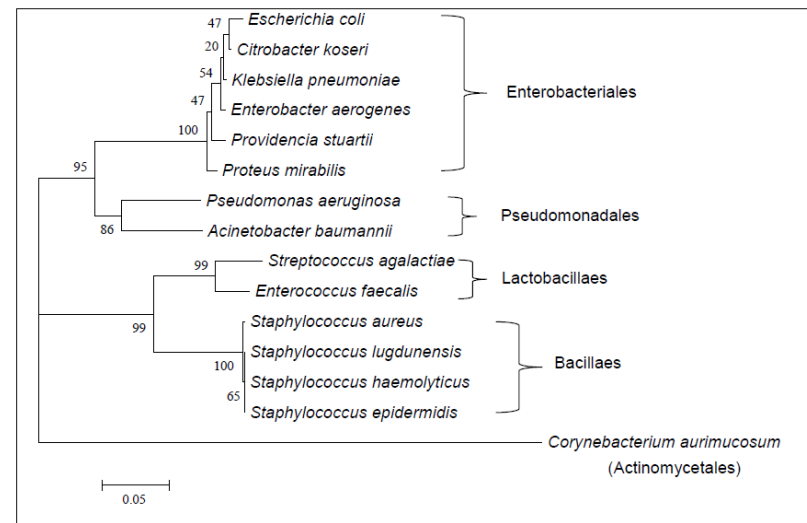
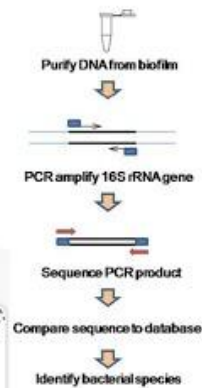
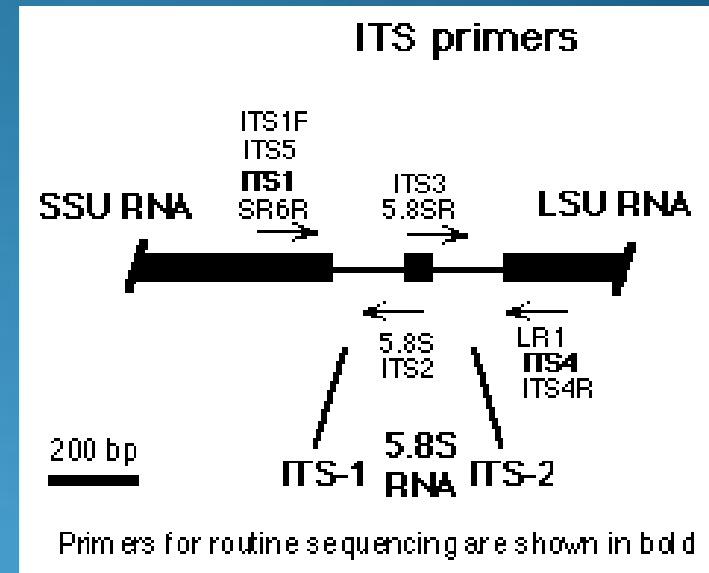
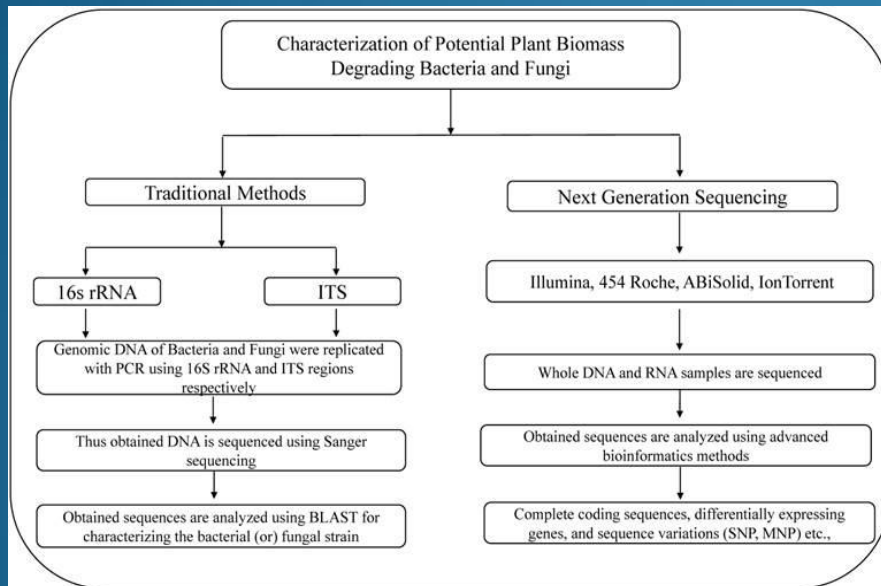


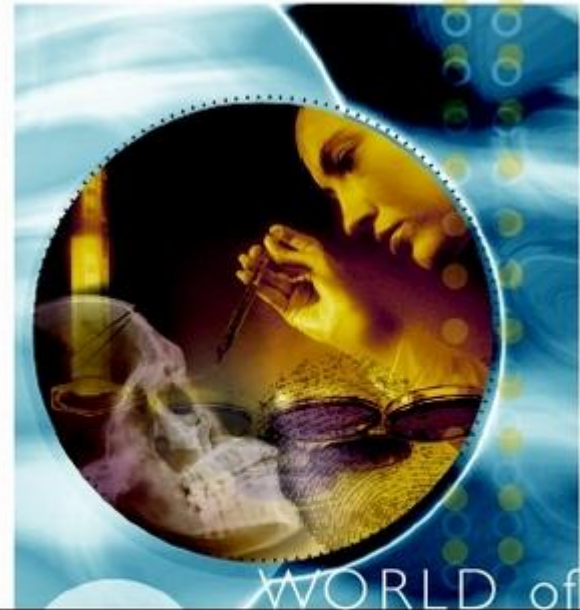
Figure 2. Phylogenetic tree constructed by MEGA5.0 based on 16S rDNA sequences amplified by PL06 and DG74 primers.

The identity of the bacteria was confirmed by biochemical tests. The scale bar represents 5% sequence divergence.

Fungal identification



Forensic

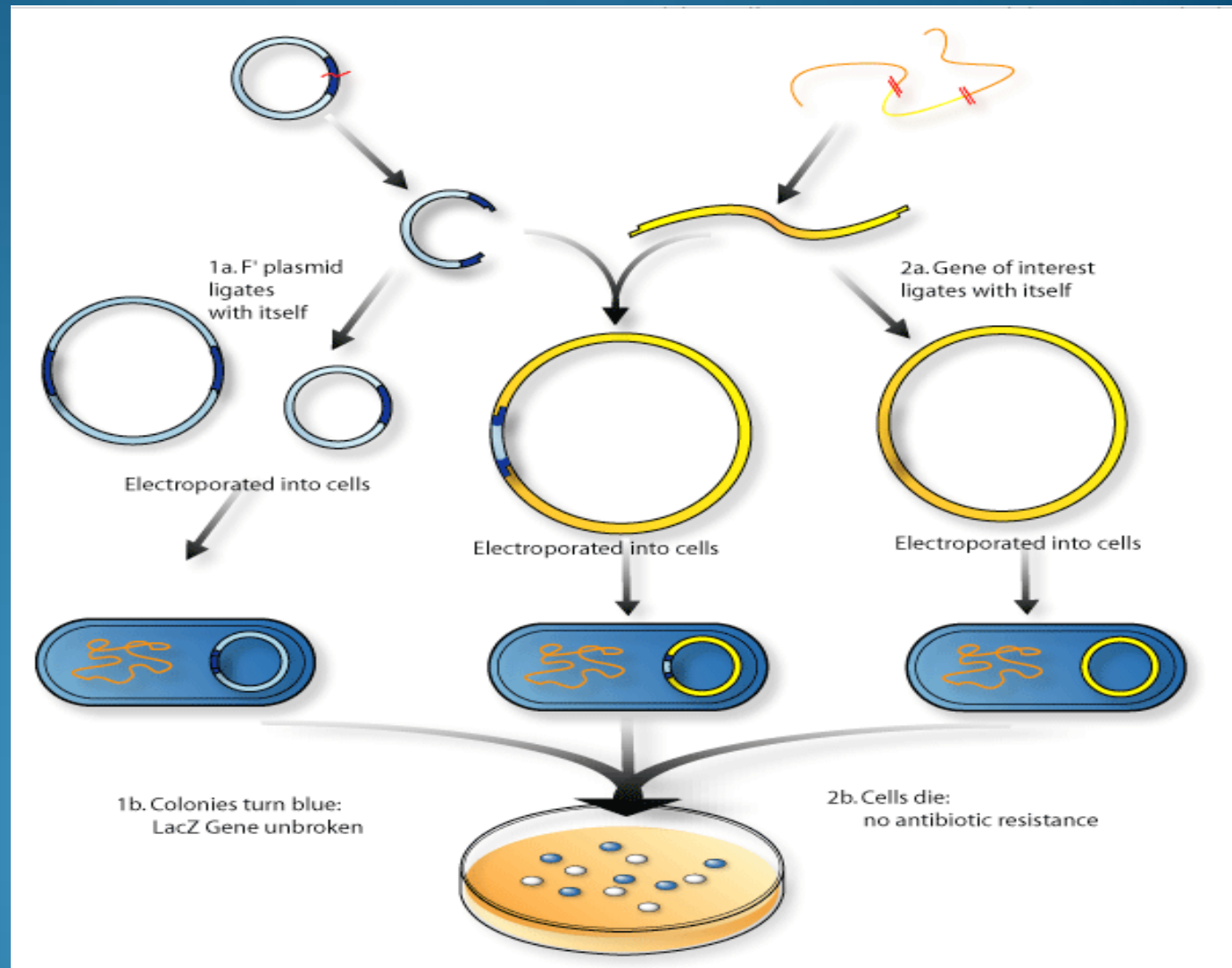


FORENSIC SCIENCE



I took care of the problem. Everything's cool. I have your money and I'll see you Friday. If anybody asks you haven't heard from me or Mike.

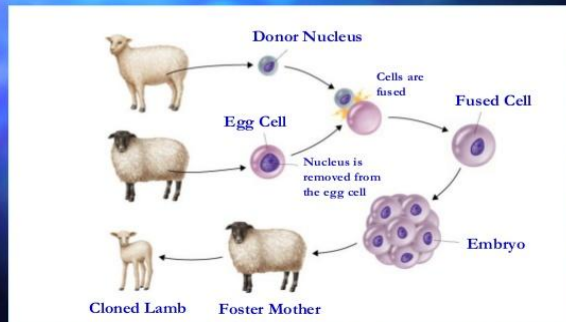
Gene cloning & expression



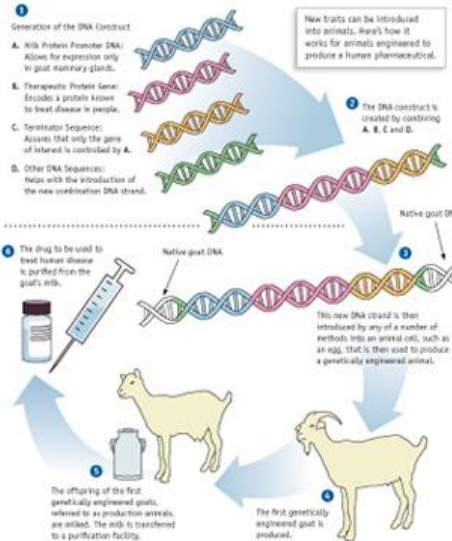
Genetic engineering & Biotechnology



How was Dolly the sheep made?



Genetically Engineered Animals



Supporters of Genetic and Human Services / U.S. Food and Drug Administration

www.fda.gov/oc/ohrt/ohrt_101_102_page0001

T-DNA Mutagenesis and Plant Genetic Engineering



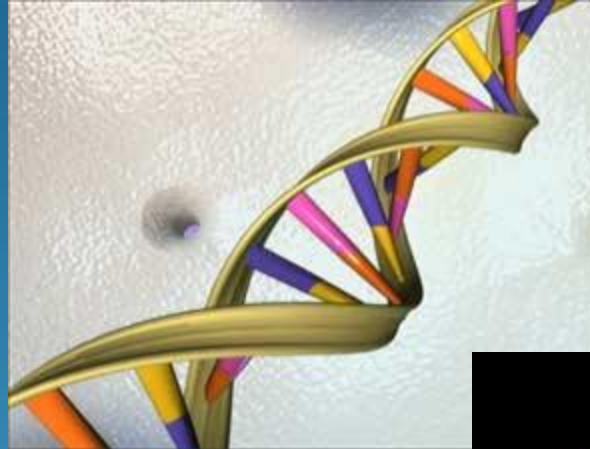
Purpose: Determine gene function to produce better plants for society



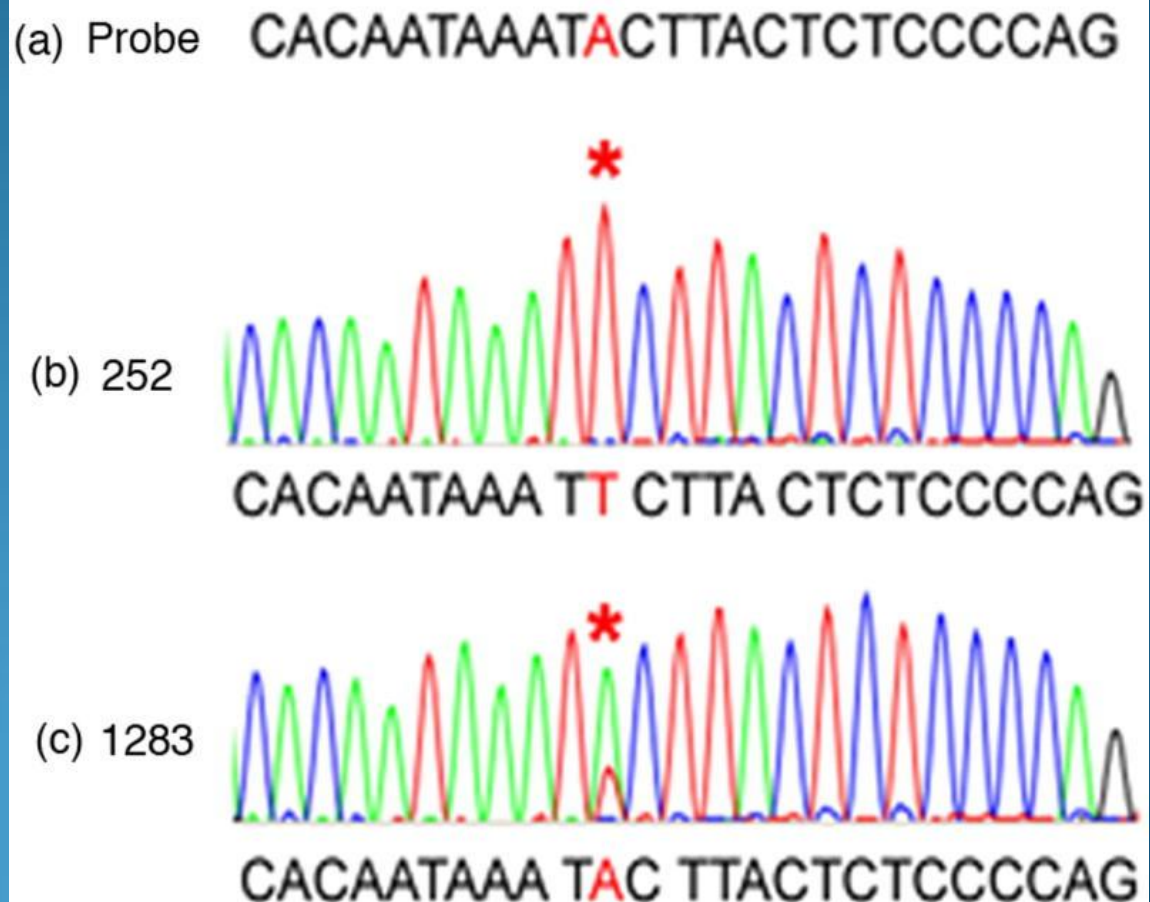
Creating mutation

Random or specific

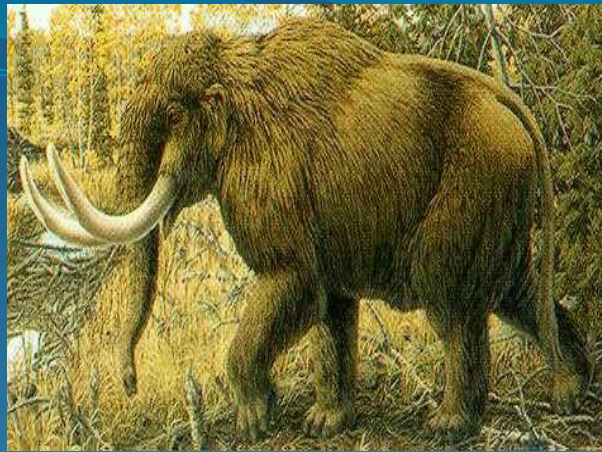
ACCATCGGCCTGCATCA
TGGTAGCCTGACGTAGTCATGGTAGCCTGACT----



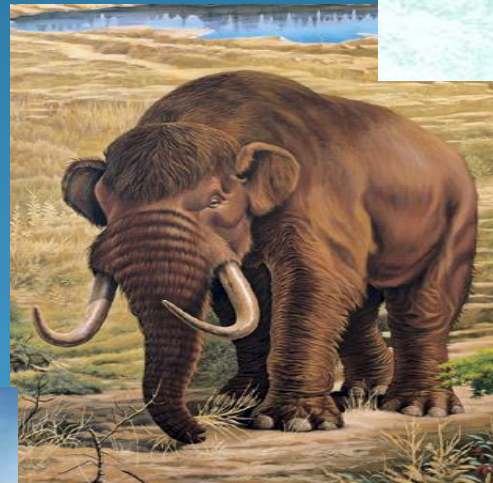
Single nucleotide polymorphism (SNP)



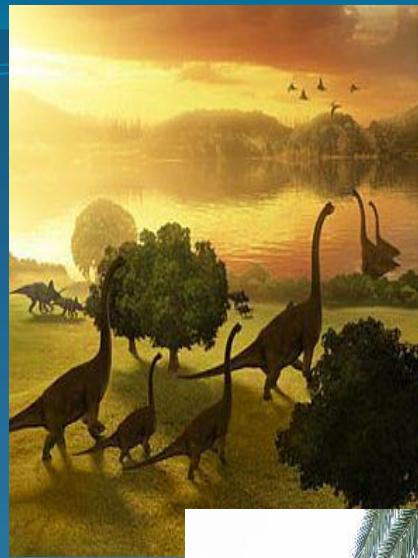
Studying evolution



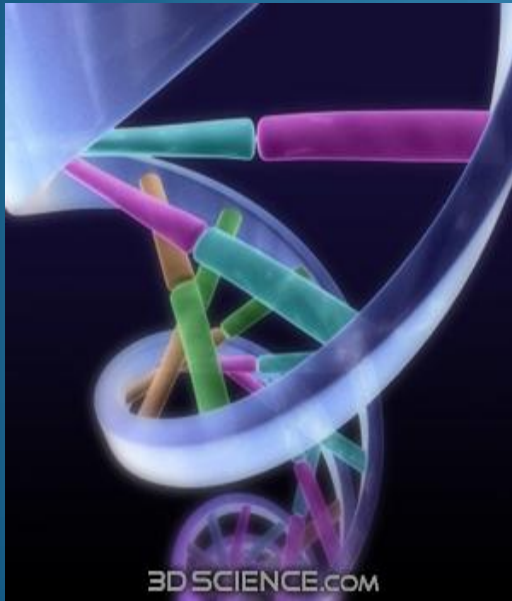
Mastodon



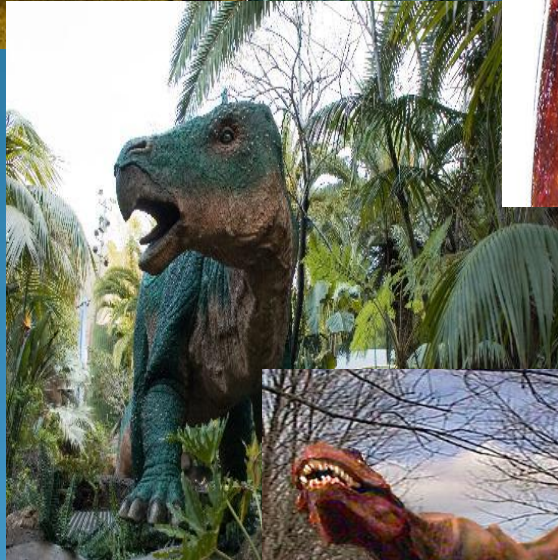
Fossils



million years ago

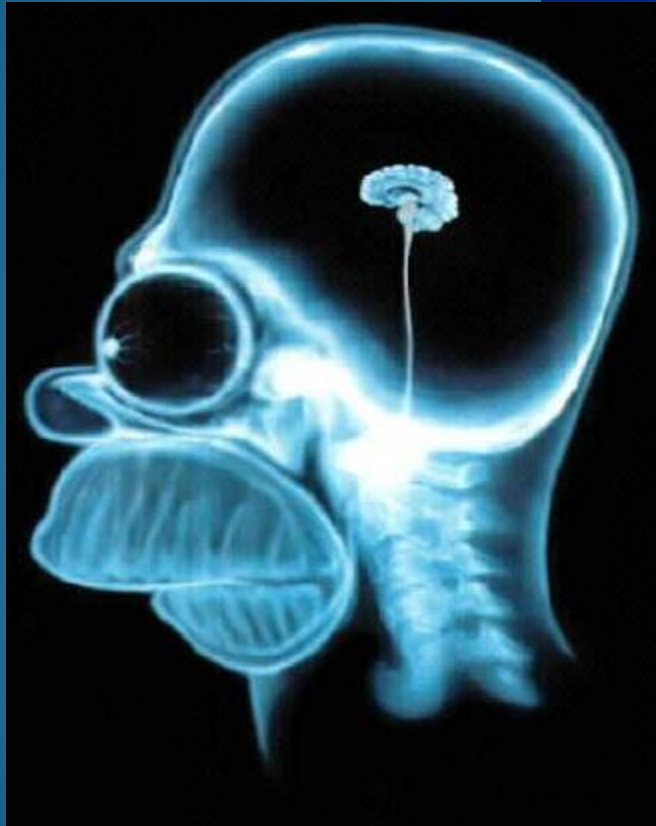


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PCR is just a tool

Reaching Beyond Horizons



**How to
use it, is
up to you**



Thank You!