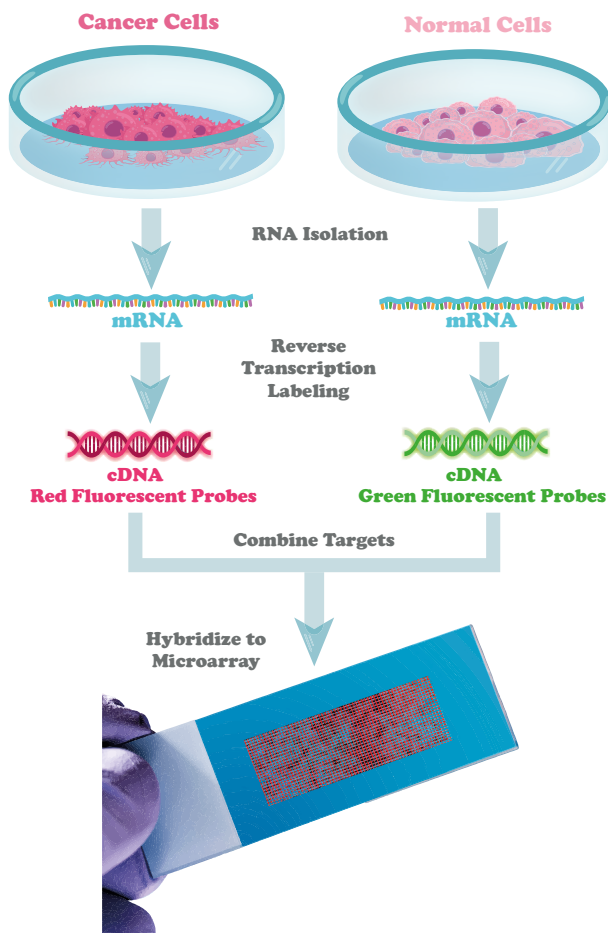


CONCEPT: FUNCTIONAL GENOMICS

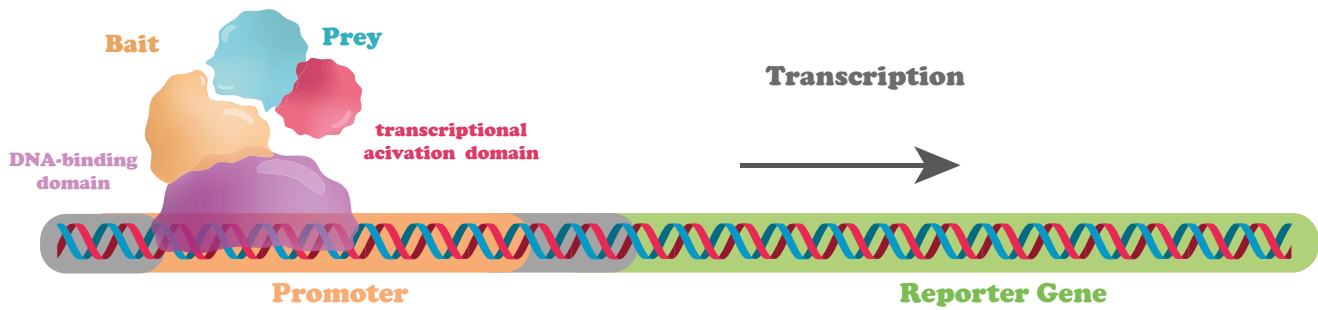
- **Functional genomics** is an approach used to study the function, expression, and interactions of genes and proteins
 - Many _____ of functional genomics exist
 - **Transcriptomics** is the study of the sequence and expression of RNA transcripts
 - **Proteomics** is the study of the cellular expression of proteins
 - **Interactomics** is the study of physical interactions between DNA, RNA, and proteins
 - There are many _____ used to study functional genomics
 - **DNA microarrays** are used to determine which genes are active in a particular cell and circumstances

EXAMPLE:



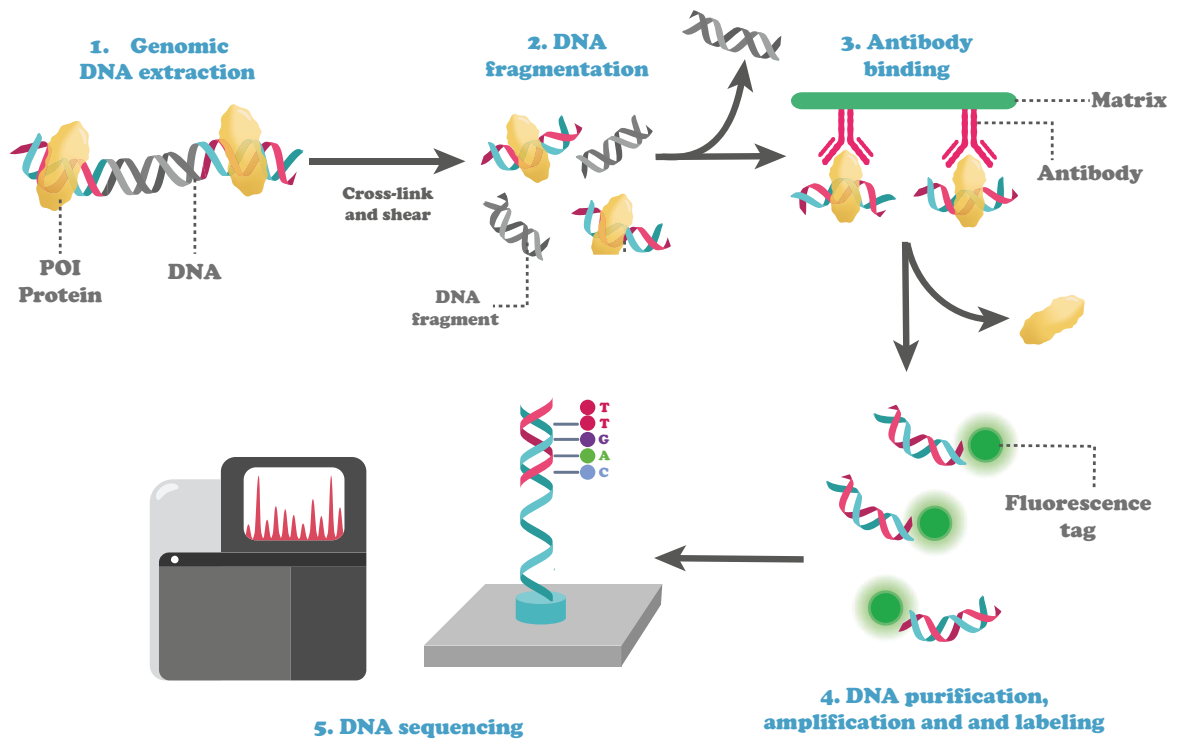
- **Two-hybrid test** is used to study protein interactions in live cells

EXAMPLE:



- **ChIP (chromatin immunoprecipitation)** is used to study protein-DNA interactions

EXAMPLE:



- **Reverse genetics** disrupts a gene's sequence to analyze its function

EXAMPLE:

