

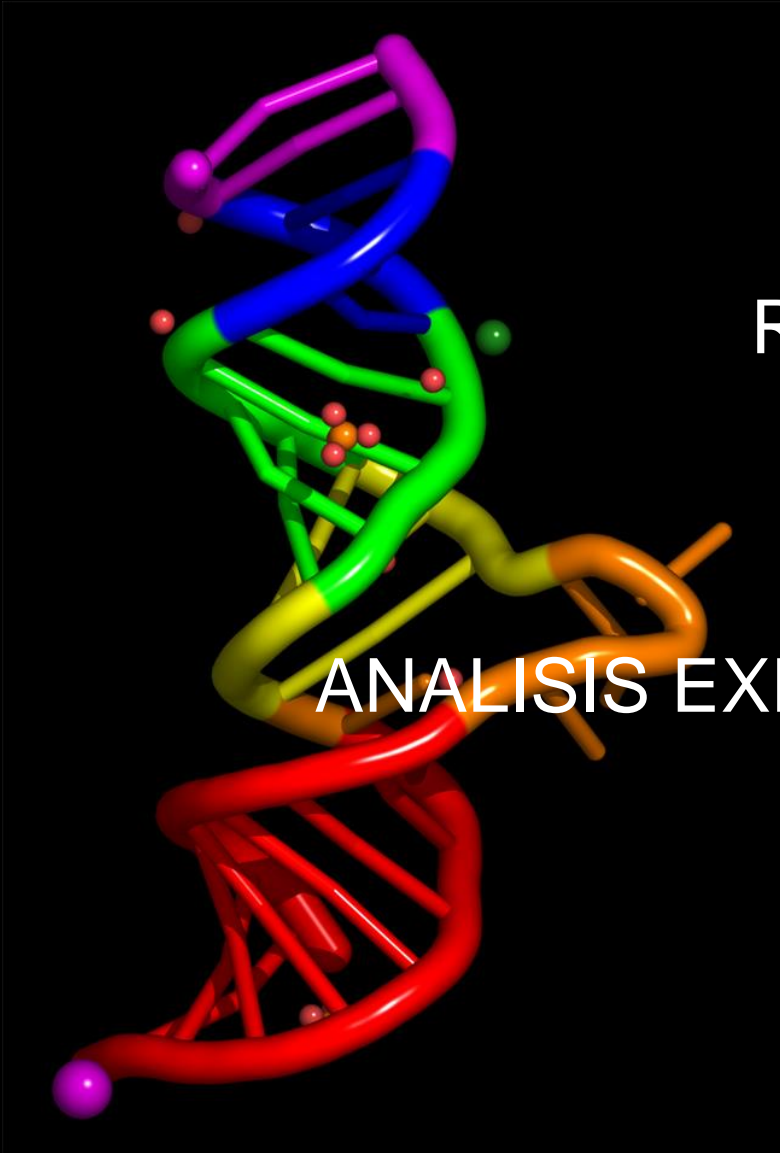


TÉCNICAS EN BIOLOGÍA MOLECULAR

CURSO DOCTORADO
UNIVERSIDAD DE MÁLAGA
2008

NOELA RODRIGUEZ LOSADA

RNA, ARN



AISLAMIENTO RNA:

RT-PCR SINTESIS DE cDNA

MICROARRAY

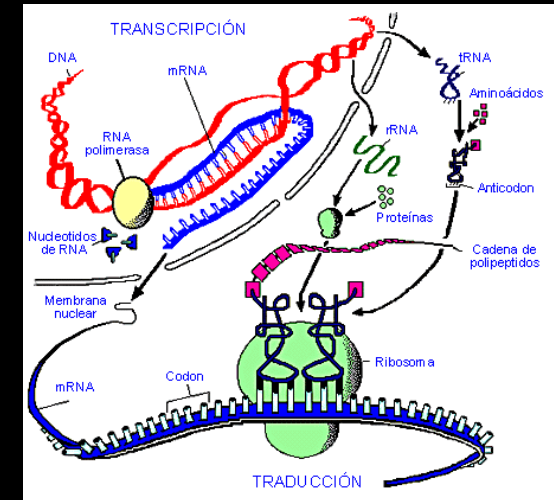
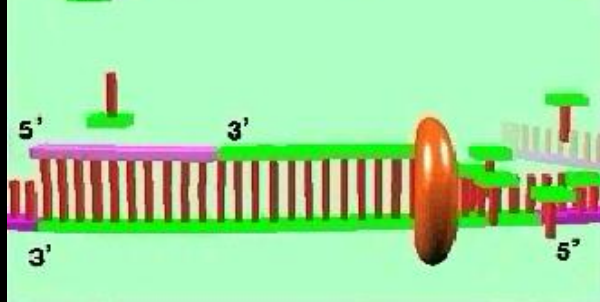
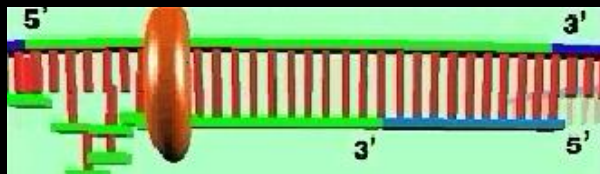
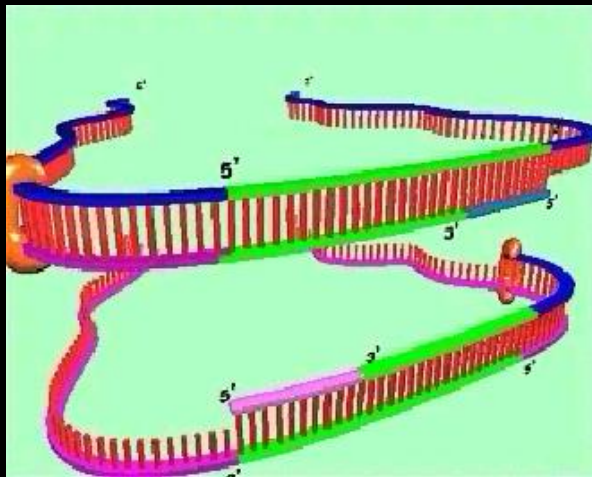
ANALISIS EXPRESIÓN-PCR REAL TIME

AMPLIFICACIÓN DE UNA REGION CONCRETA DEL cDNA= RNA

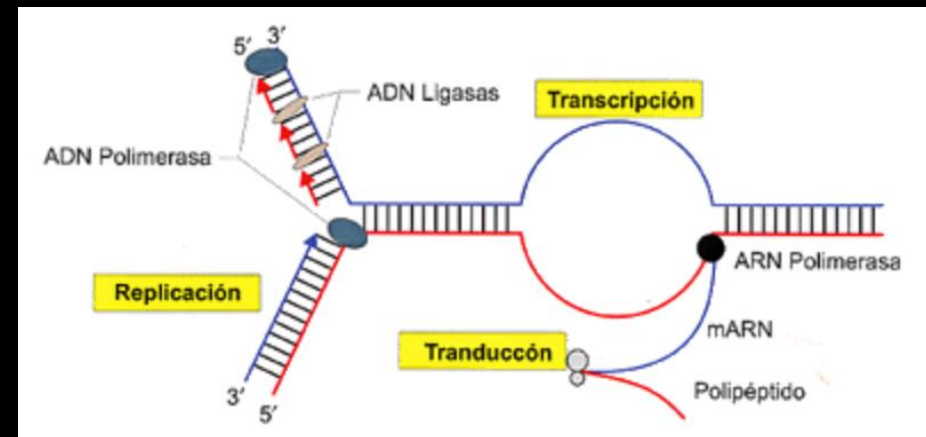
Para estudio expresión de genes, proteínas

RNA RETROTRANSCRIPTASA

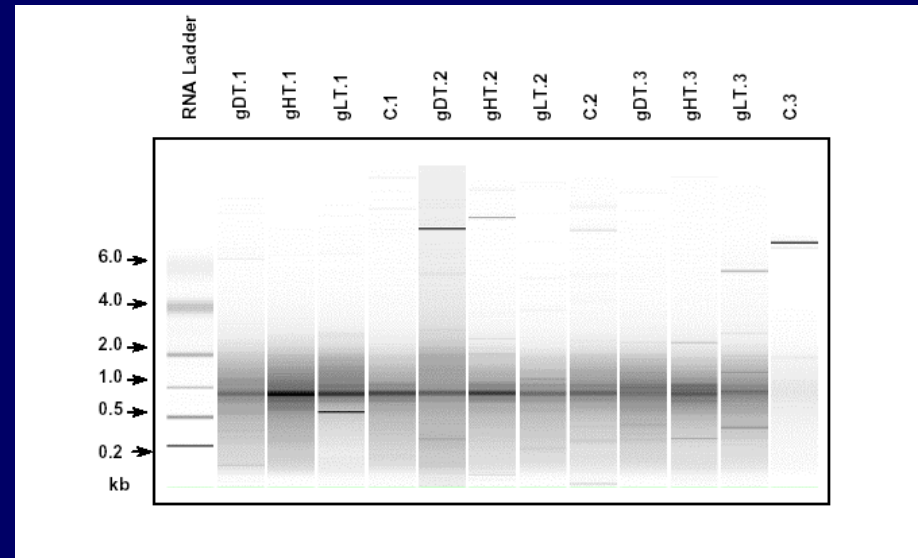
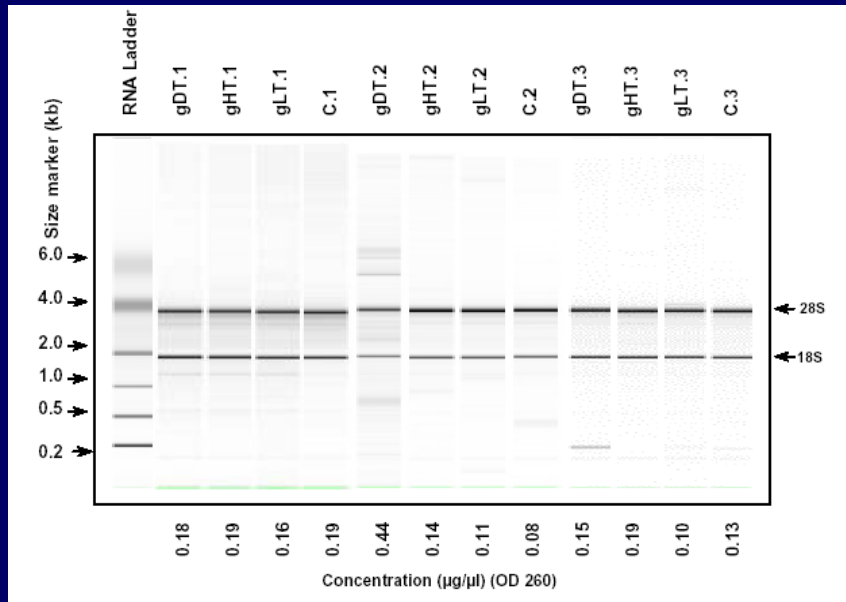
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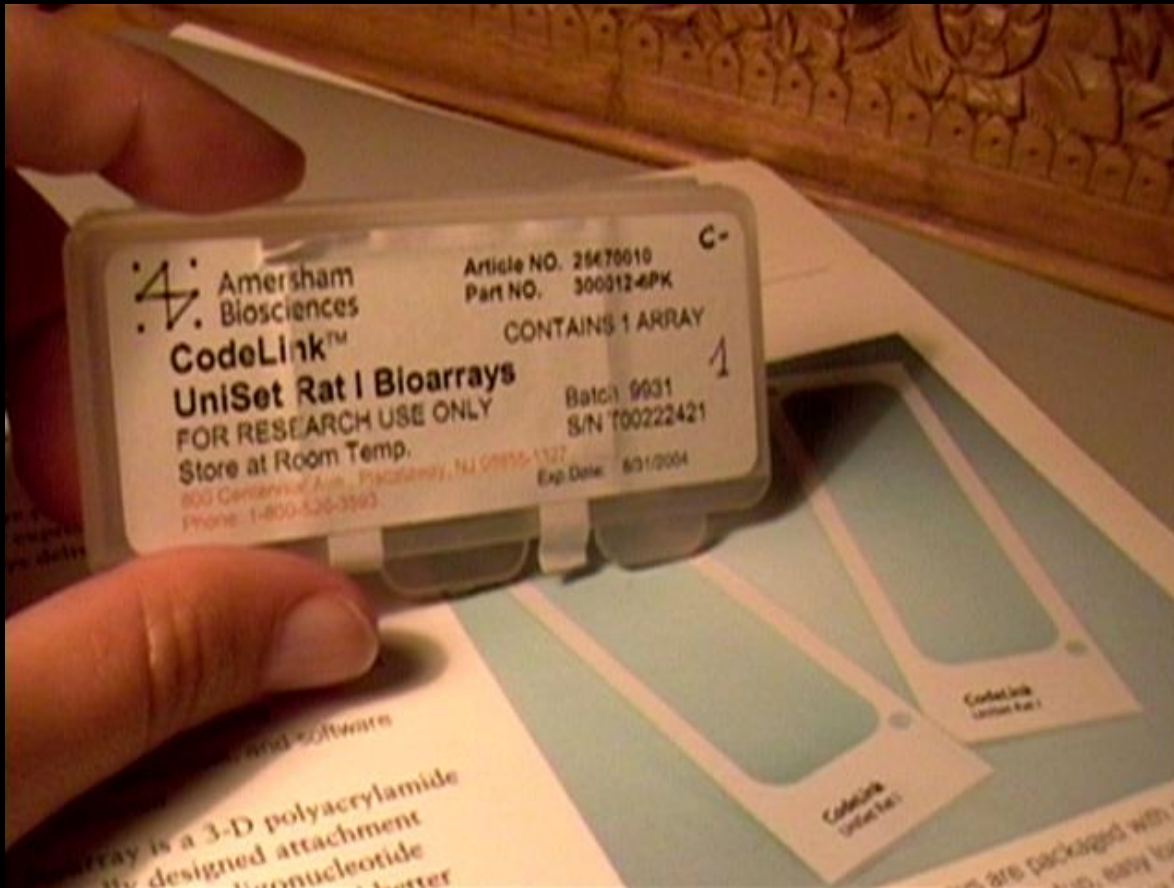
<http://biogeo.esy.es/BG2BTO/transcripcion.htm>



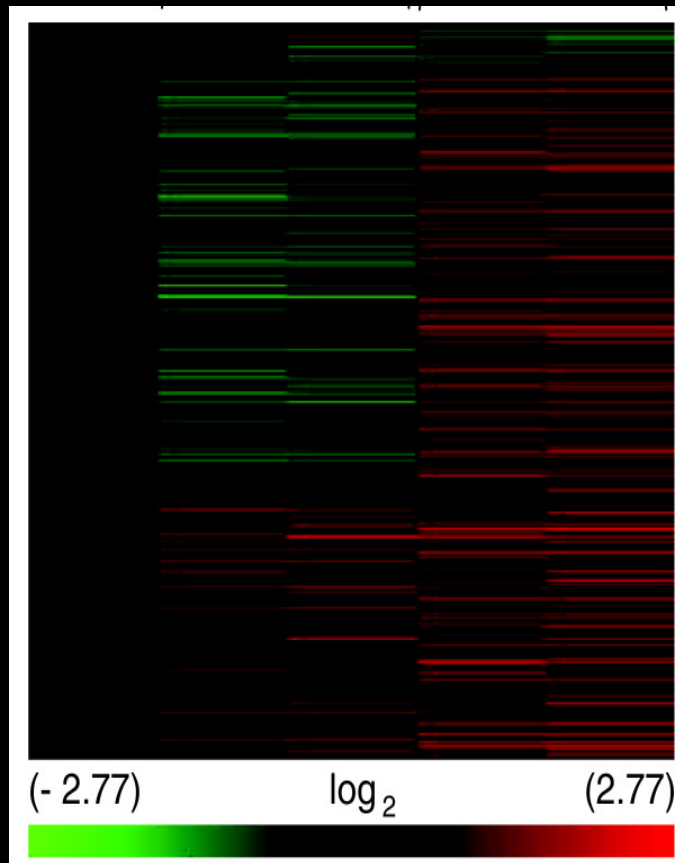
Obtención del RNA para el análisis con DNAmicroarray



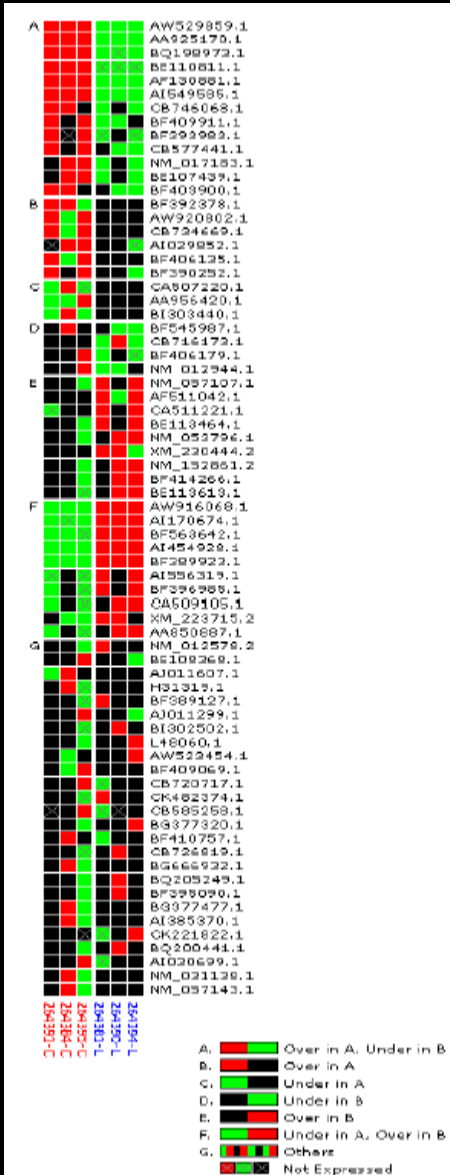
MICROARRAY



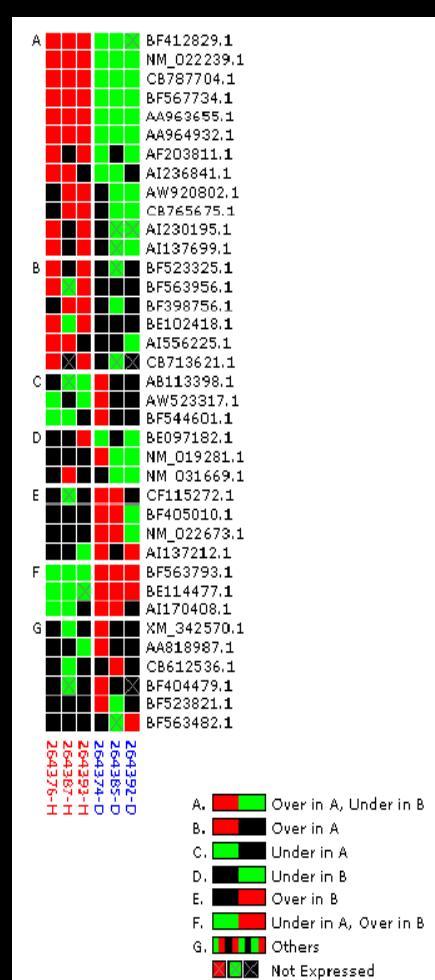
cDNA



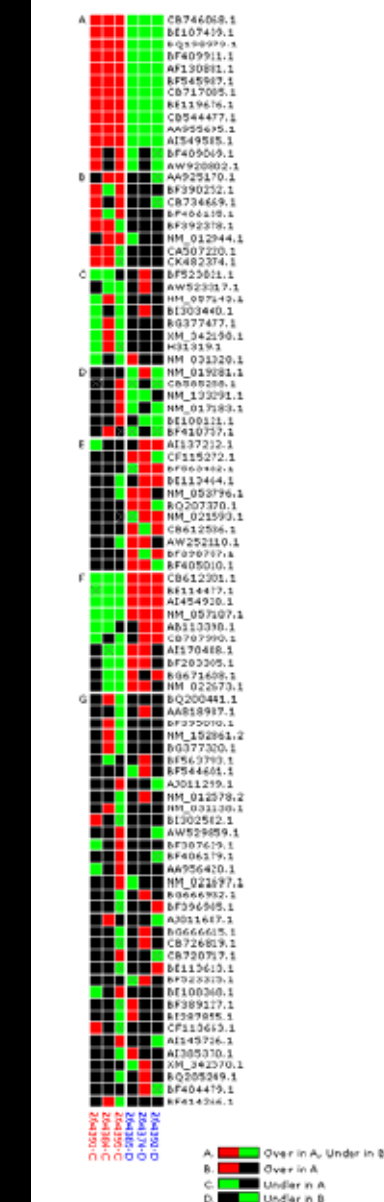
GHRELINA vs CONTROL



GHRH vs CONTROL

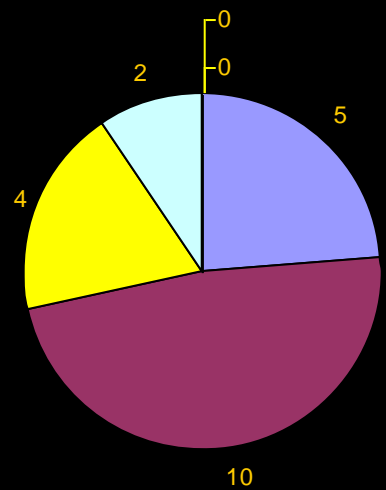


GDNF vs CONTROL



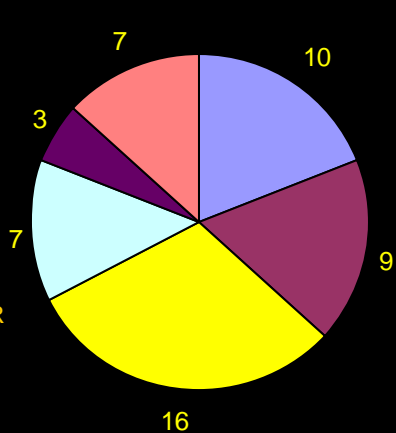
Expresión génica aumentada

GENES AUMENTADOS TRATADOS CON GHRELINA



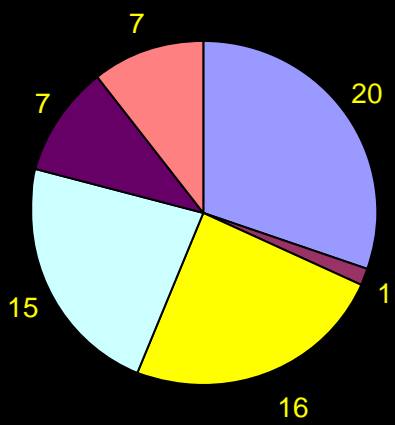
- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

GENES AUMENTADOS TRATADOS CON GHRH



- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

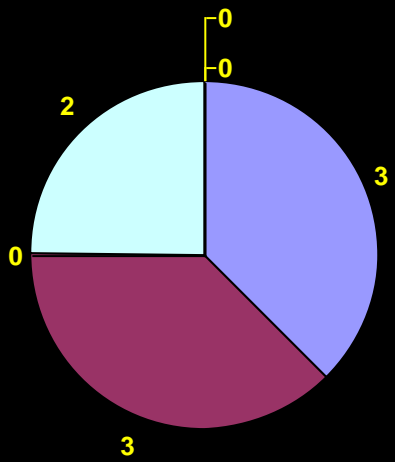
GENES AUMENTADOS TRATADOS CON GDNF



- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

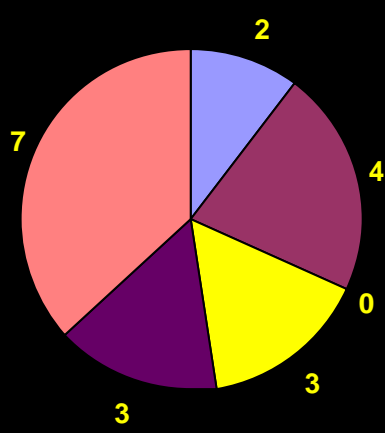
Expresión génica disminuida

GENES DISMINUIDOS TRATADOS CON GHRELINA



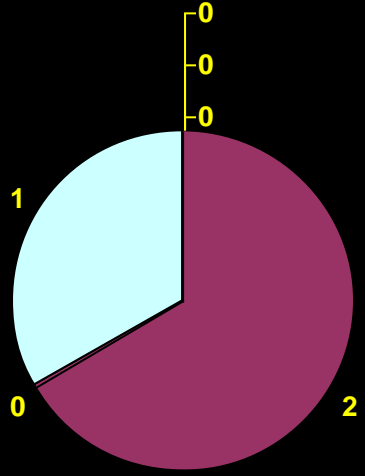
- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

GENES DISMINUIDOS TRATADOS CON GHRH



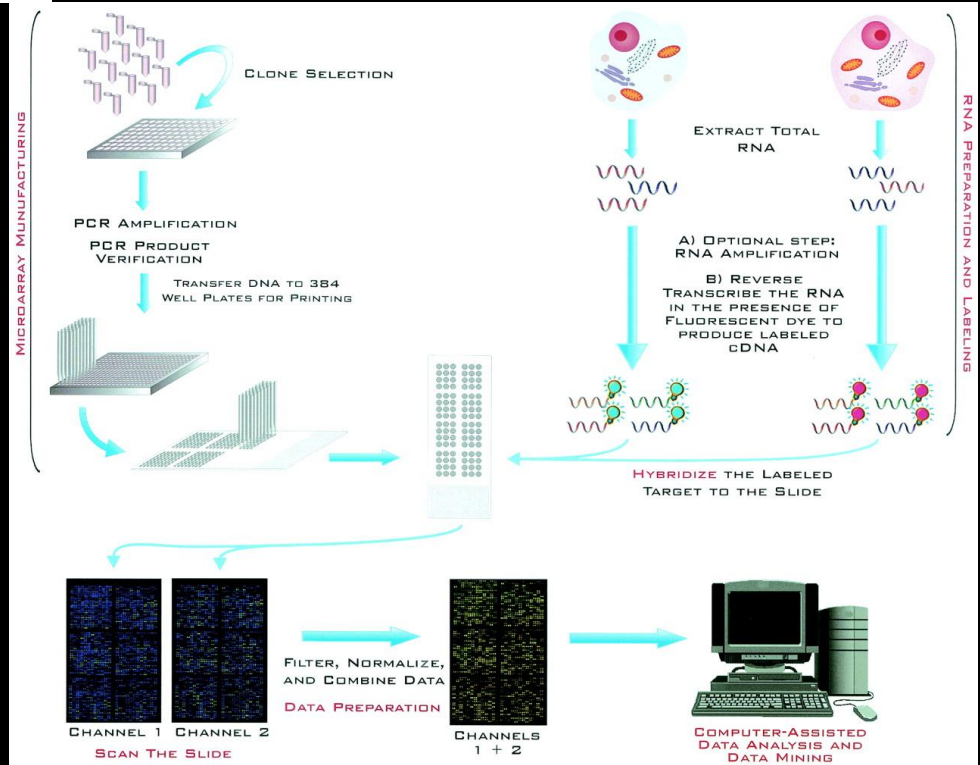
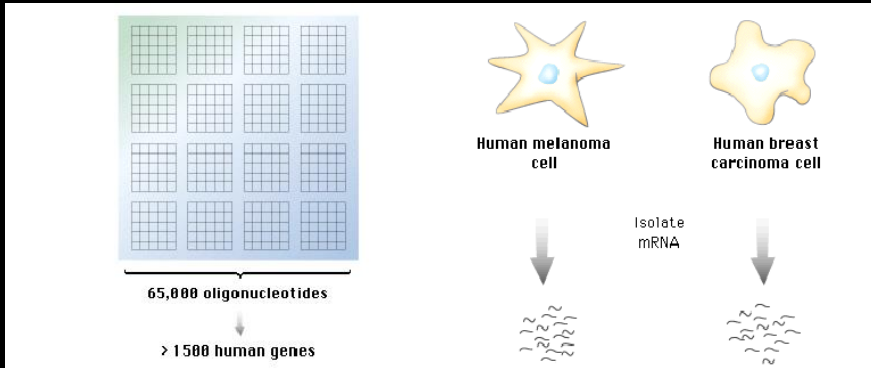
- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

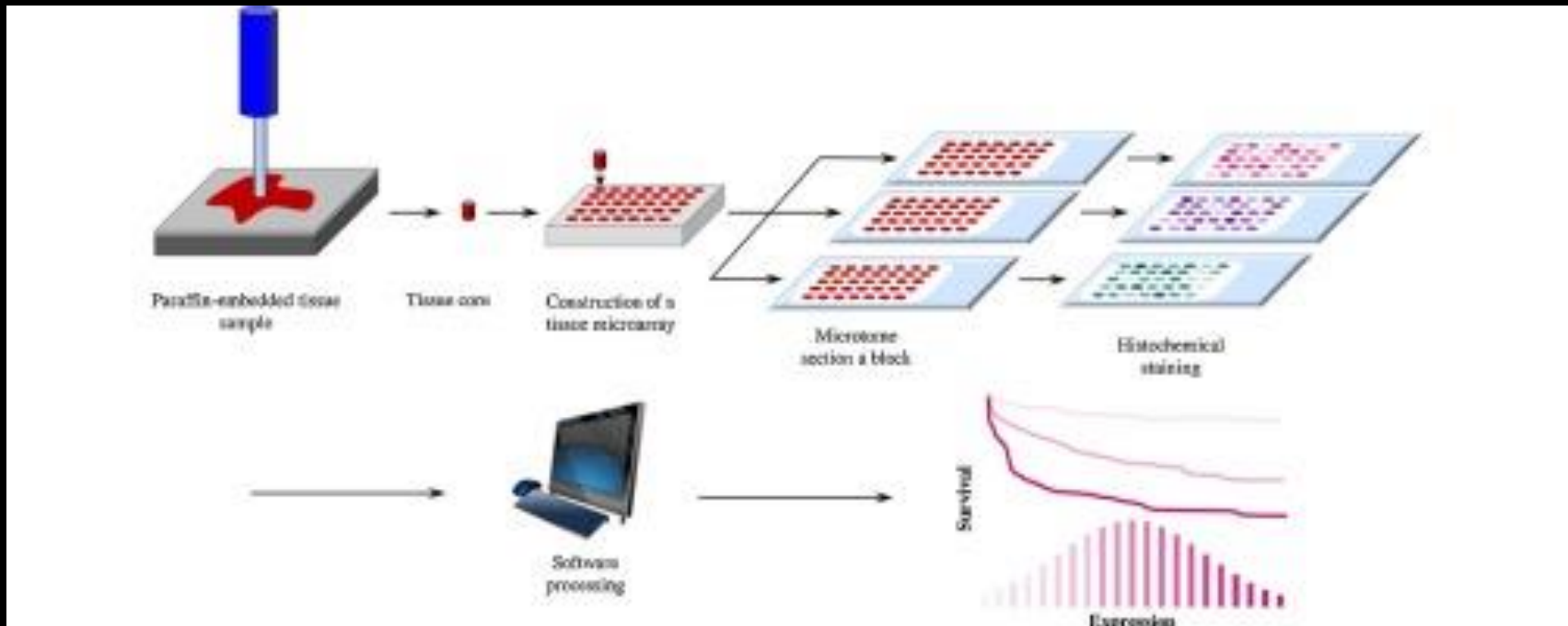
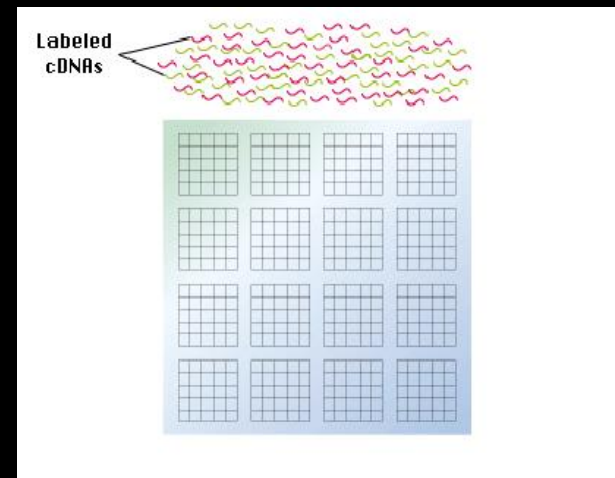
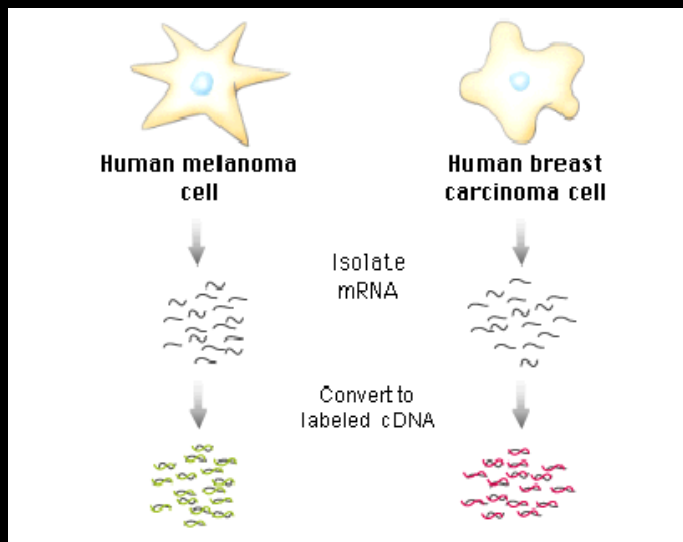
GENES DISMINUIDOS TRATADOS CON GDNF



- PROLIFERACION
- DESARROLLO
- FACTORES DE TRANSCRIPCION
- TRANSDUCTORES DE SEÑAL
- DIFERENCIACIÓN CELULAR
- APOPTOSIS

MICROARRAY PARA DETECCIÓN DE PATOLOGÍAS





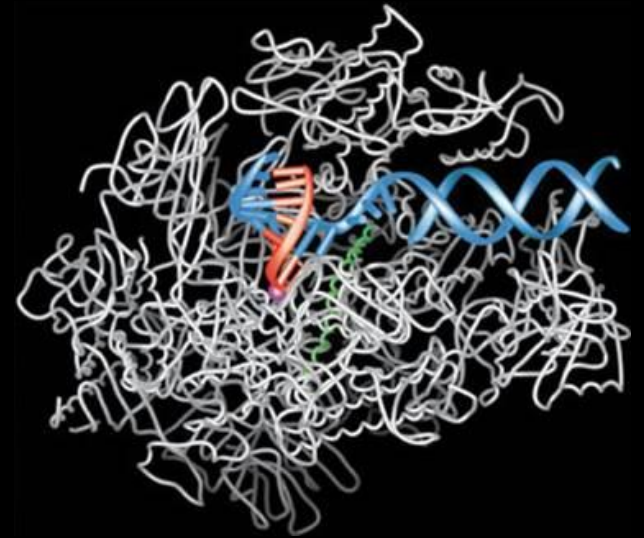
EL ESTUDIO MOLECULAR : DNA-RNA-PROTEINA-CÉLULA-ÓRGANO-ANIMAL

PROTEINA

ANALISIS PROTEINAS: WB

EXPRESAR PROTEINAS:
VECTORES DE EXPRESION

DETECCION INMUNOLOGICA PROTEINAS:
INMUNOCITOQUIMICA, ELISA,
INMUNOFLUORESCENCIA, WB



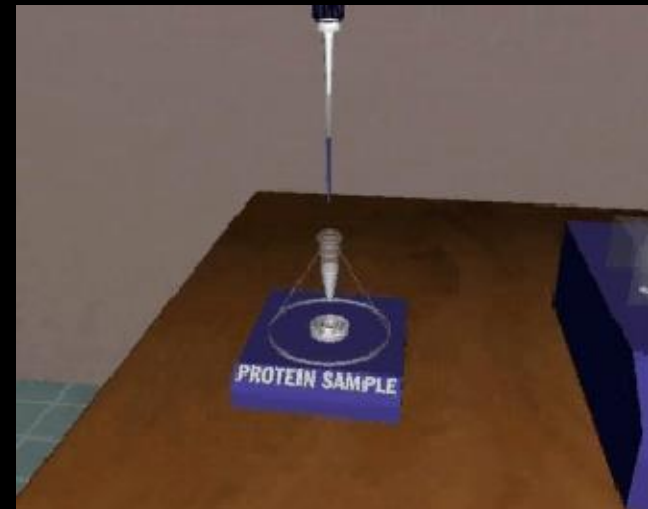
ANALISIS PROTEINAS: WB

WESTERN-BLOT
VIDEOS

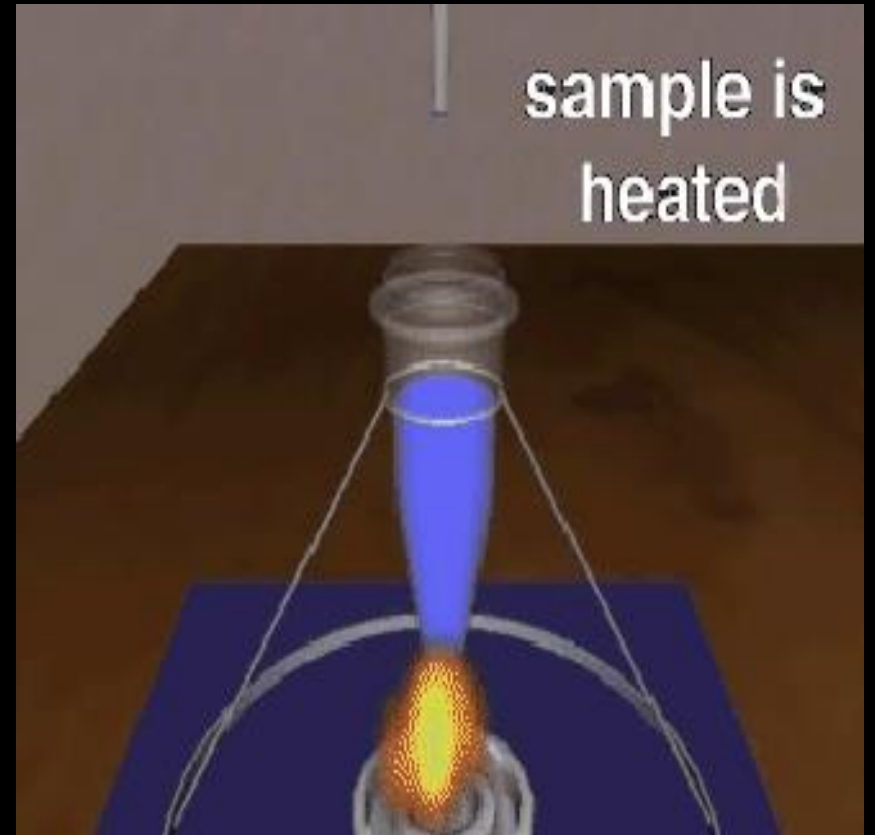
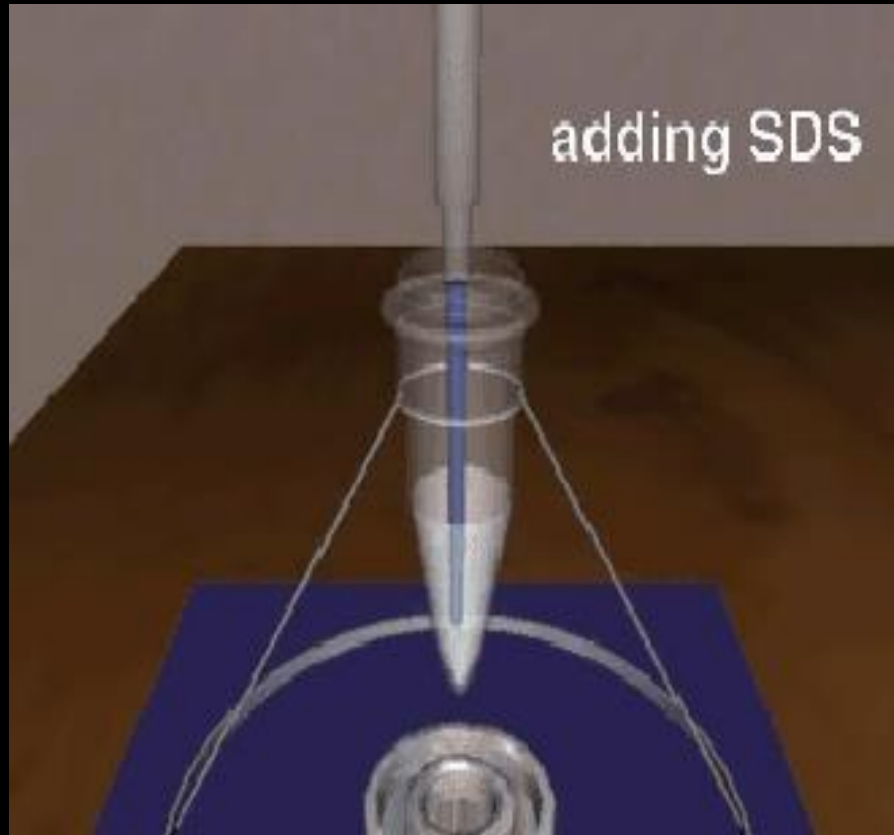
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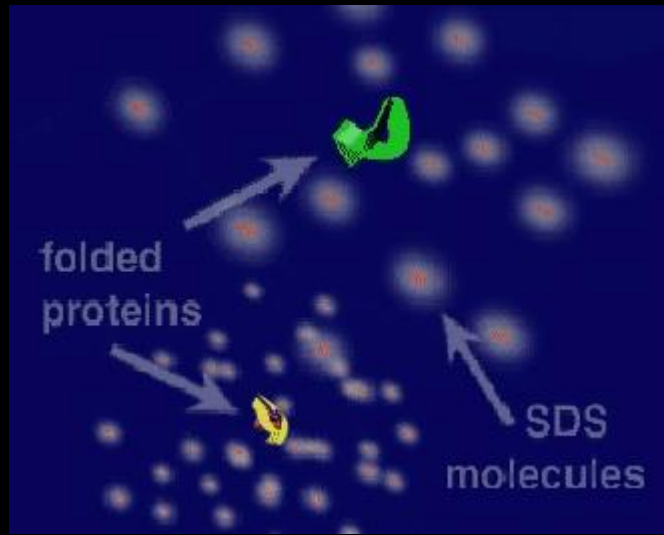
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<http://star.mit.edu/CellBio/animations/index.html>

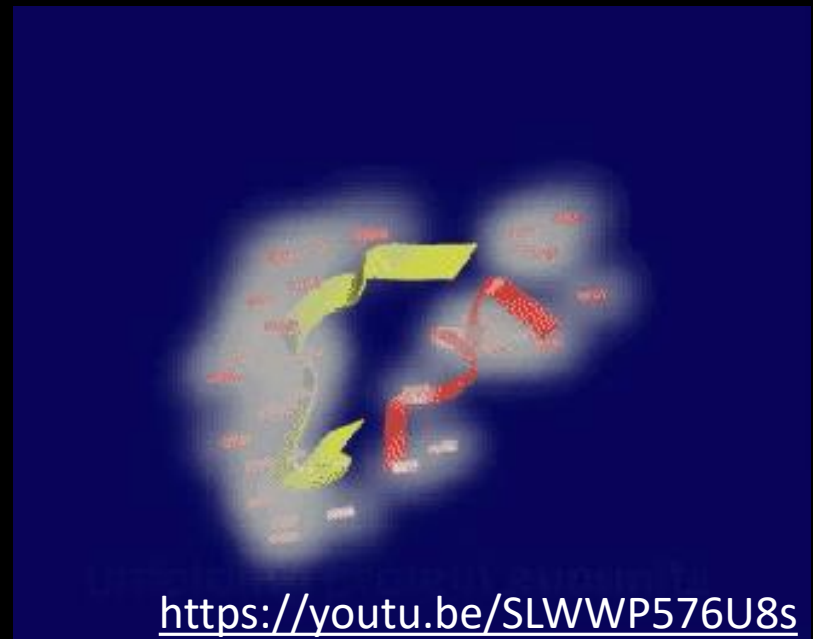
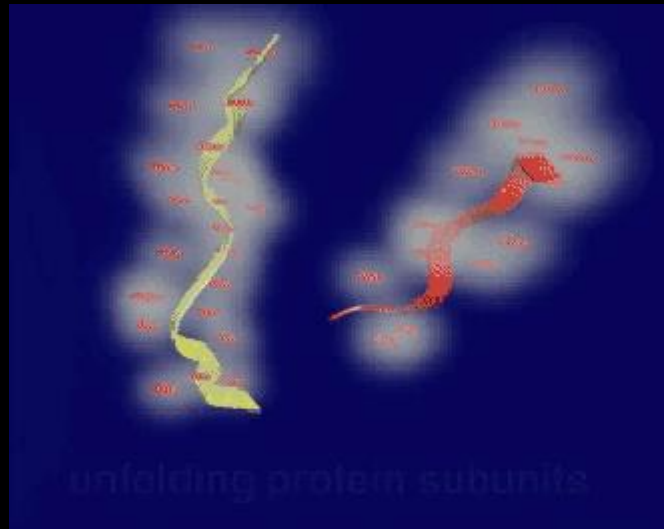
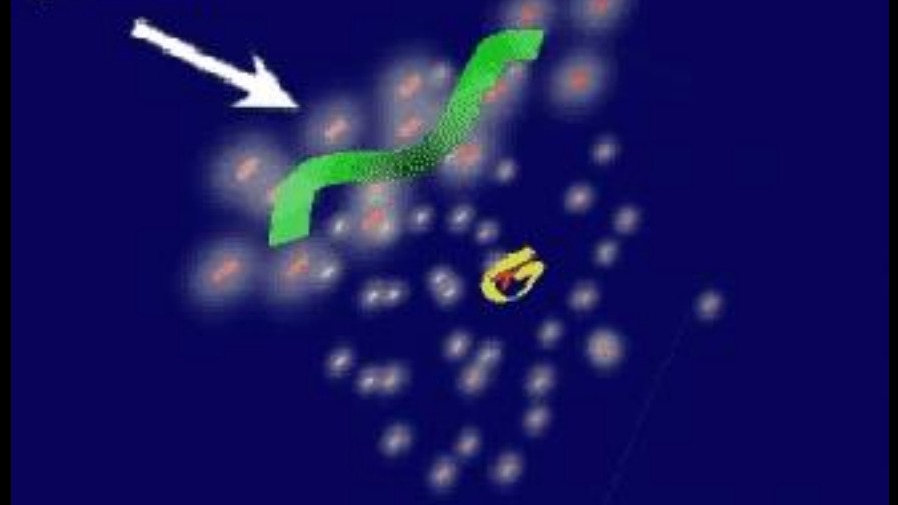


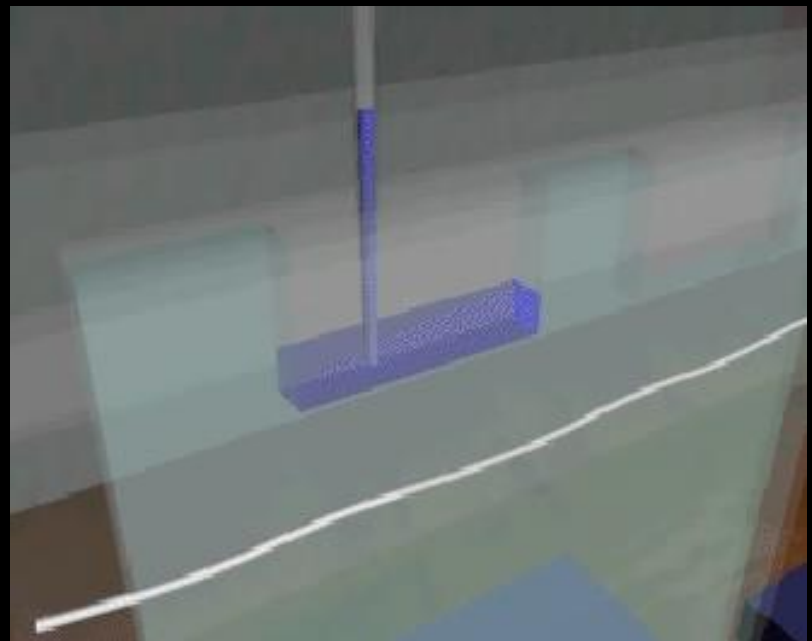
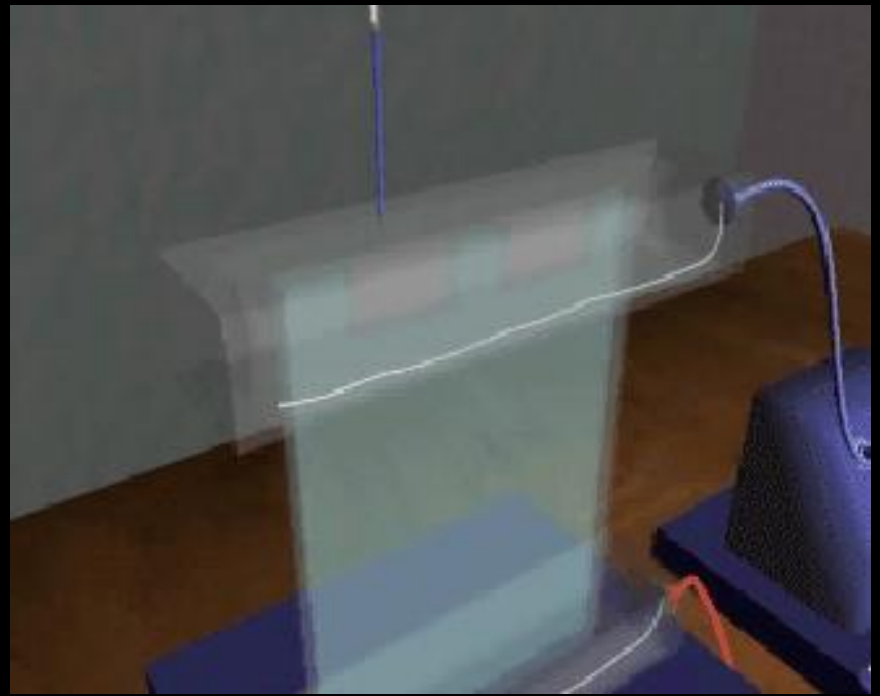
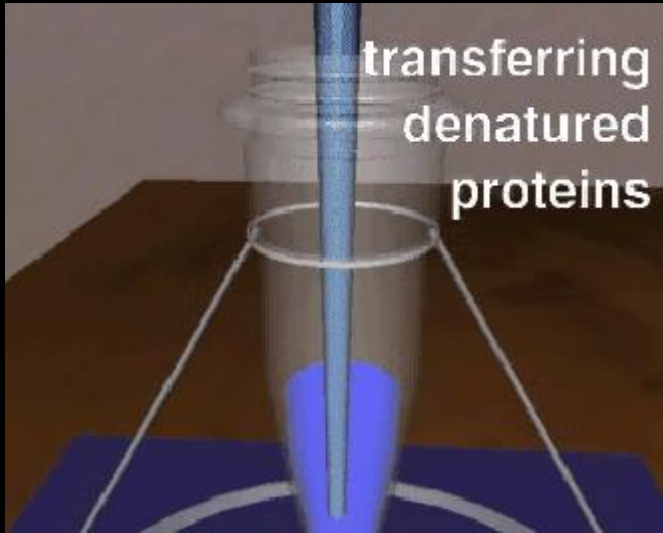
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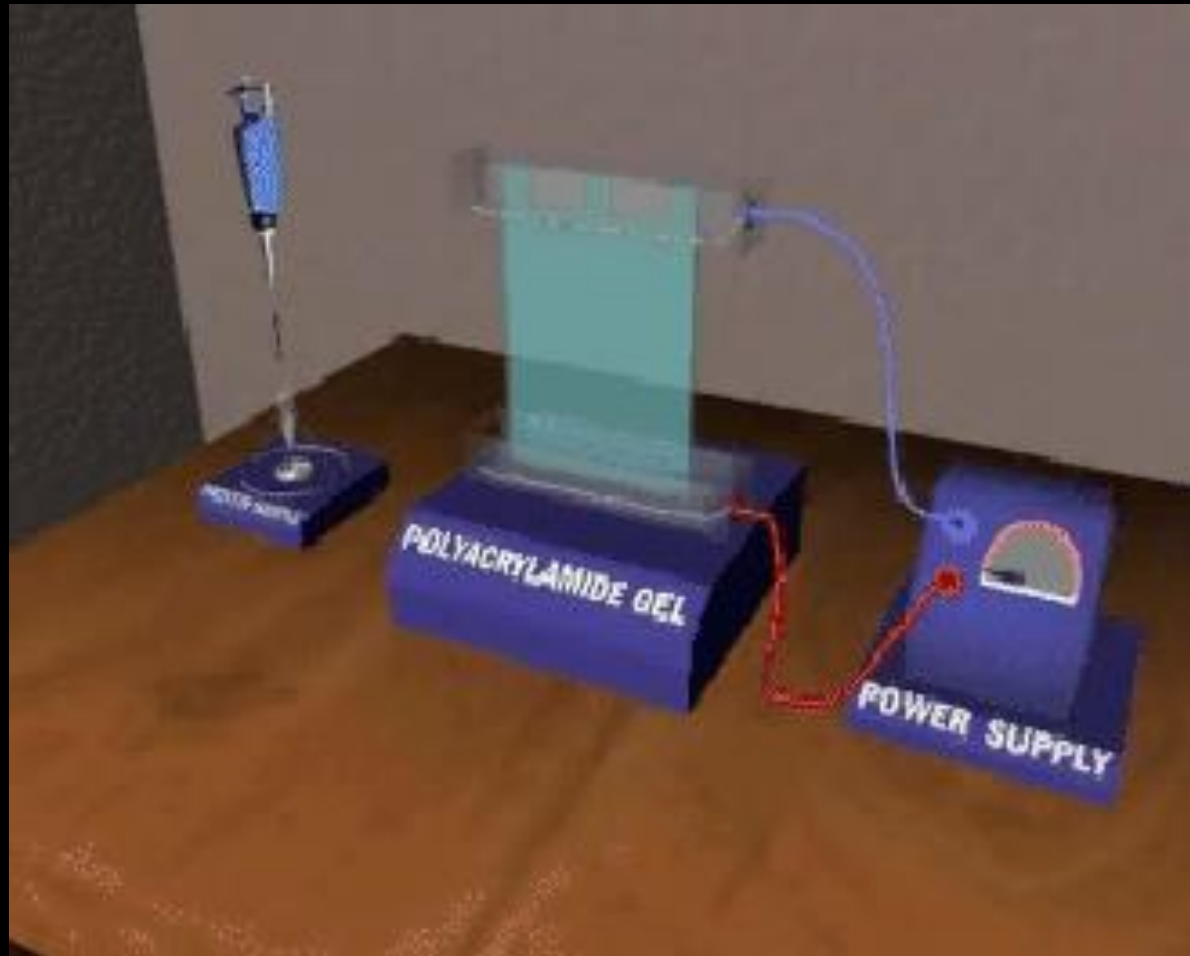


unfolding denatured protein

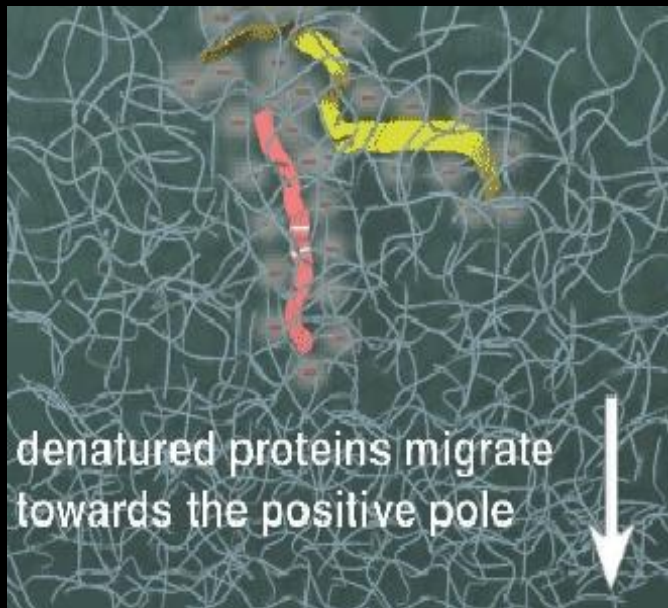
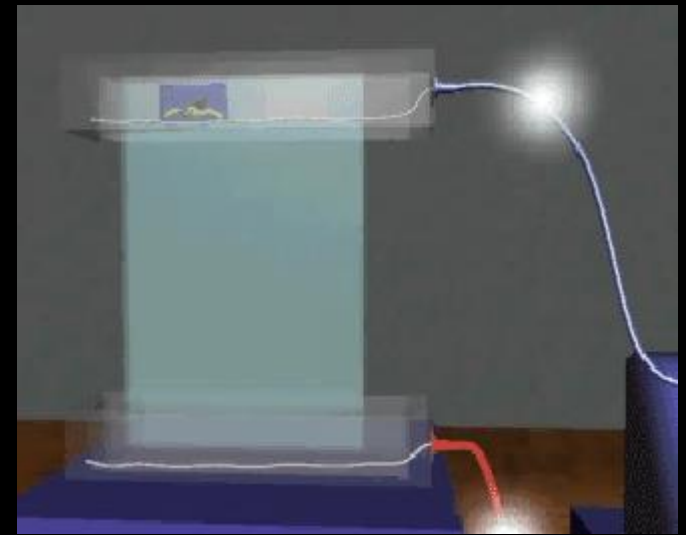


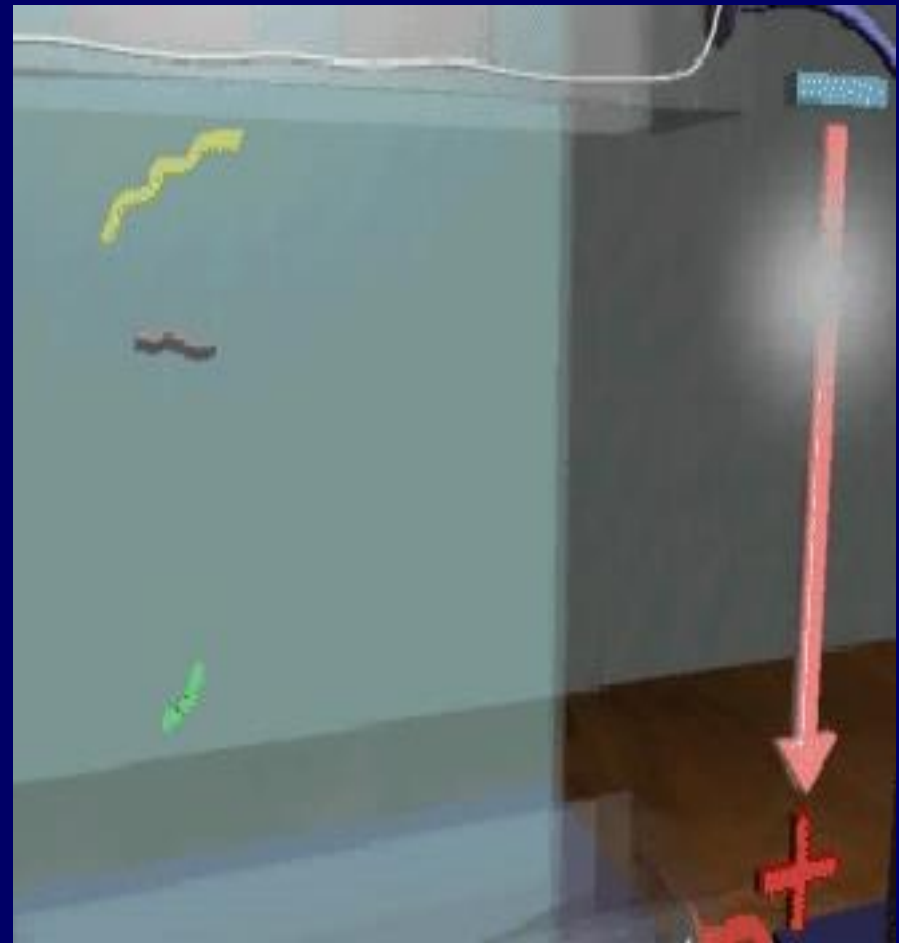
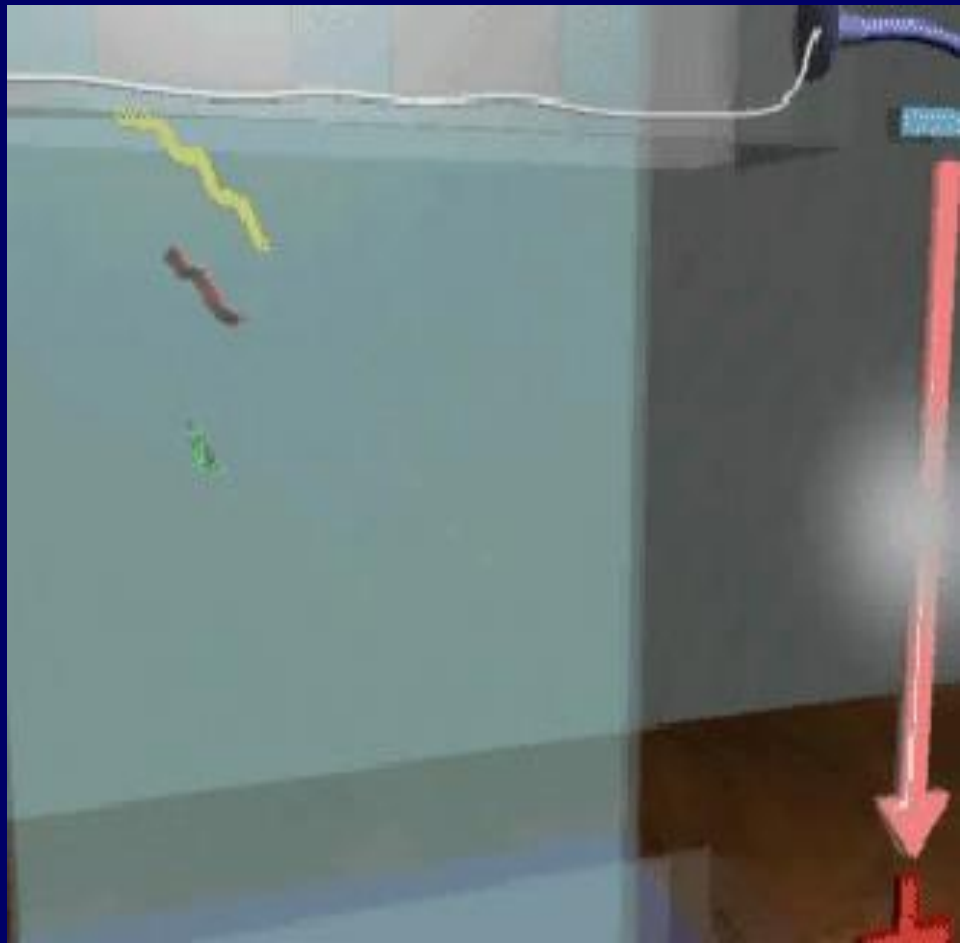


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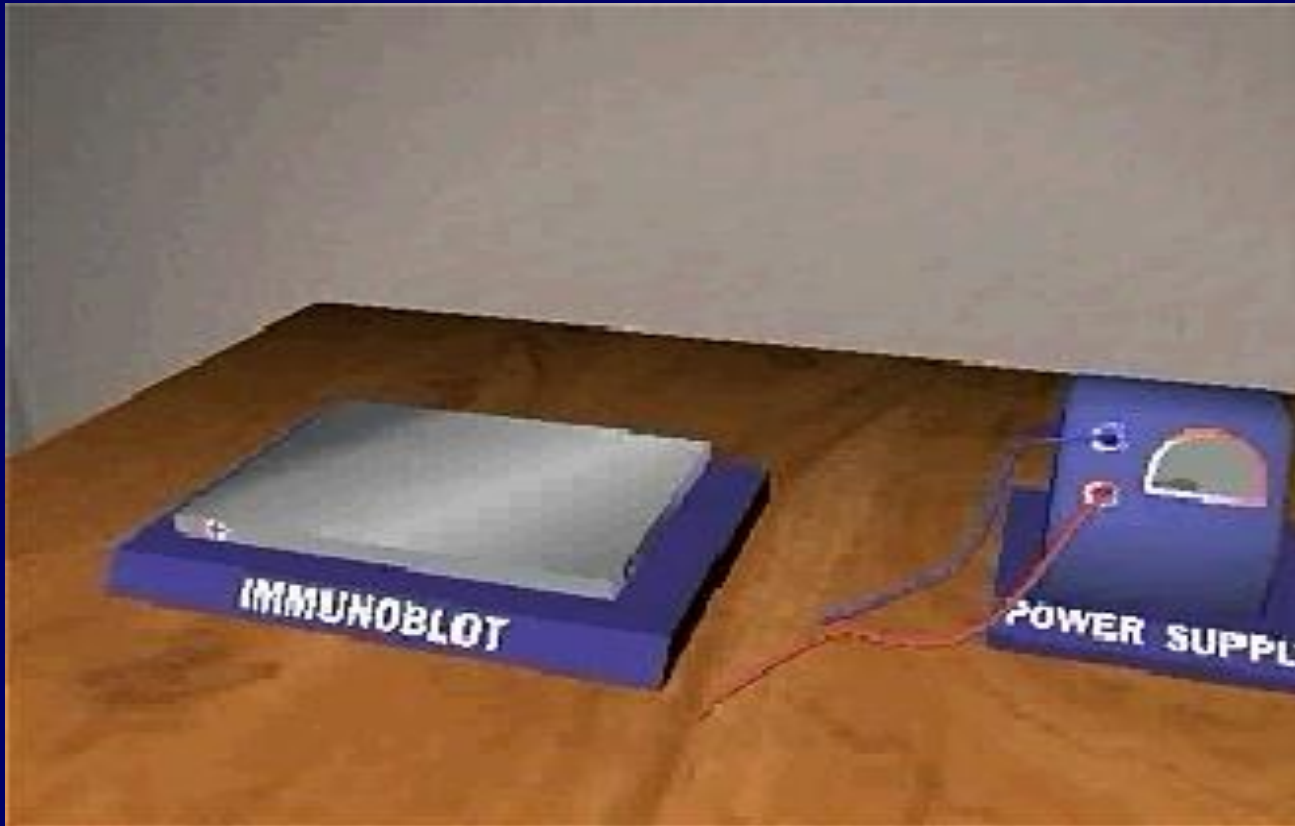
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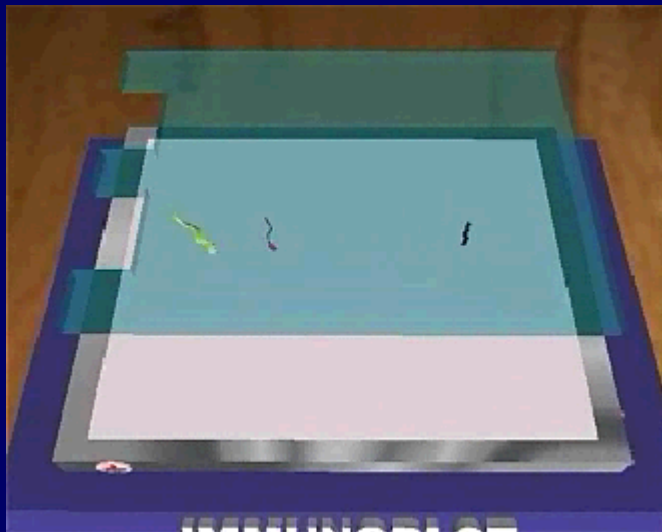
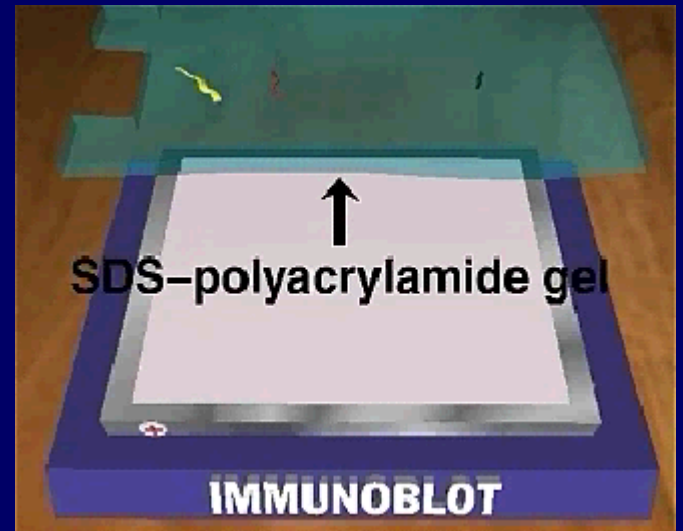
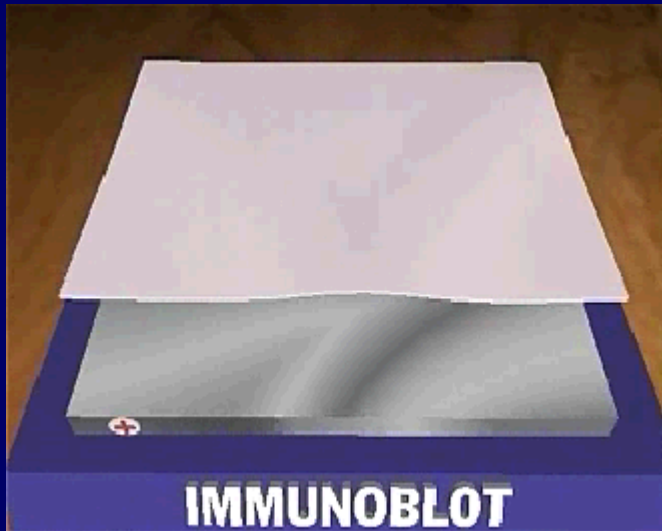


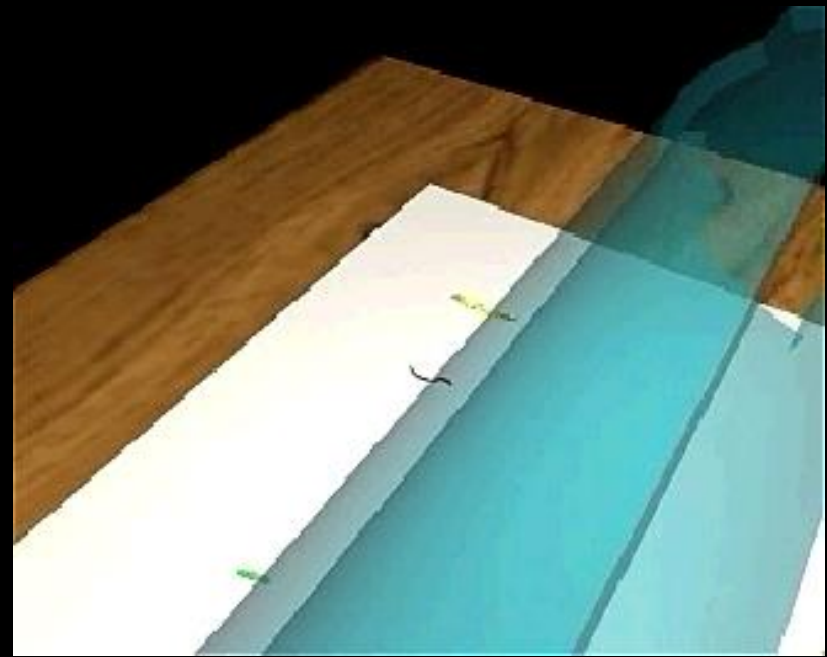
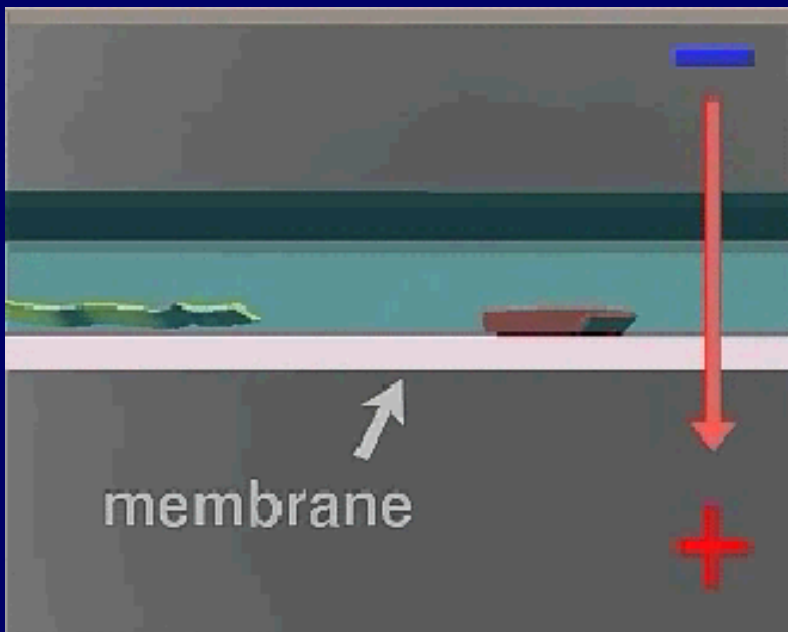
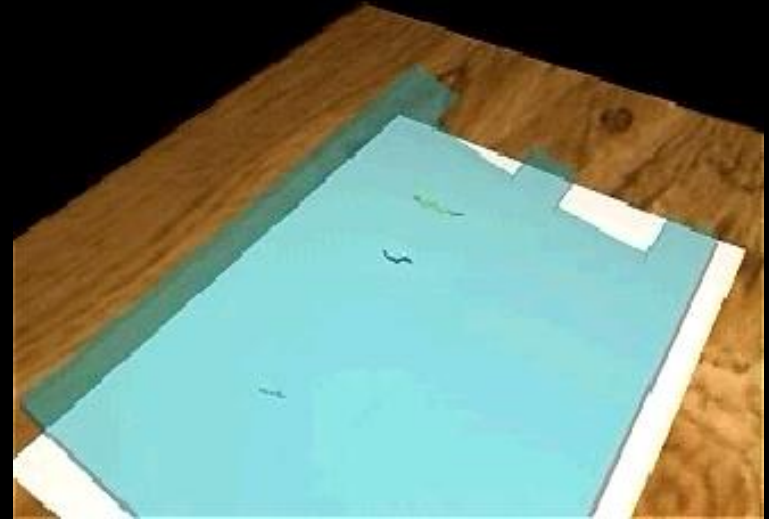
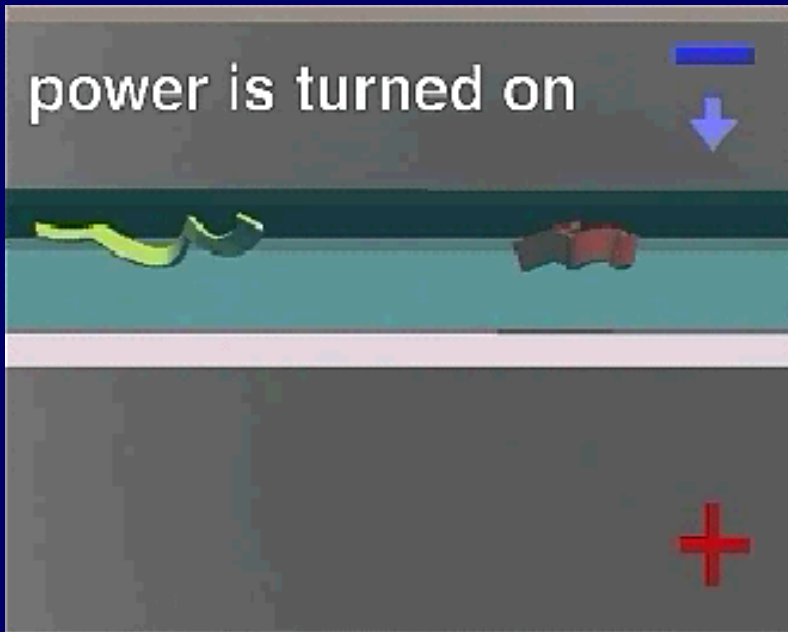
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TRANSFERENCIA PROTEICA



<https://youtu.be/SLWWP576U8s>



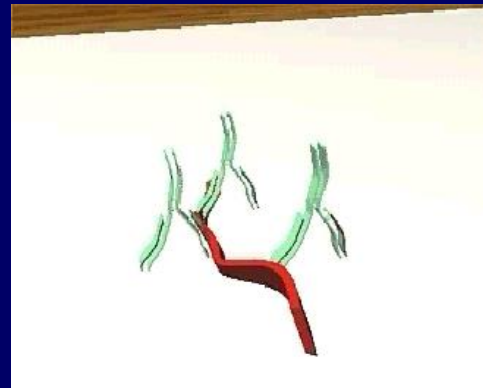


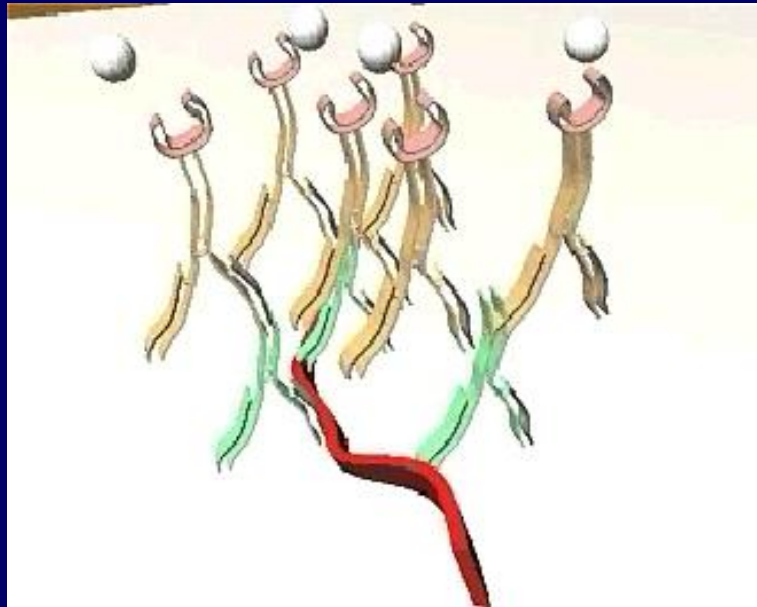
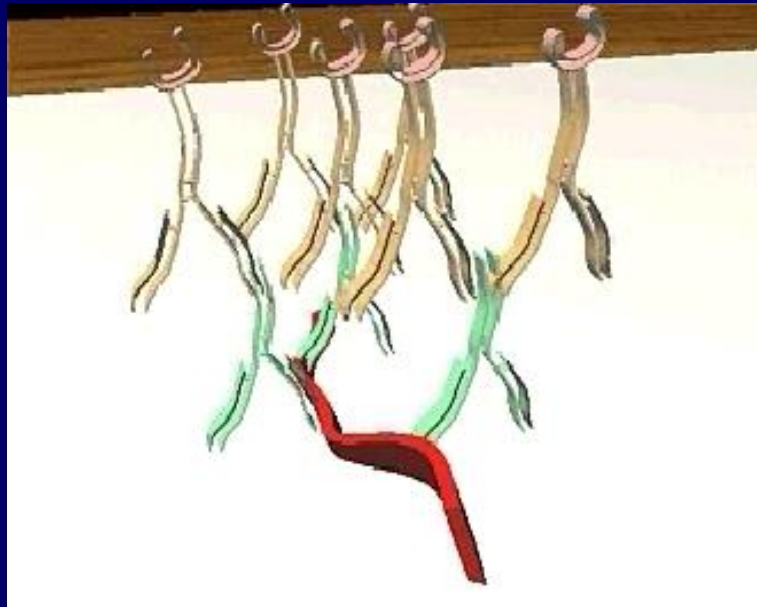
<https://youtu.be/SLWWP576U8s>

INCUBACIÓN ANTICUERPOS: MARCAJE



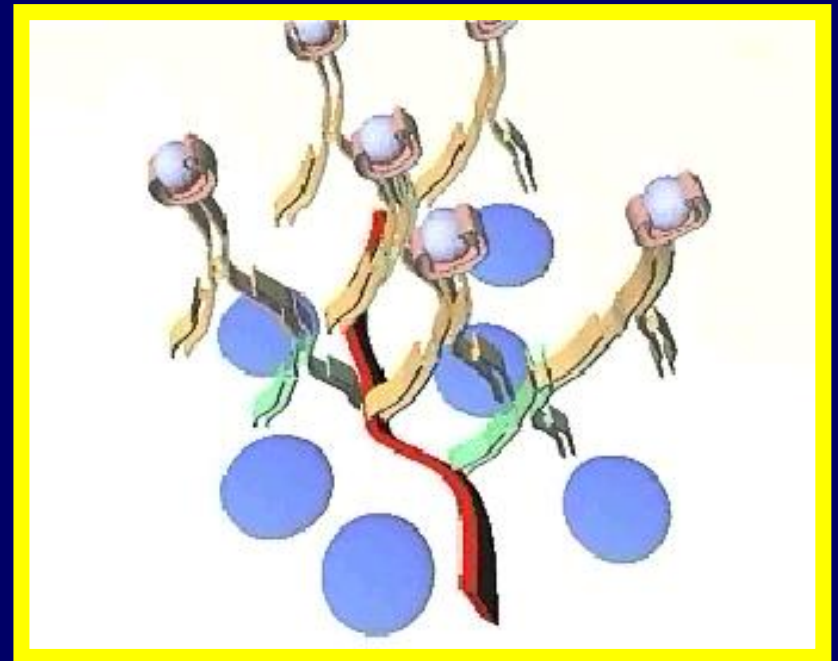
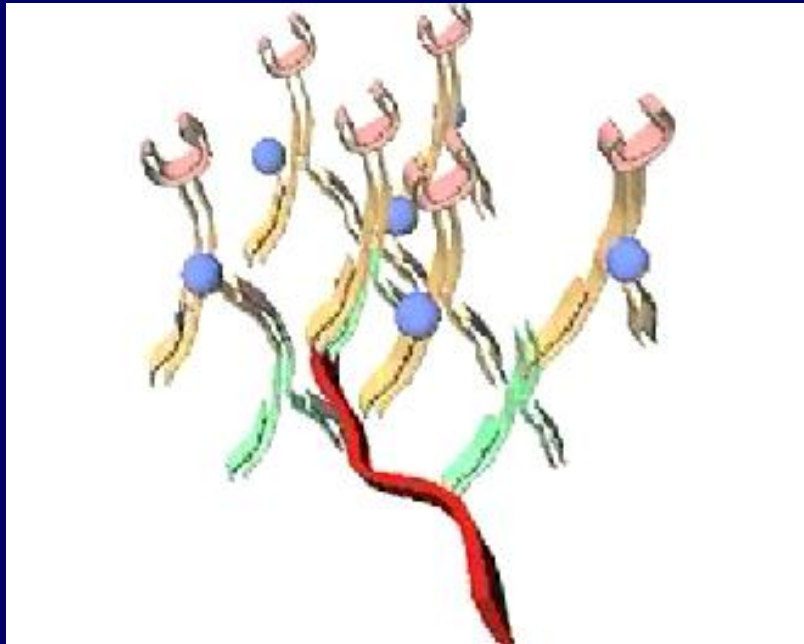
**primary antibodies (green)
are added**

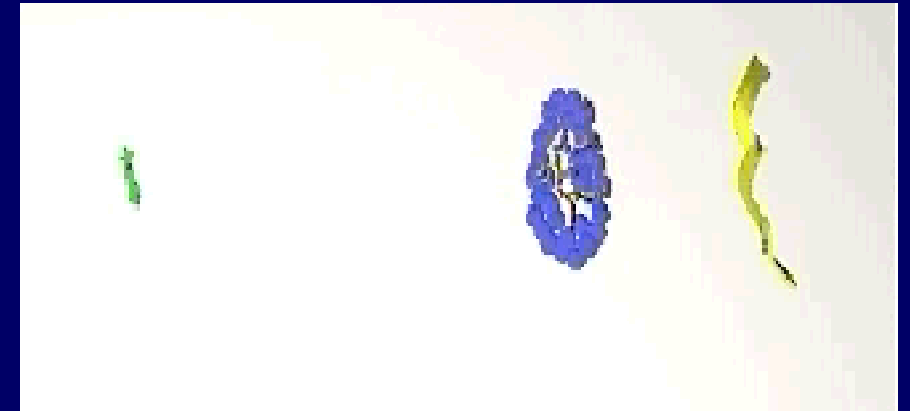
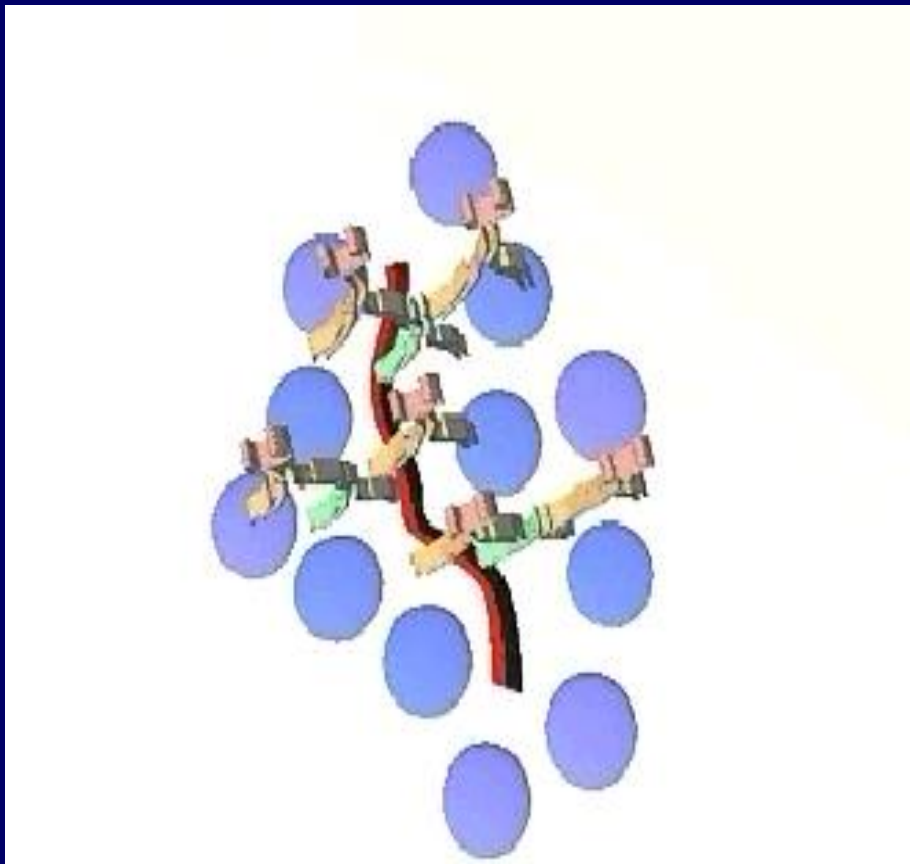




<https://youtu.be/SLWWP576U8s>

UNIÓN QUIMIOLUMINISCENTE: REVELADO





REVELADO



WB α β -tubulina



WB α β -tubulina

Rodriguez-Losada Noela author

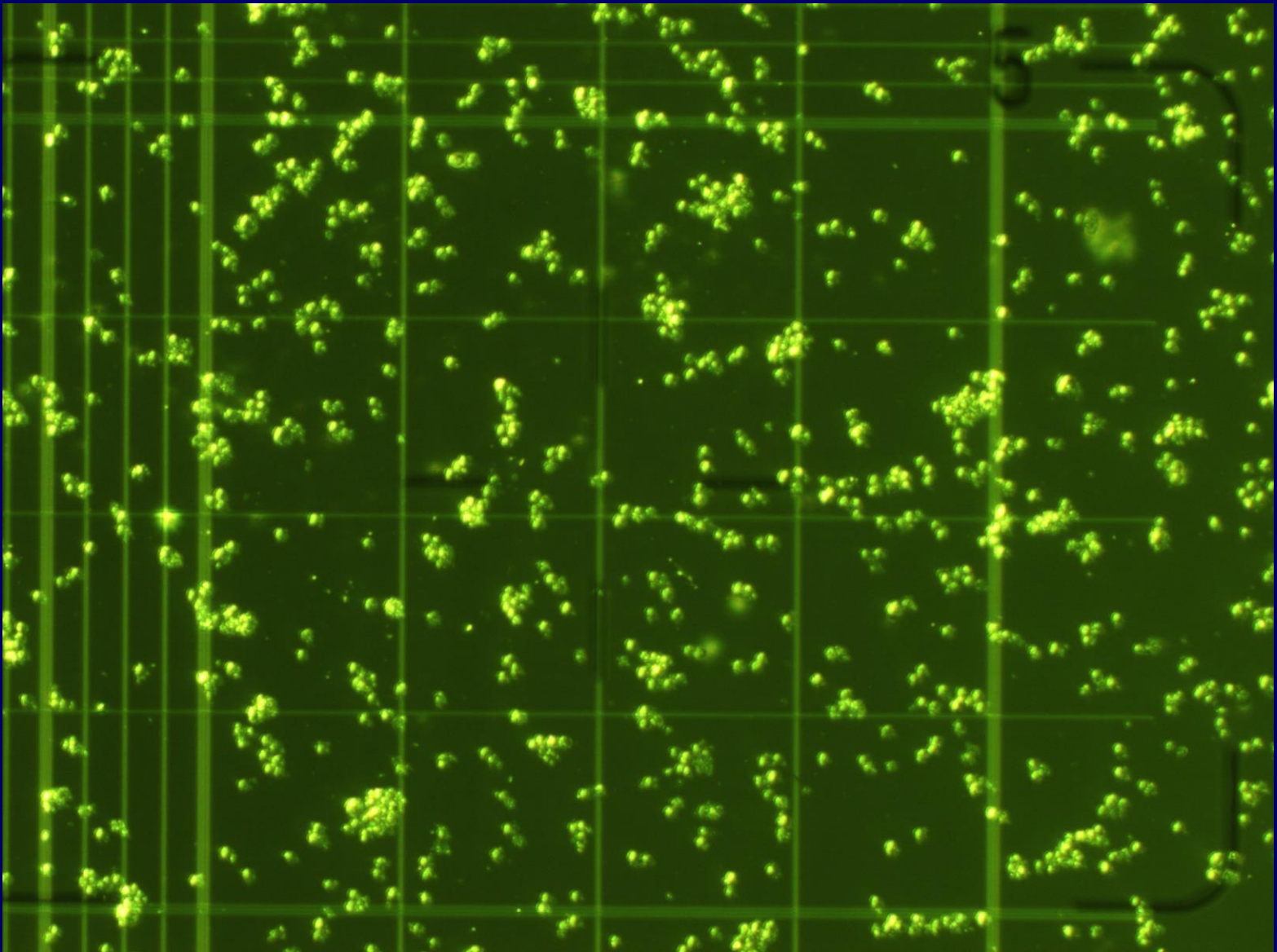
CELULA

TRANSFECTARLA: SISTEMAS DE TRANSFECCIÓN
(EXPRESION POR PLASMIDOS DE DNA: ENZIMAS
RESTRICION: **CLONAJE**)

EXPERIMENTOS MUERTE CELULAR: APOPTOSIS

SUPERVIVENCIA Y PROLIFERACIÓN

PROLIFERACION



Rodriguez-Losada Noela author

ESTUDIO EXPRESION PROTEÍNAS: CITOMETRÍA,
INMUNOFLUORESCENCIAS, INMUNOHISTOQUÍMICAS.

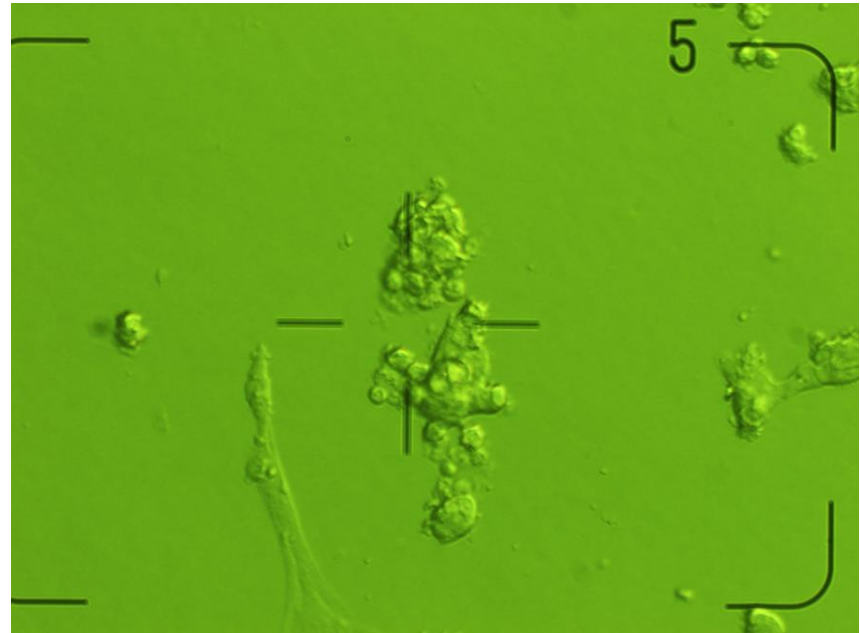
ESTUDIO EXPRESION GENES

ENSAYOS PROLIFERACION, APOPTOSIS, LATENCIA,
TRANSFECCION

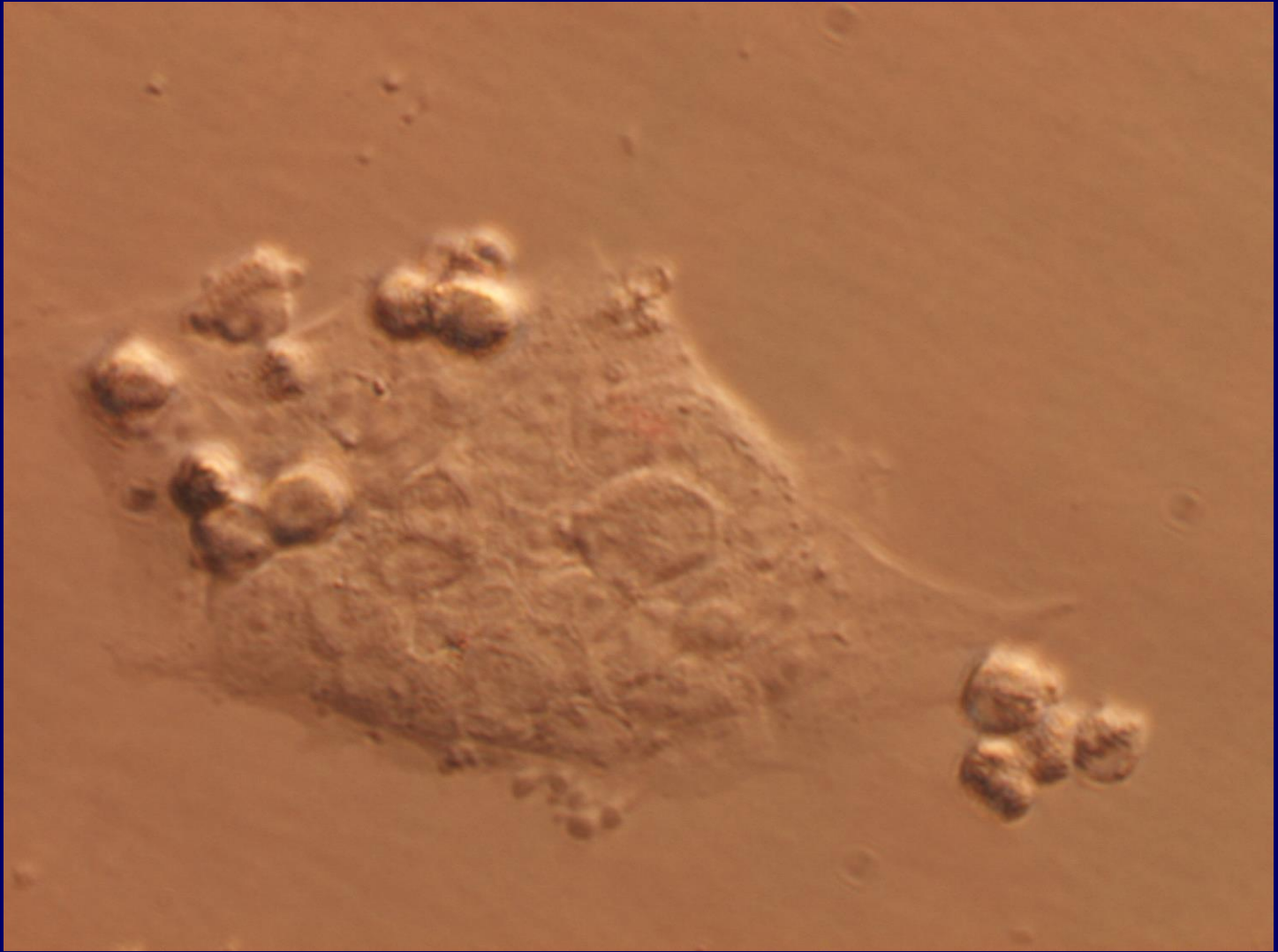
REGULACION CELULAR CICLO

REGULACION MIGRACION

PATWAYS

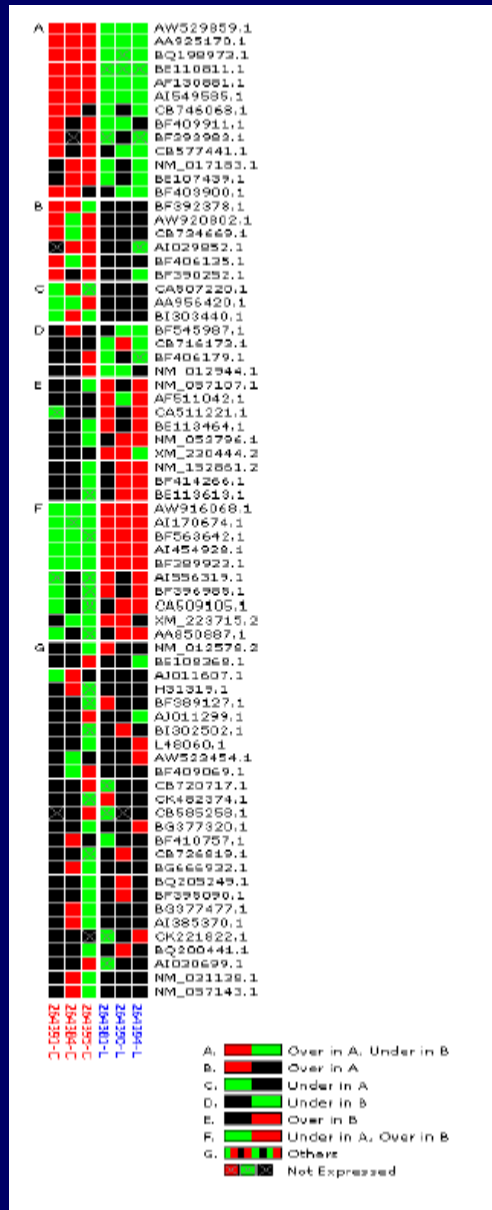


Rodriguez-Losada Noela author



Rodriguez-Losada Noela author

EXPRESIÓN DE GENES EN CULTIVO



ANIMAL

RIA- CANULACION -
PULSATILIDAD

ELISAS

INMUNOFLUORESCENCIAS-
INMUNOHISTOQUIMICAS DE
TEJIDO EXTRAIDO

PCR-RT DE TEJIDOS

WB/NB DE TEJIDOS

TRANSGÉNESIS

KNOCK-OUT

