

La nANOMEDICINA

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¿¿¿MEDICINA TRADICIONAL O MEDICINA-CIENTÍFICA???

Haga clic para modificar el estilo de texto del patrón

Segundo nivel

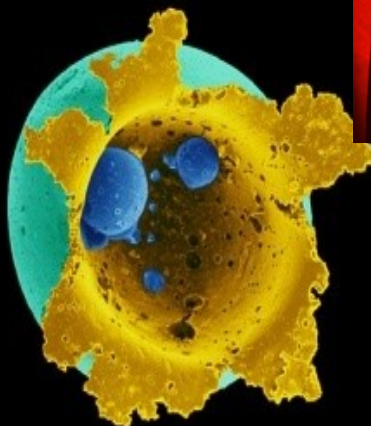
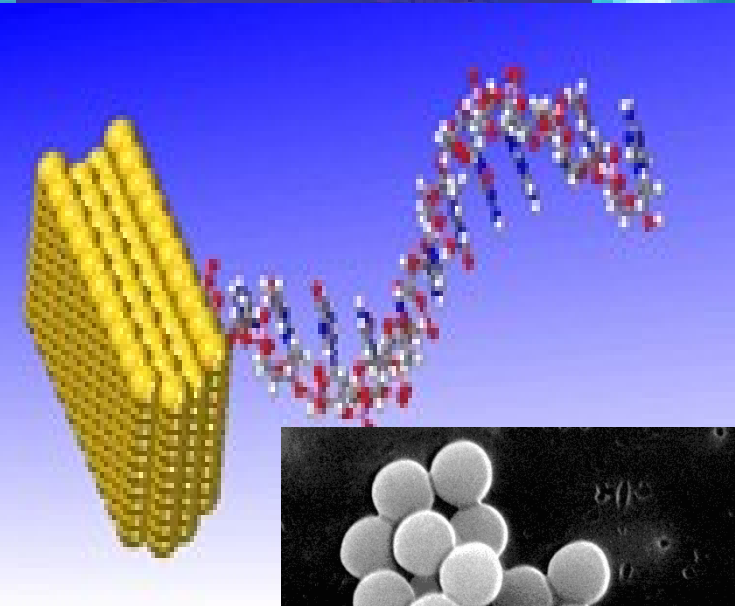
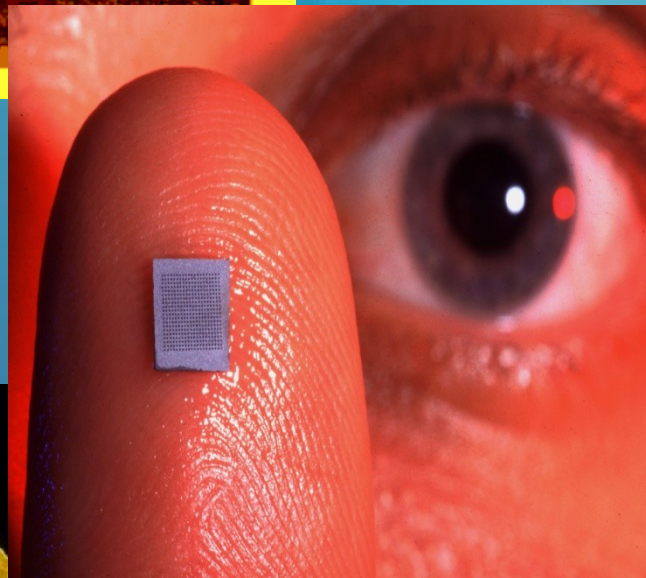
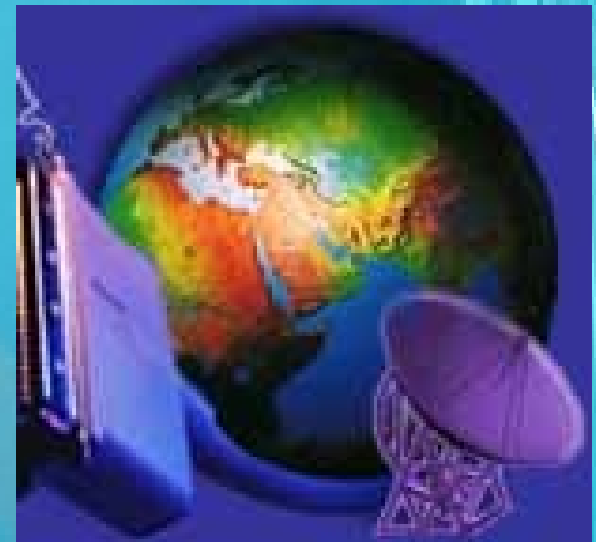
Tercer nivel

Cuarto nivel

Quinto nivel

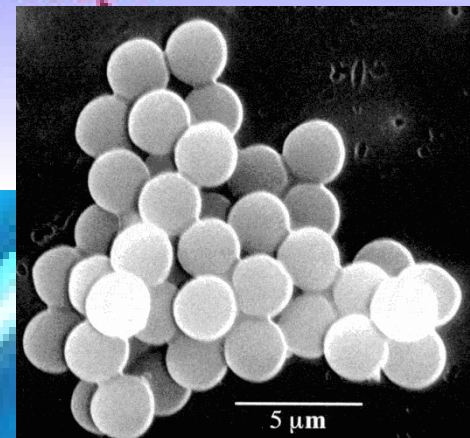


IBM
NANO



SCIENCEPHOTOLIBRARY

Nanotecnología
de materiales



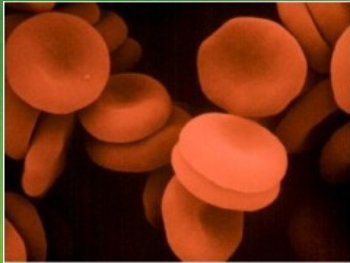
Lo que si podemos ver...

Haga clic para modificar el estilo de texto del patrón
Segundo nivel

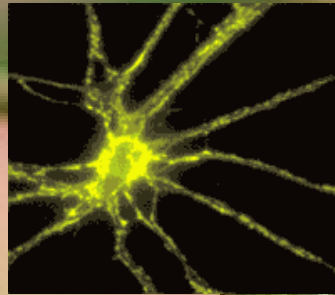
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 - Cuarto nivel
 - Quinto nivel



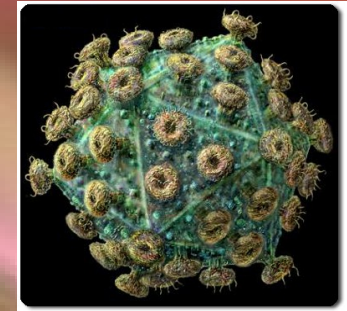
LO QUE NO PODEMOS VER....



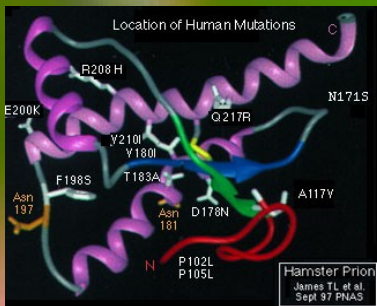
**eritrocitos
micras**



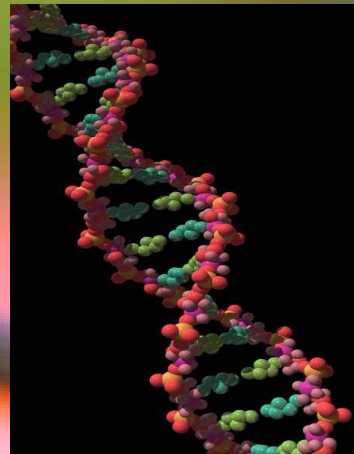
**Neurona unas
cuantas micras**



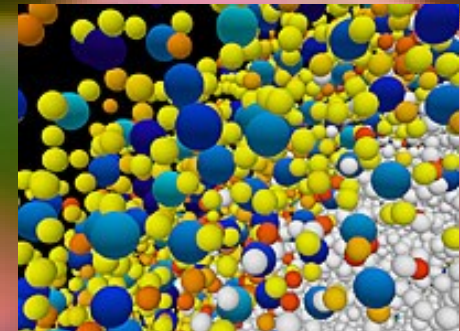
**Virus VIH (SIDA)
100 nm**



**Prion (VACAS LOCAS)
10 a 20 nm**

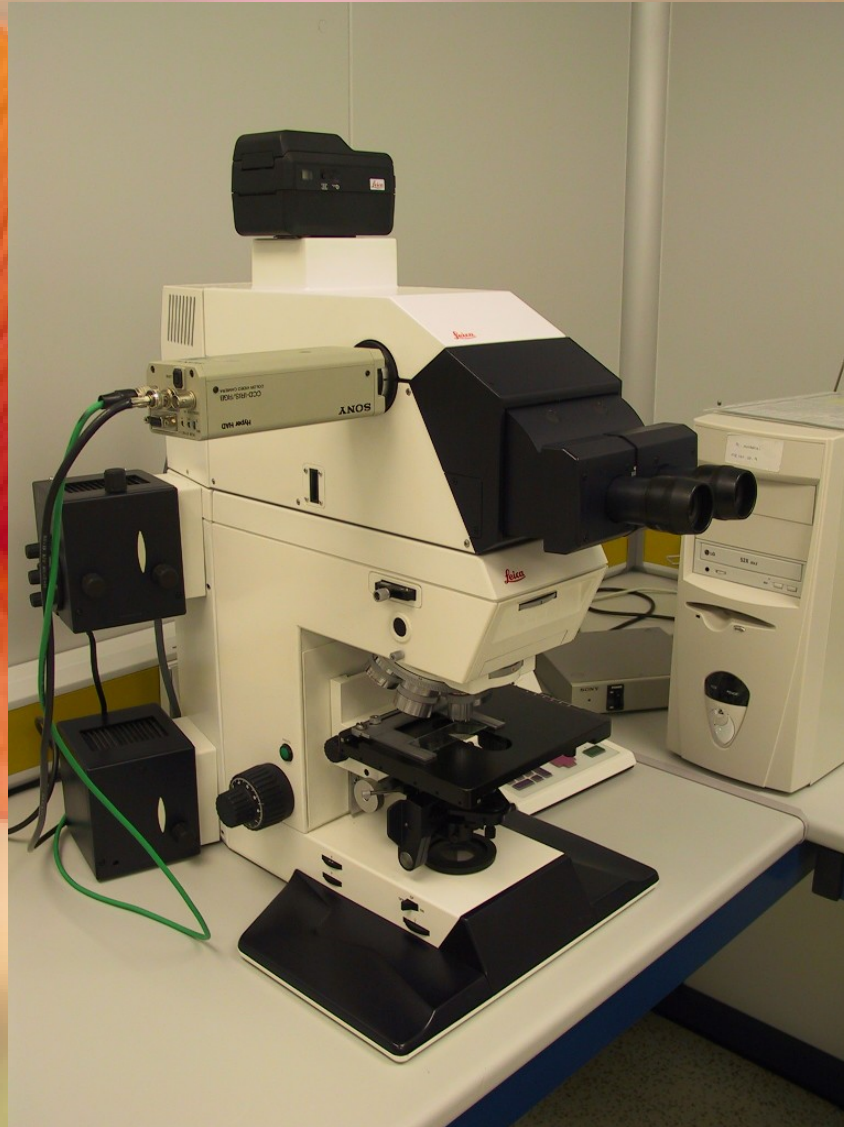


ADN 10 nm

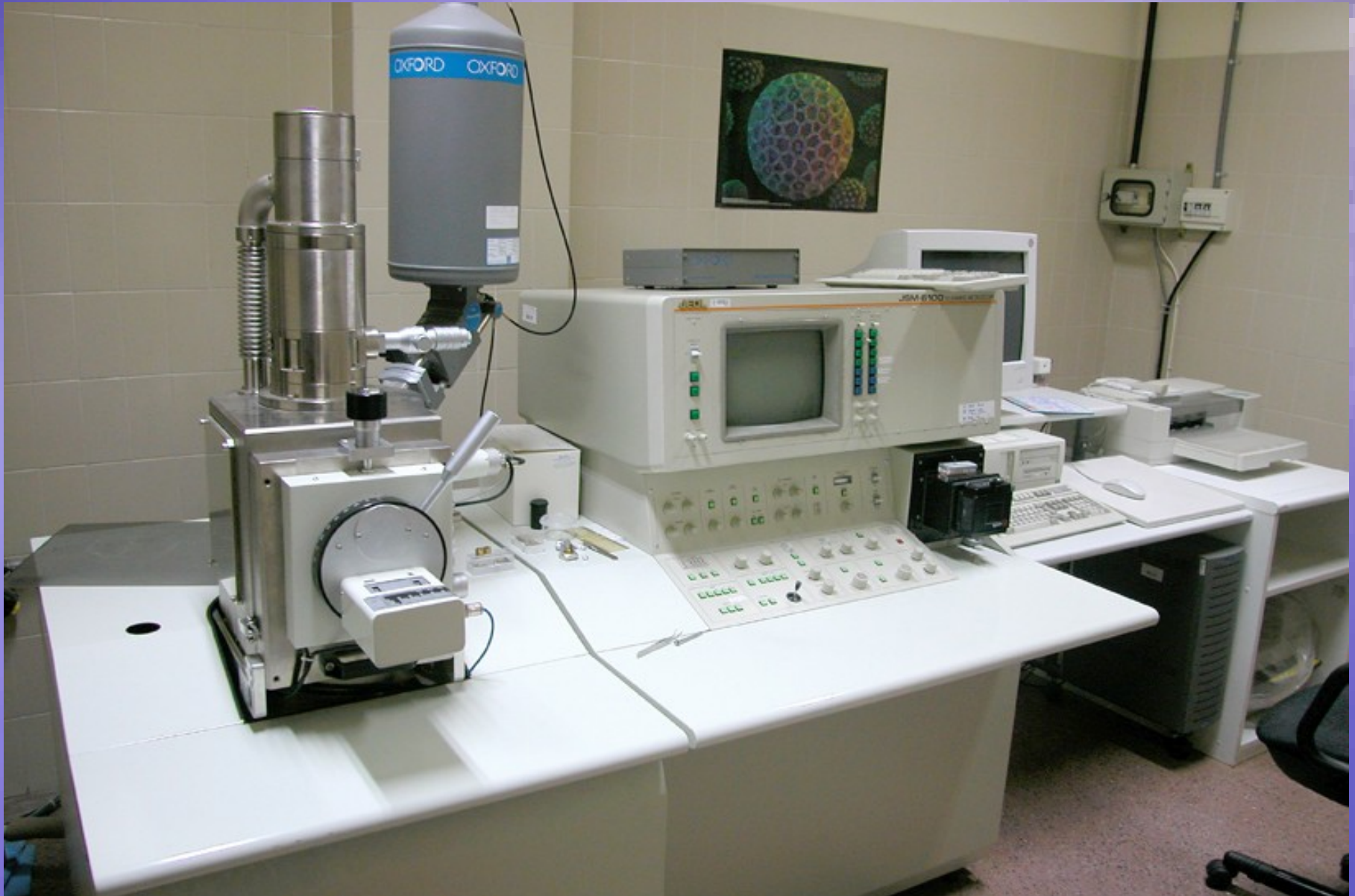


**ÁTOMOS
1 nm**

Microscopio óptico



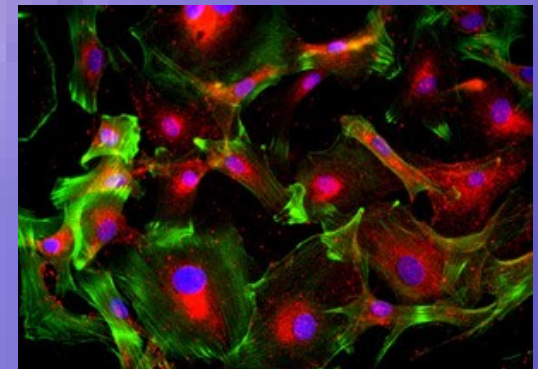
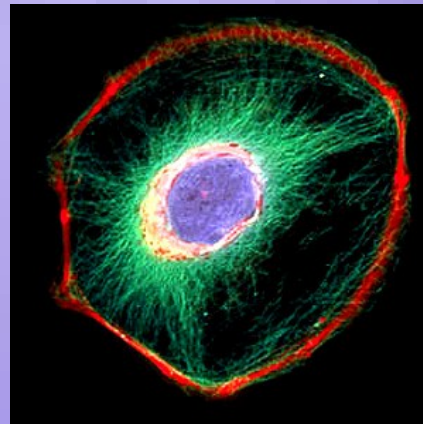
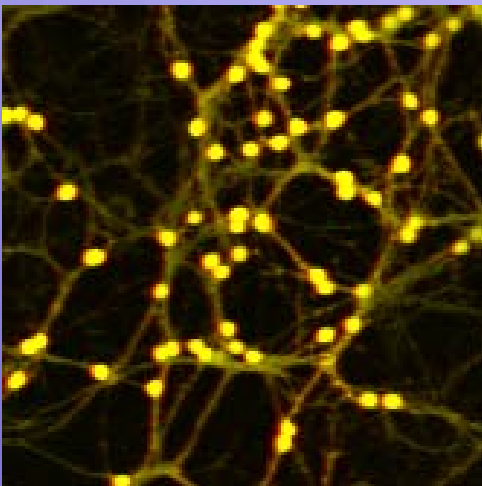
Microscopio Electronico



MICROSCOPIO CONFOCAL CON FLUORESCENCIA

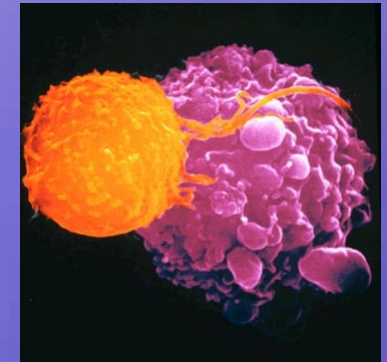
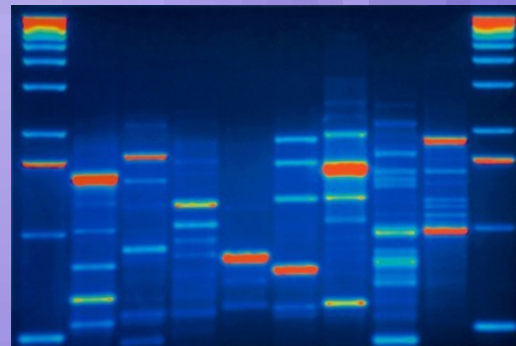
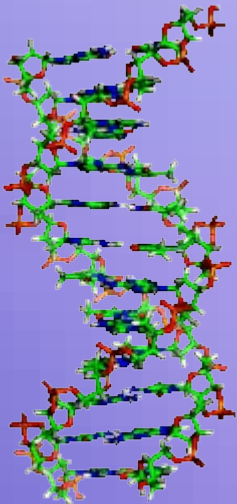
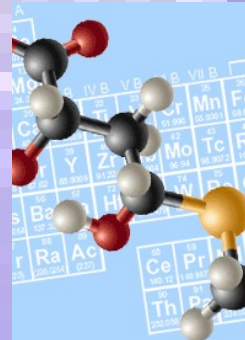
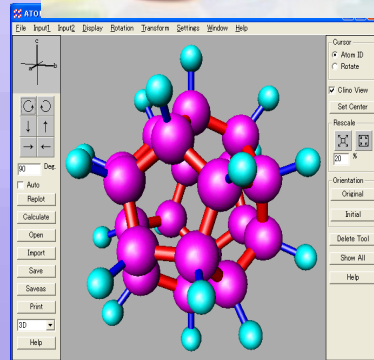


Se observan micras y especies > 700 nm

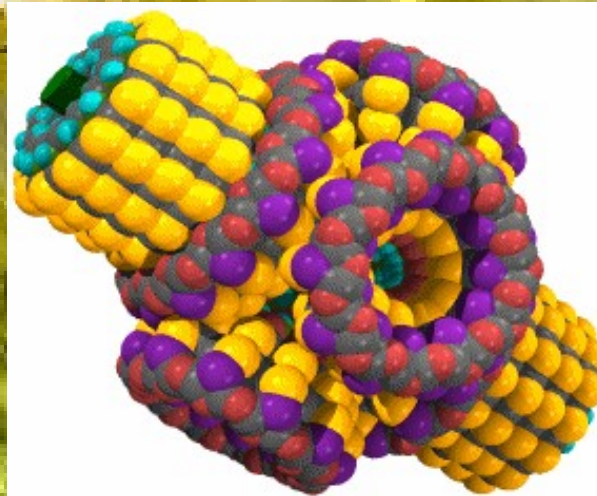




AHORA SOMOS CAPACES DE MANIPULAR LA MATERIA PARA HECHER “MATERIALES SOBRE PEDIDO”



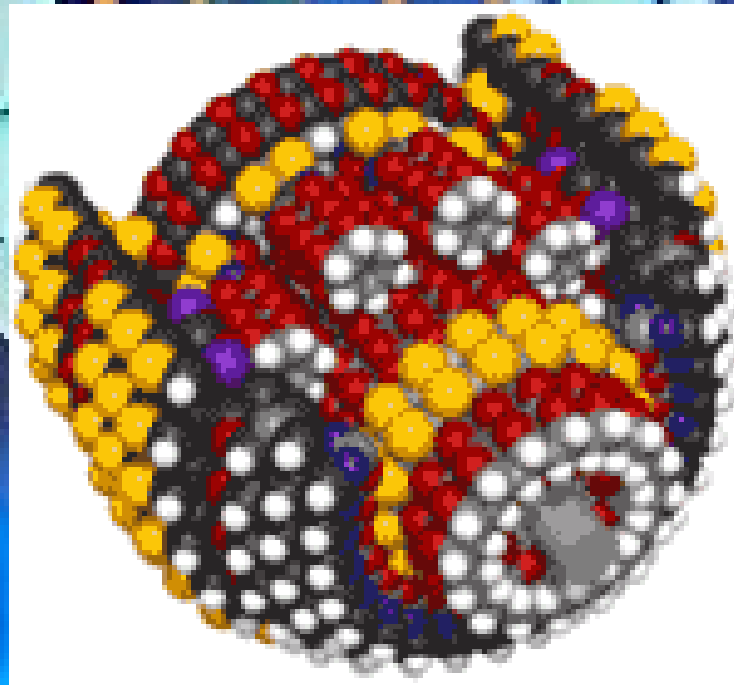
NANOMEDICINA

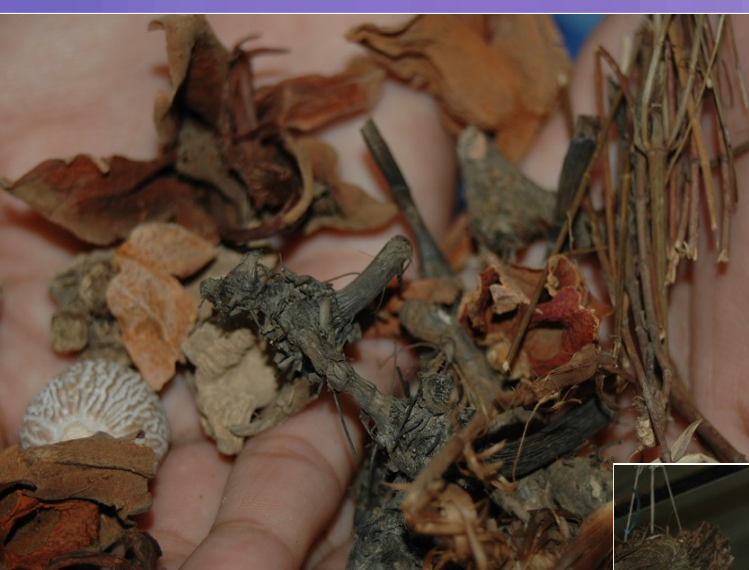




Liberación controlada de Fármacos Y Nanomedicina Catalítica

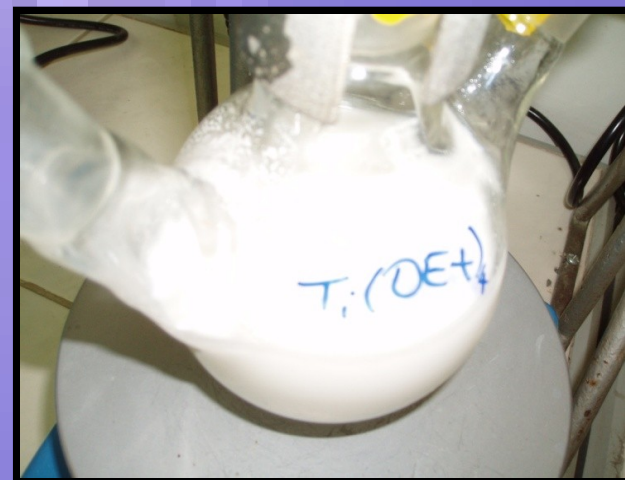
ENFERMEDADES NEURODEGENERATIVAS





REMEDIOS ALTERNATIVOS





**DISEÑAR MATERIALES NANOESTRUCTURADOS CON
UN ESPACIO VACÍO MAYOR A 70%**

**✓ BIOCOMPATIBLES CON TEJIDO CEREBRAL y
CUALQUIER TEJIDO DEL CUERPO**

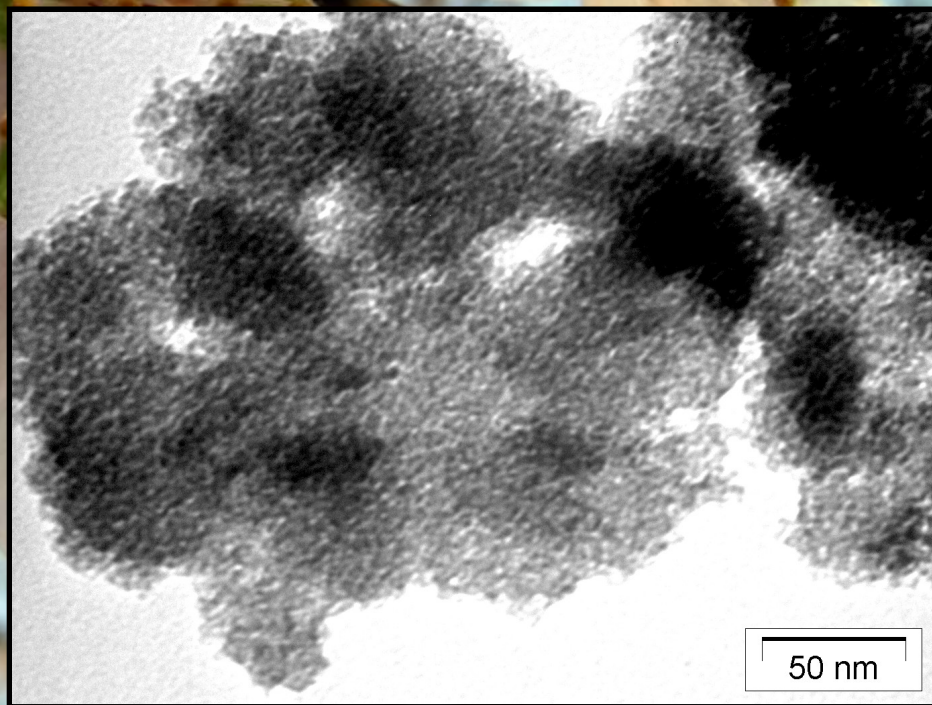
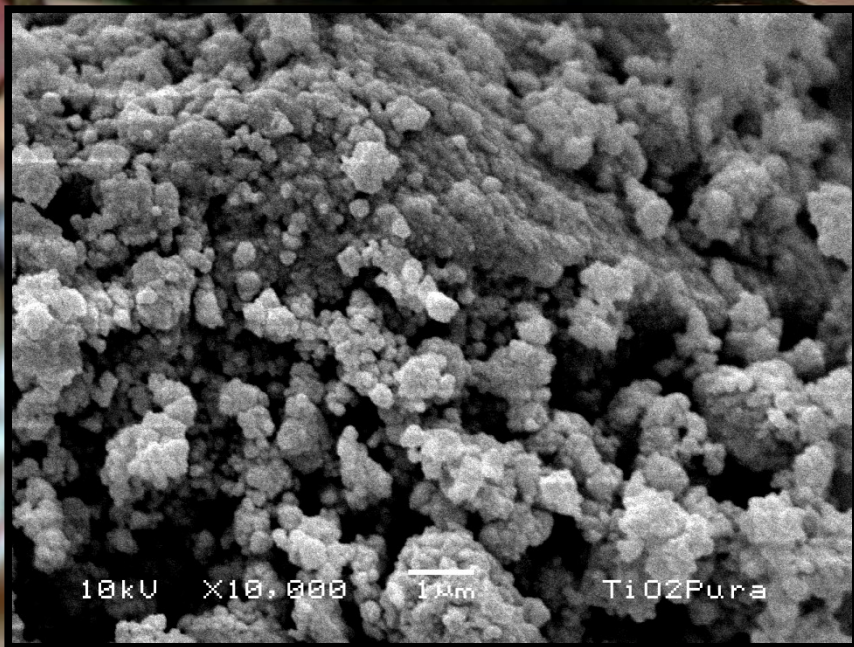
**✓ CON DIFERENTES ESTRUCTURAS
POROSIDAD Y TAMAÑO VARIABLE**

**ADECUADOS PARA INTRODUCIR CUALQUIER
FÁRMACO Y LIBERARLO EN EL TIEMPO DESEADO**

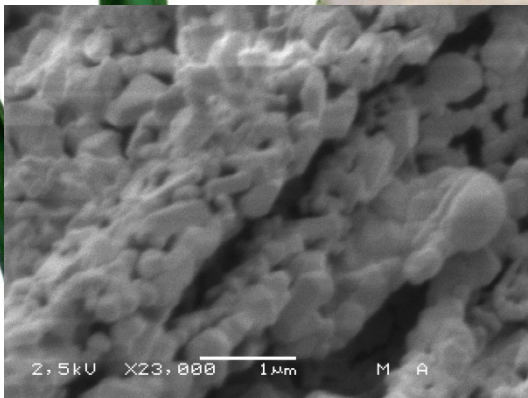
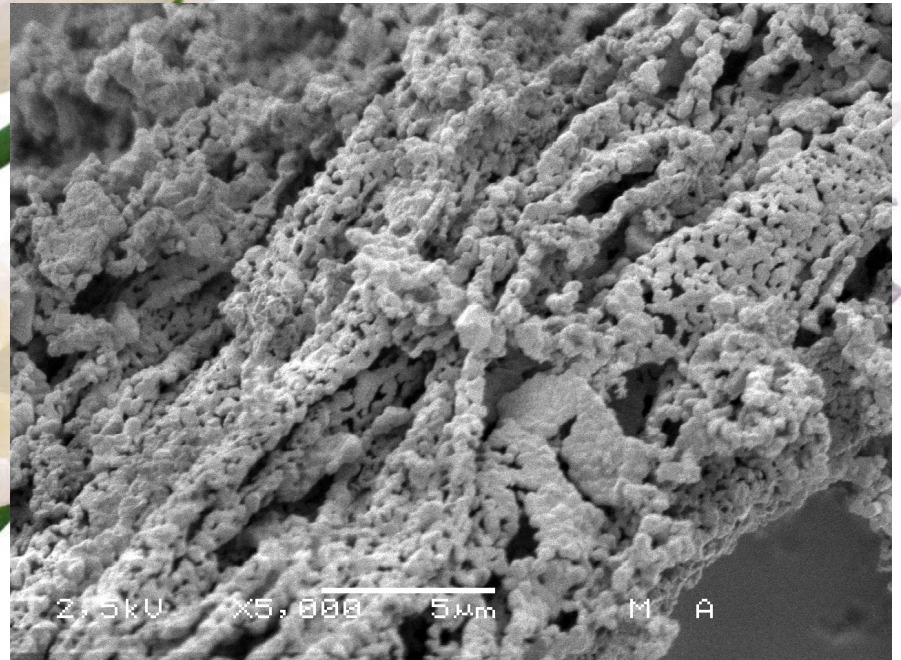
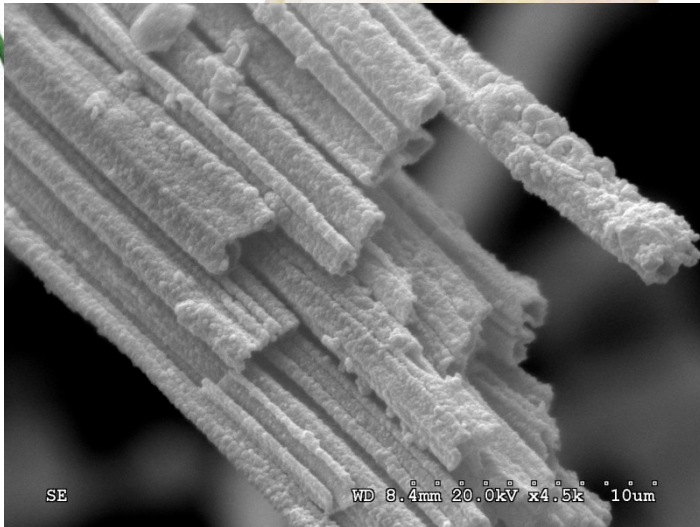
**✓ EL FÁRMACO DE ESTA MANERA, ESTARÁ EN
CONTACTO DIRECTAMENTE CON LA ZONA DAÑADA**



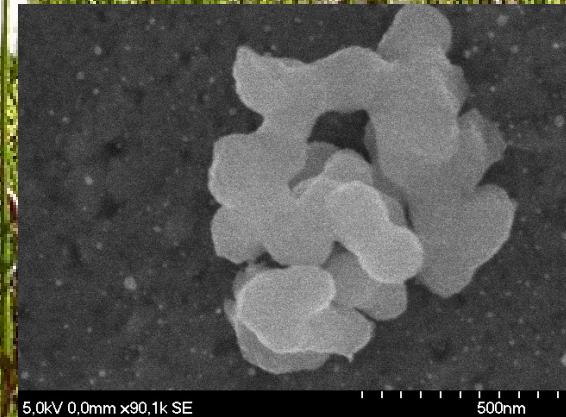
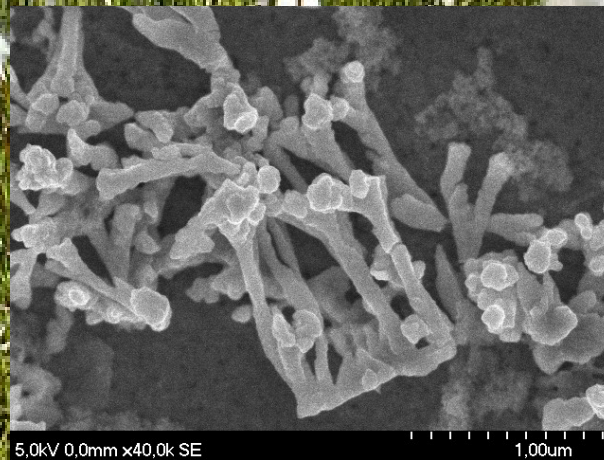
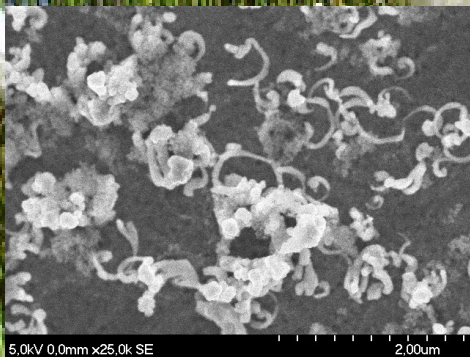
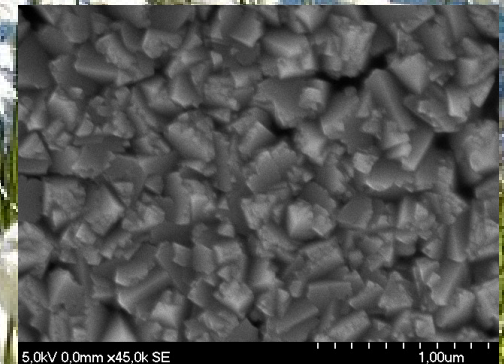
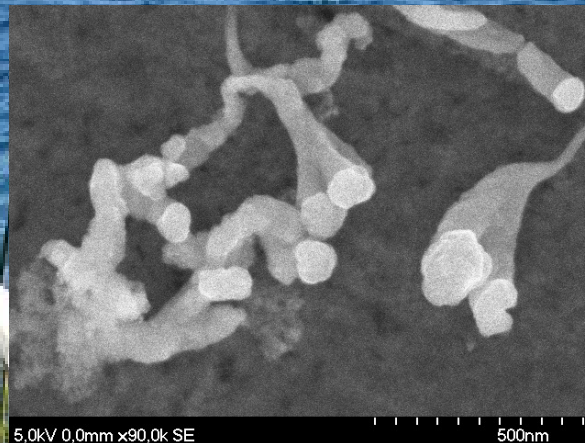
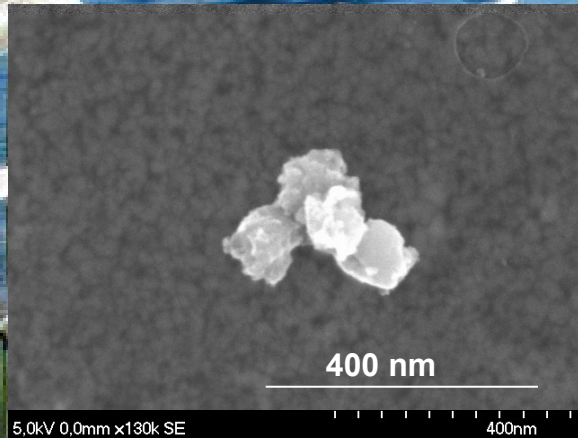
OXIDO DE TITANIO-IZTAPALAPA NANOESTRUCTURADO



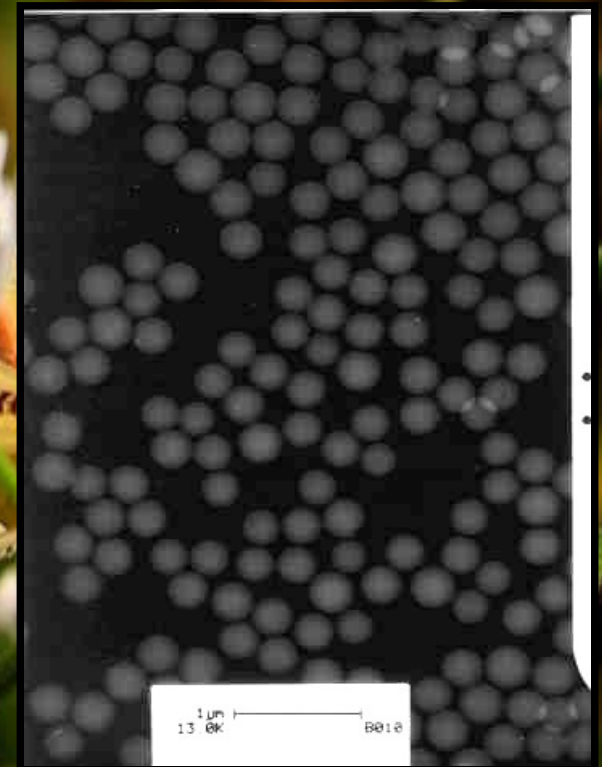
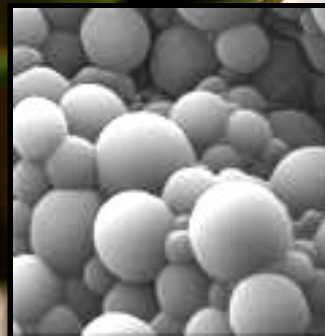
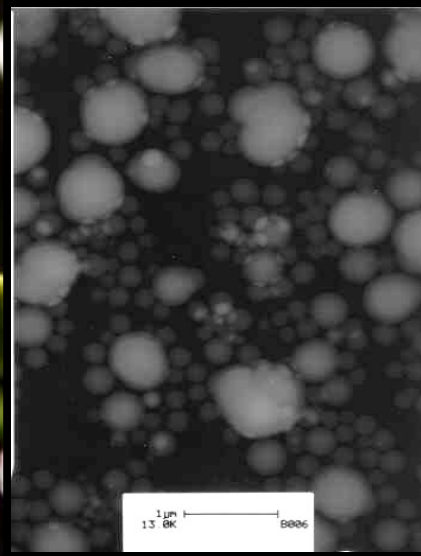
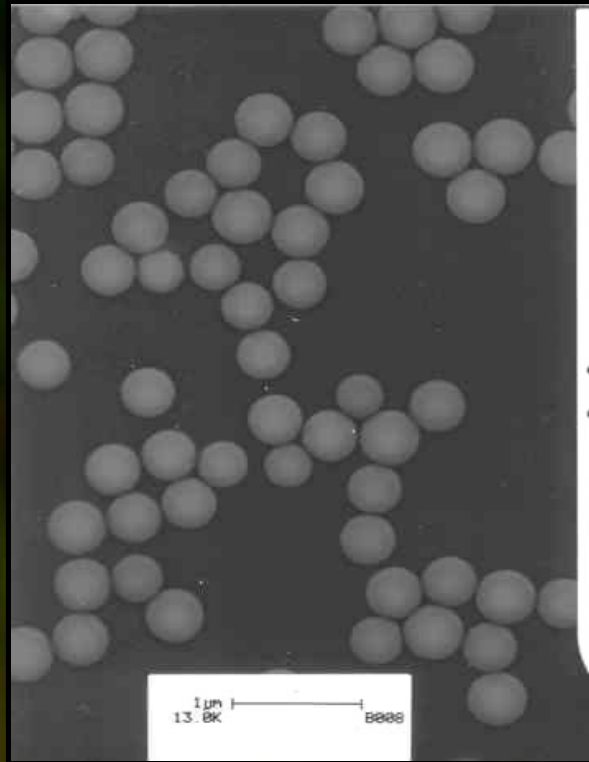
NANOTUBOS DE ÓXIDO DE TITANIO



ÓXIDO DE SILICIO NANOESTRUCTURADO



NANOESFERAS HUECAS DE ÓXIDO DE SILICIO





EPILEPSIA

2009
5500 Pacientes
en el INNN

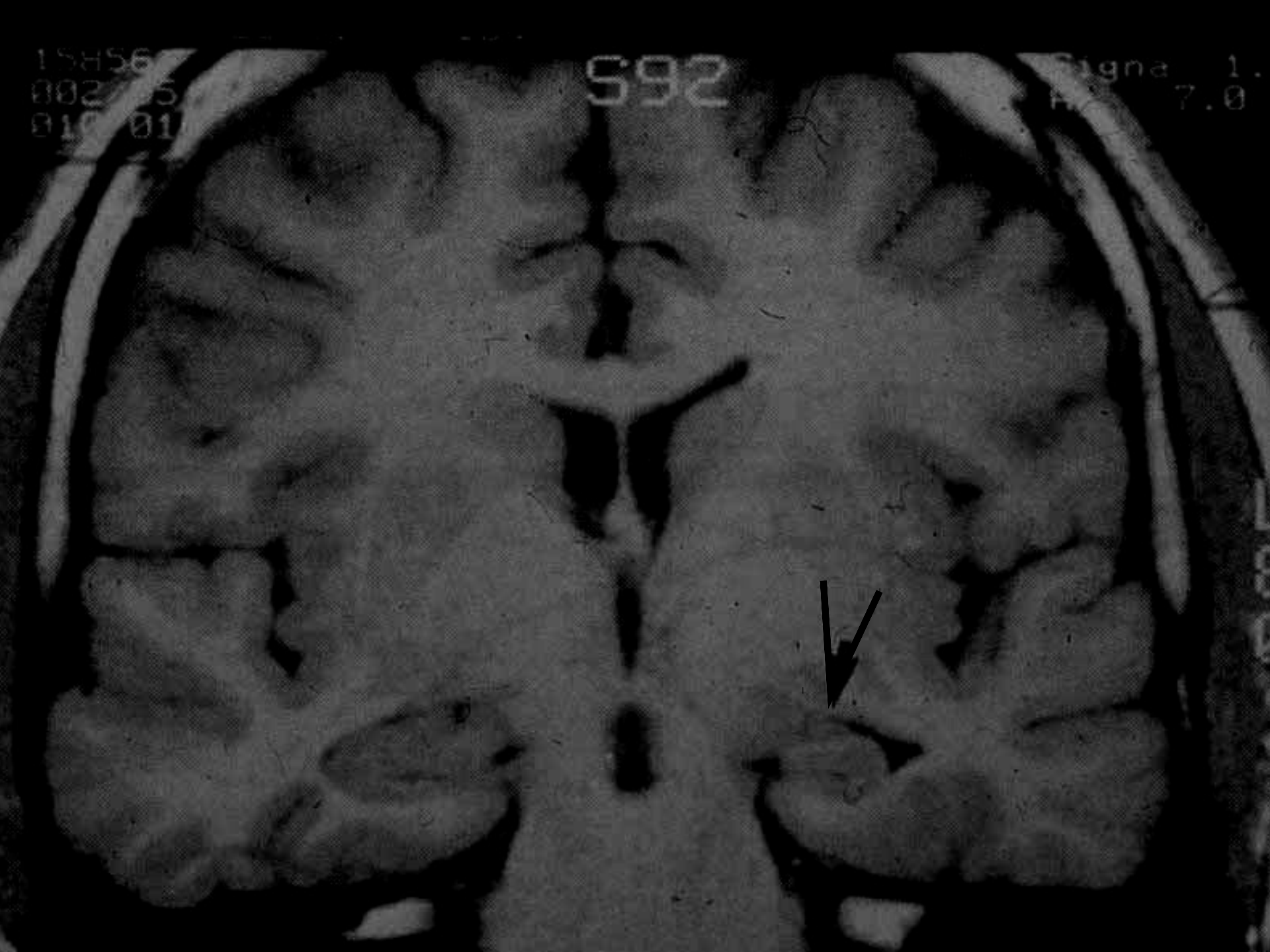


50% TUVO POR LO
MENOS UNA CRISIS

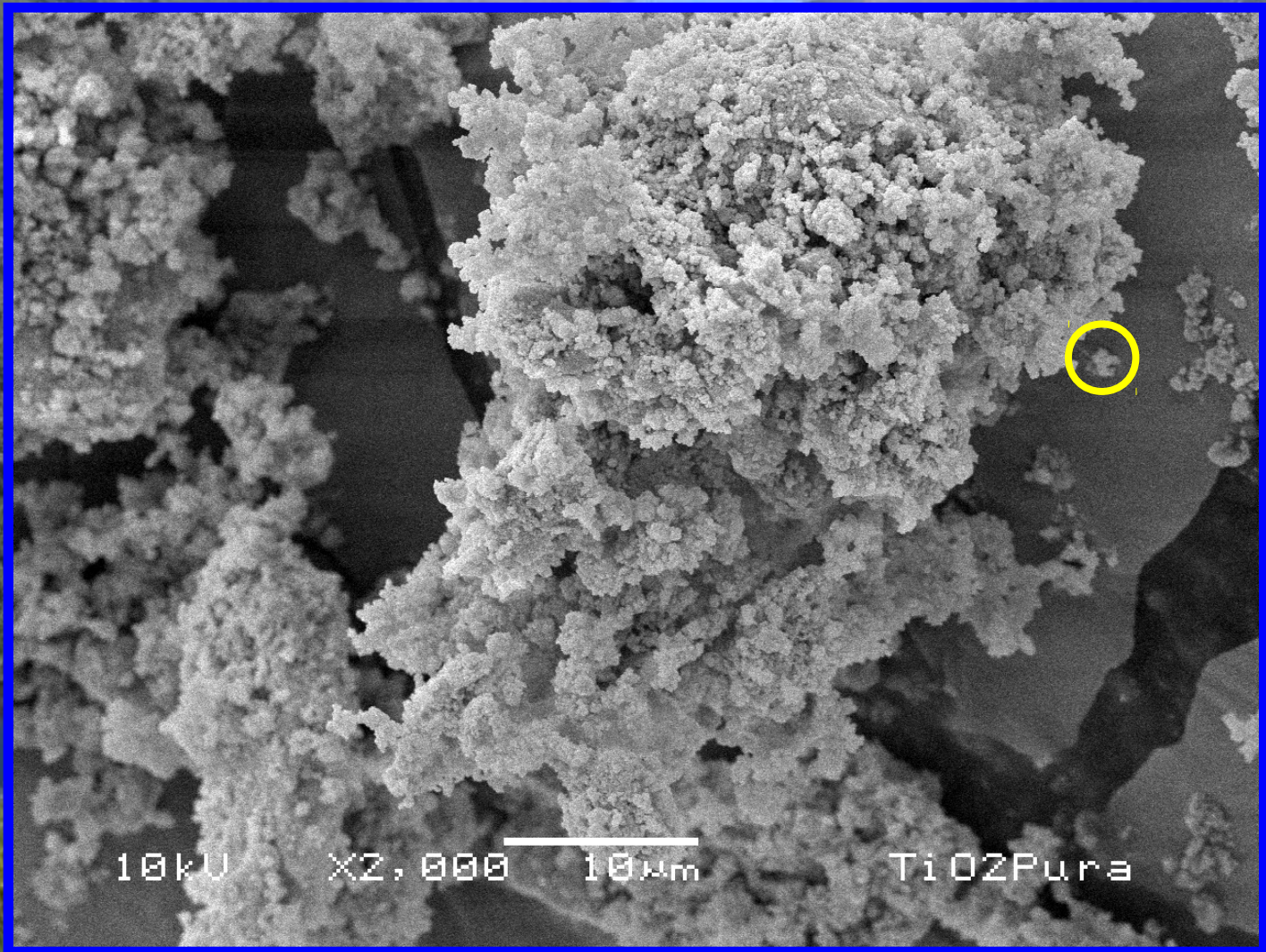
15856
002/5
010/01

592

Signa 1.
Hz 7.0



TITANIA IZTAPALAPA NANOESTRUCTURADA



MICROSCOPIA ELECTRÓNICA DE TRANSMISIÓN

Haga clic para modificar el estilo de texto del patrón
Segundo nivel

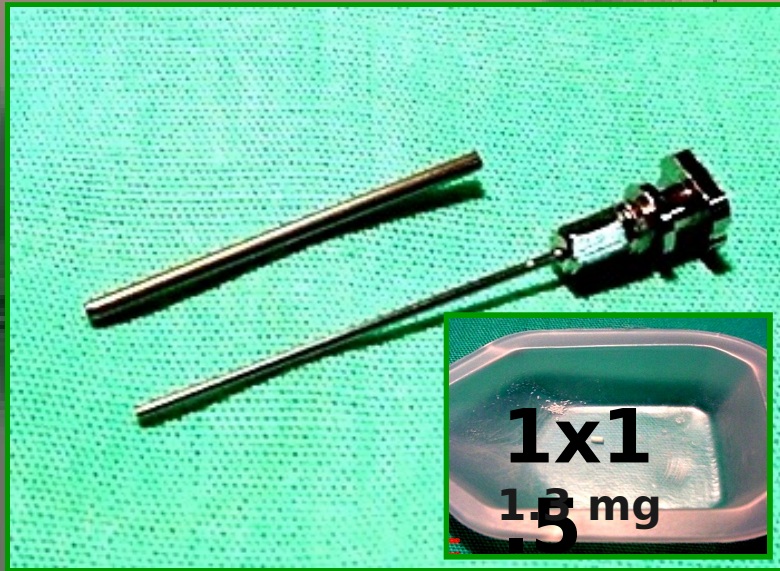
- Tercer nivel
 - Cuarto nivel
 - Quinto nivel

4.tif

Print Mag = 1434610x @ 7.5 in
Acquired May 19, 2009 at 4:58 PM
TEM Mode = MAG

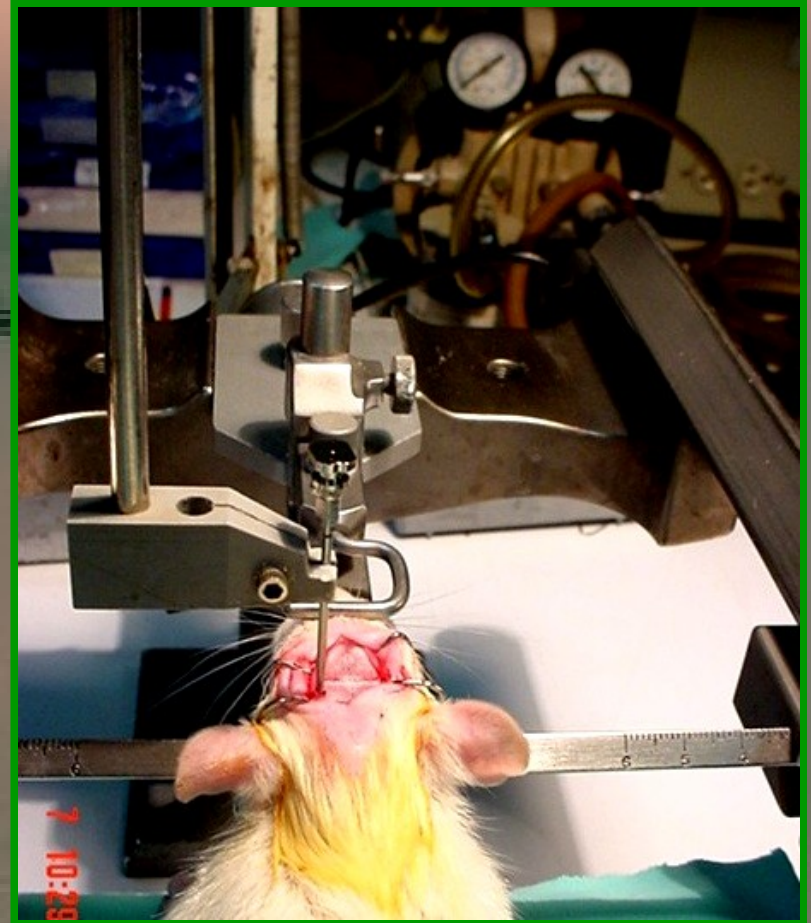
20 nm

HV= 200kV
Direct Mag = 150000x
X = -350.8 Y = 590.6
Tilt = -0.2
Default Form



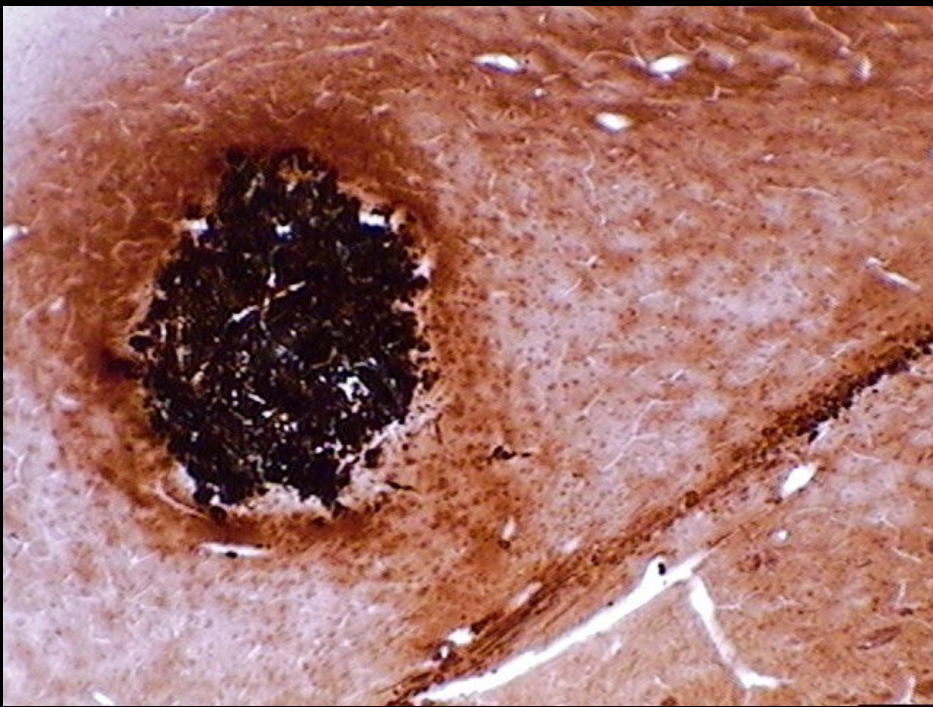
mm

El reservorio se implanta en el cerebro. Usando cirugía estereotáxica que es poco invasiva.





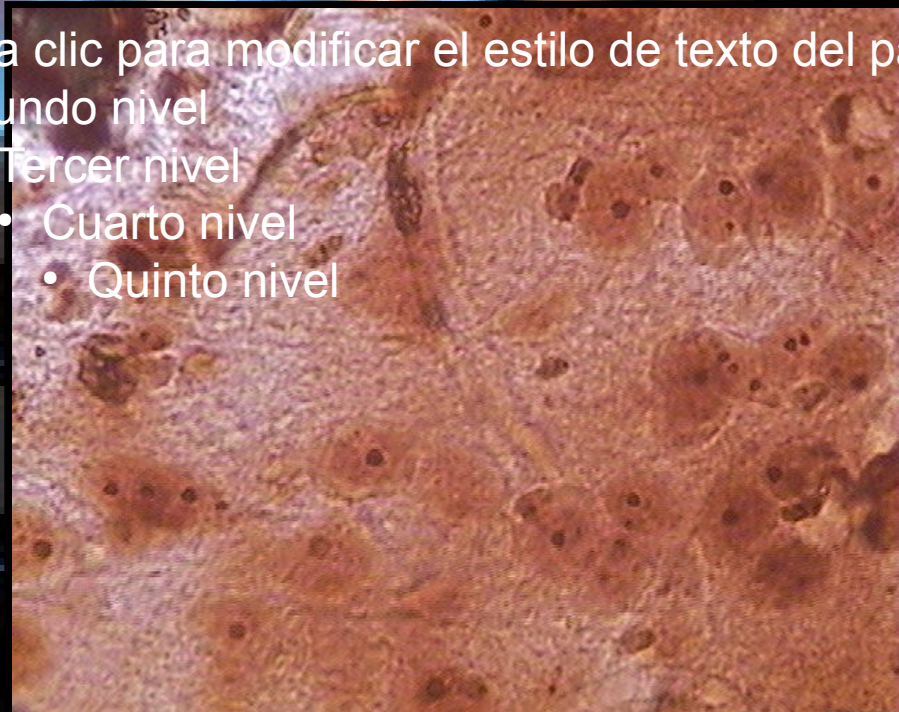
CEREBRO-RATA WISTAR



GRUPO DE RATAS WISTAR 6 MESES DESPUES DE COLOCAR EL DISPOSITIVO

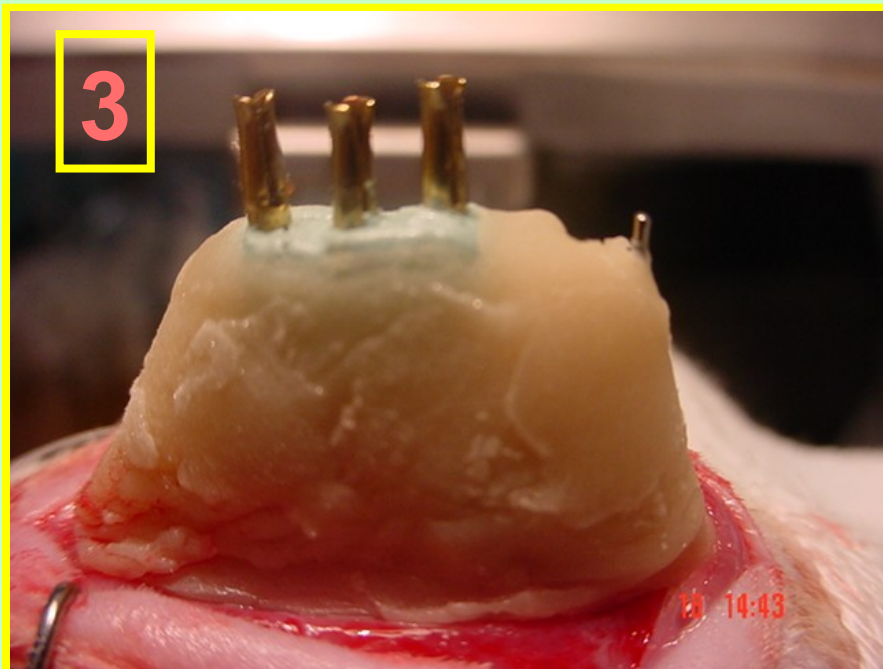
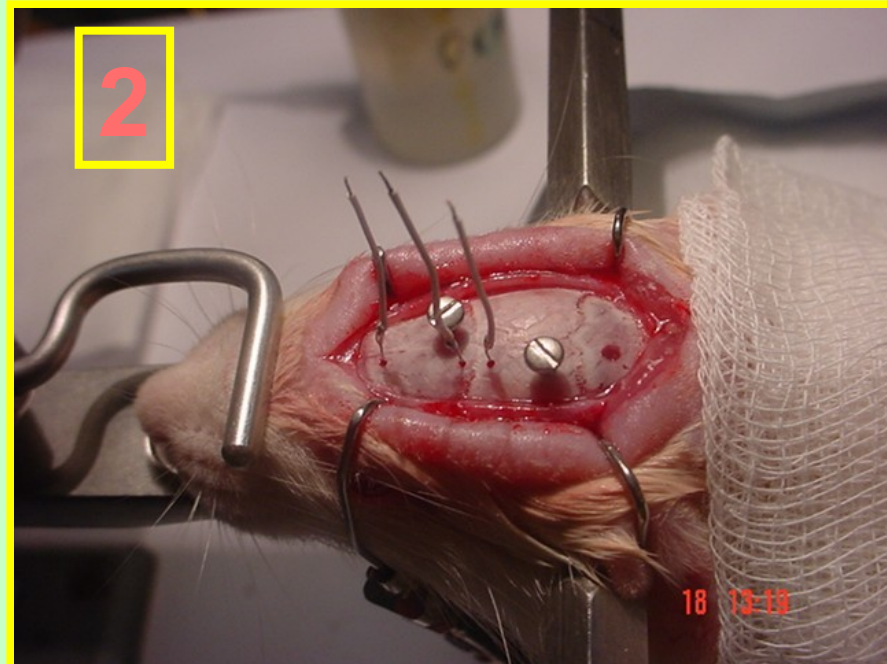
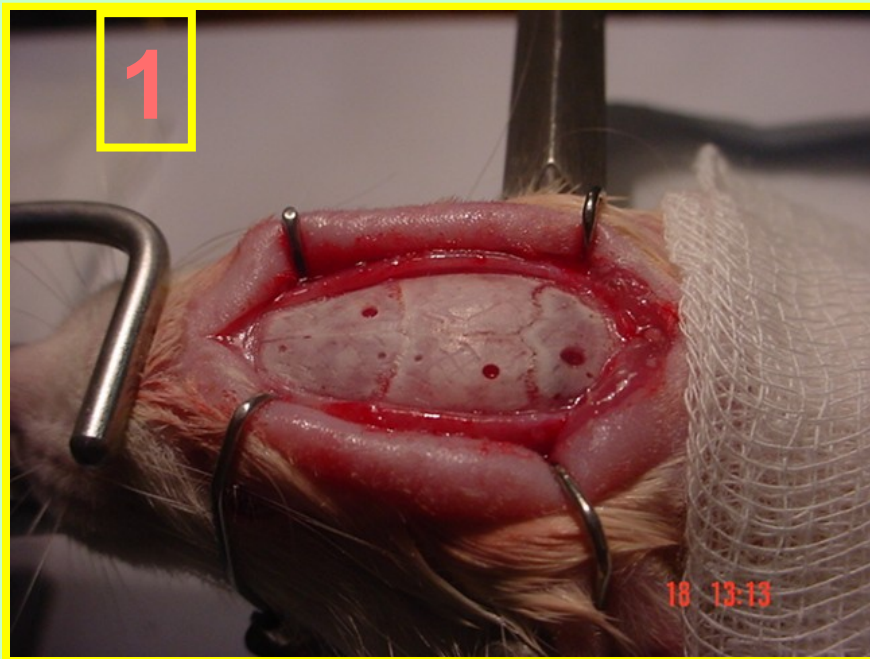
Haga clic para modificar el estilo de texto del par
Segundo nivel

- Tercer nivel
- Cuarto nivel
- Quinto nivel



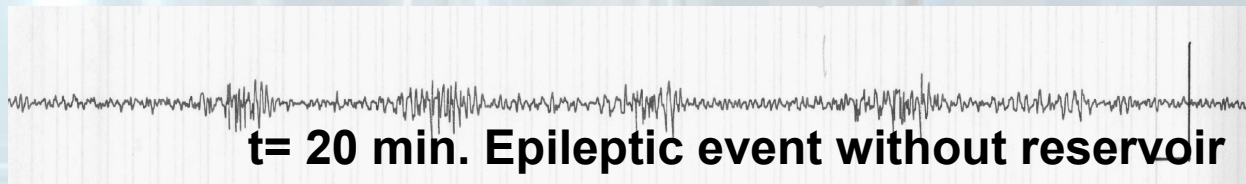
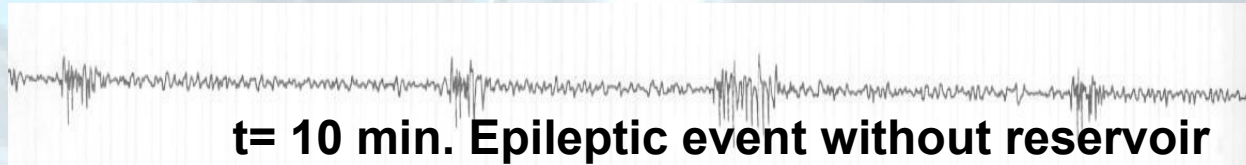
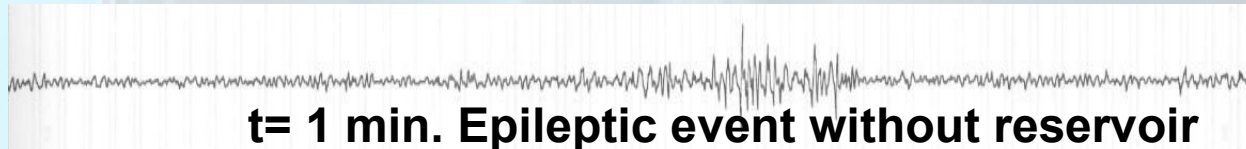
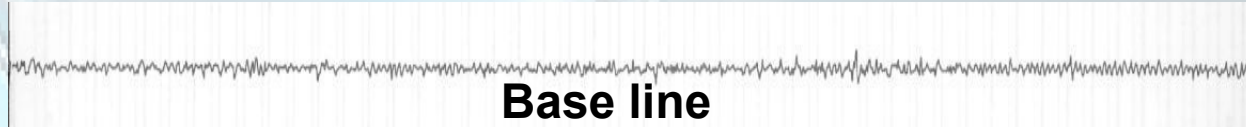
METODO DE KINDLING QUÍMICO PARA PROVOCAR EPILEPSIA A LOS ANIMALES



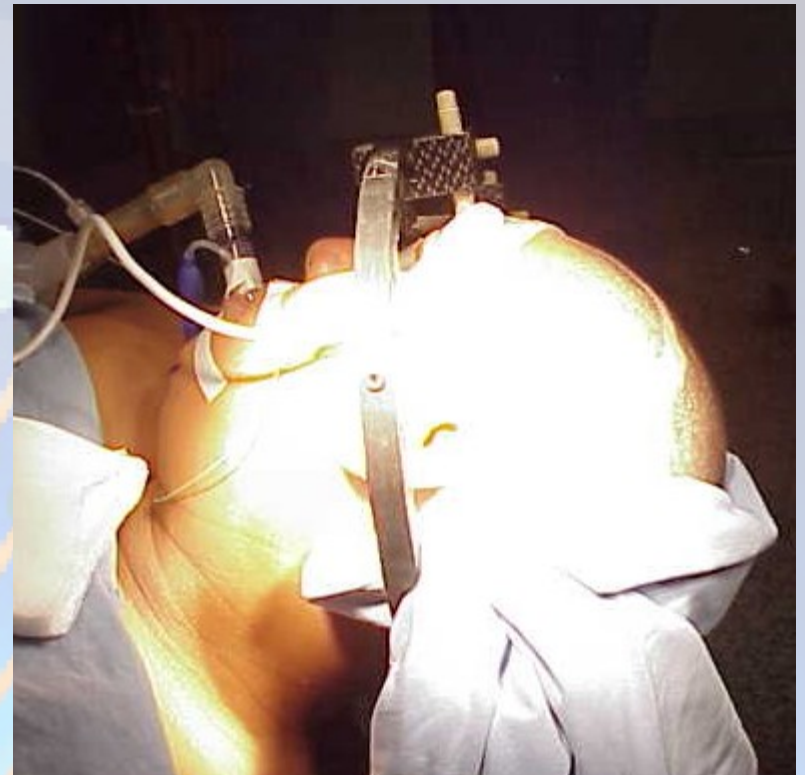


REGISTRO ENCEFALOGRÁFICO

CONTROL

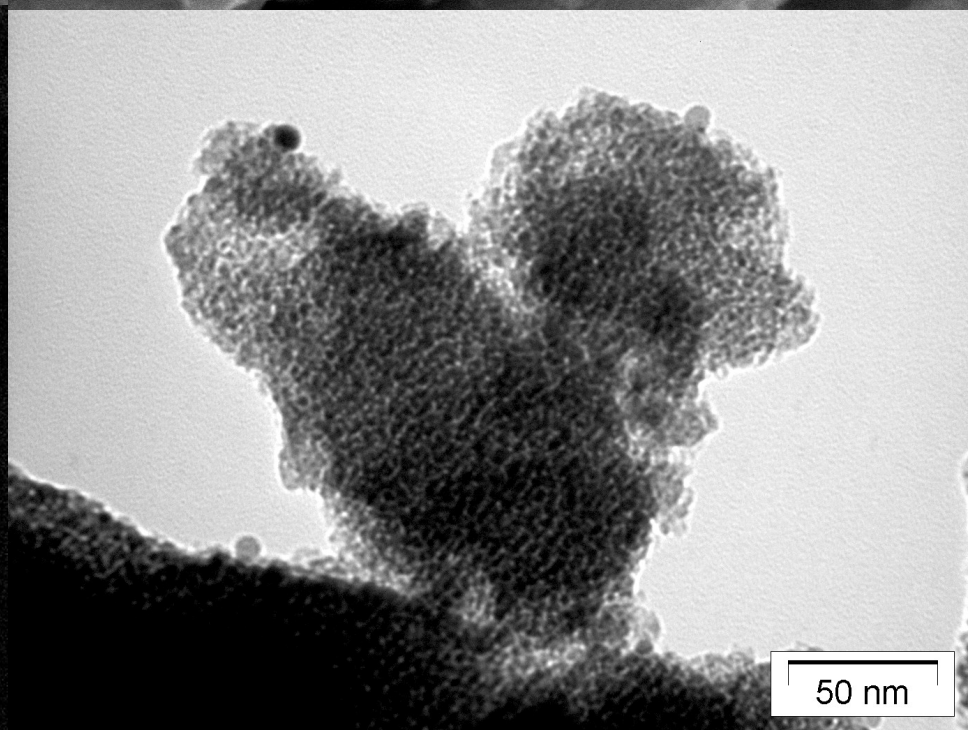
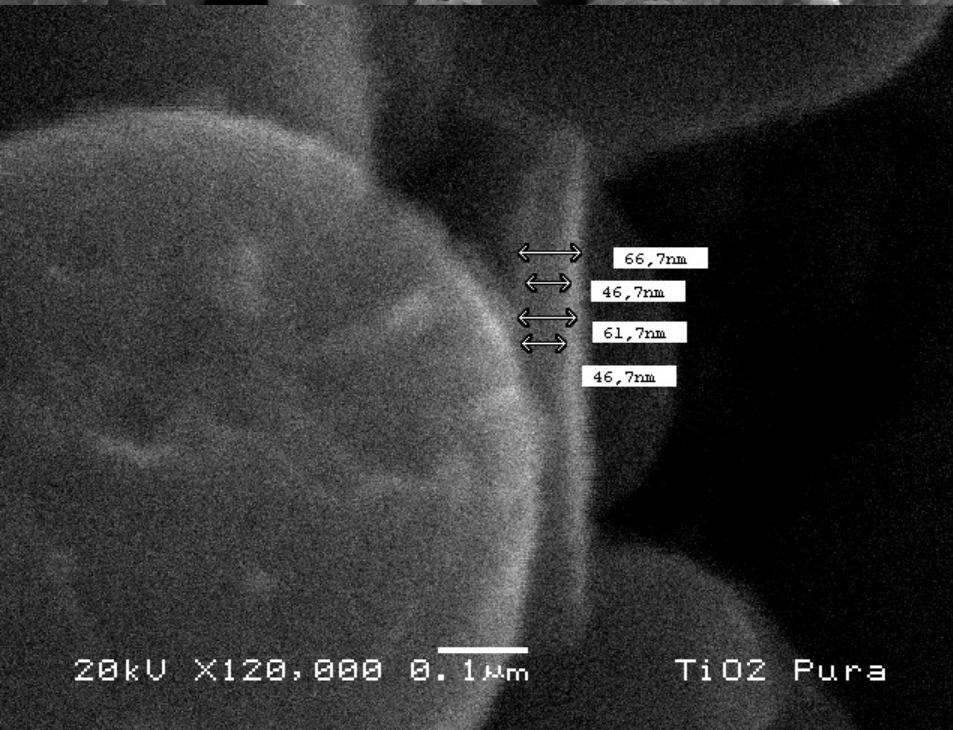
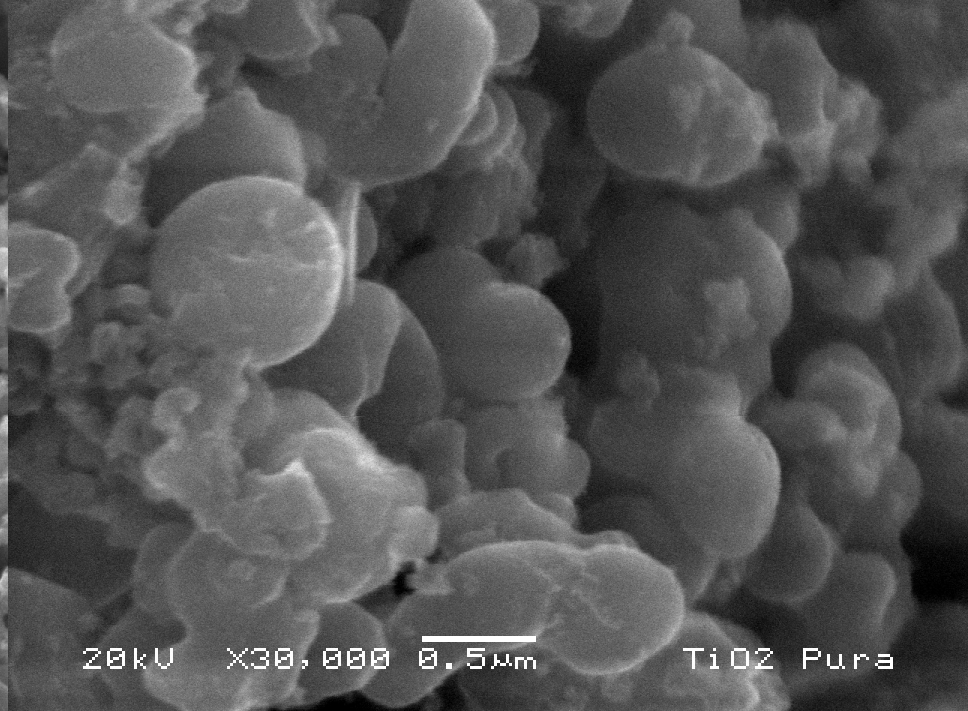
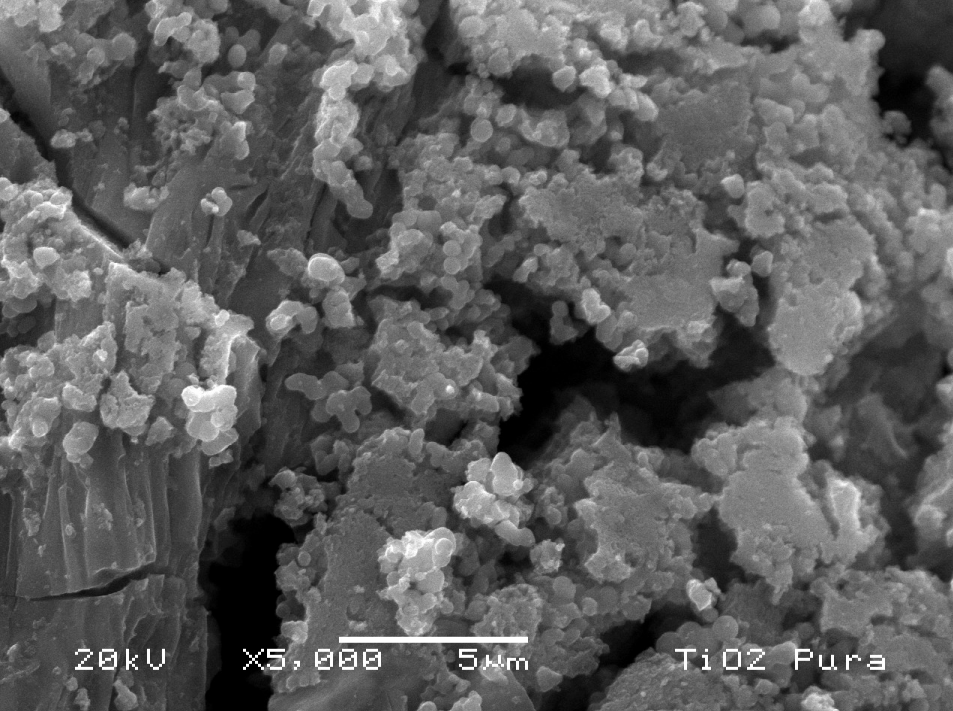


tiempo

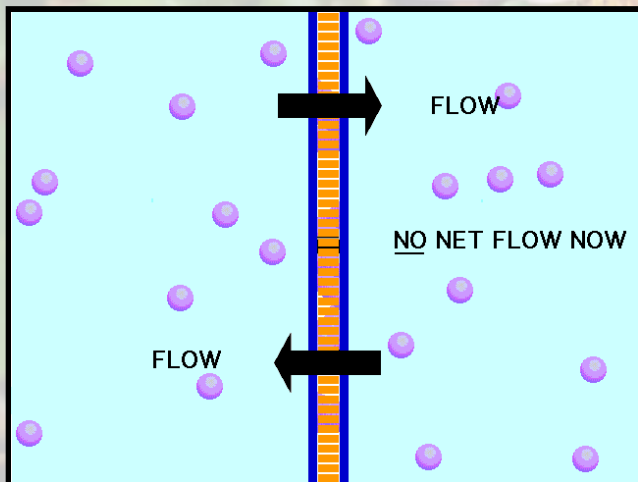
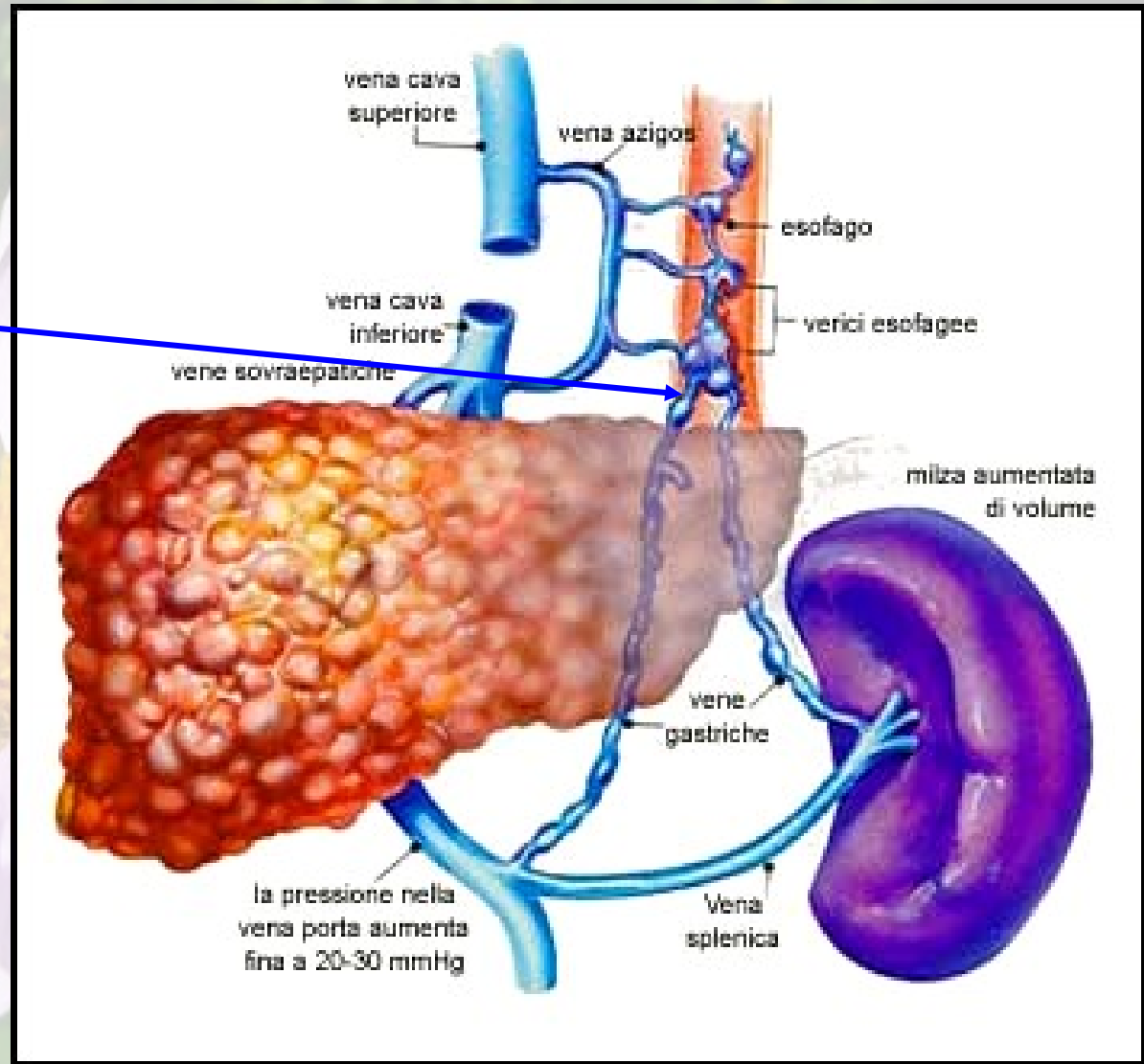
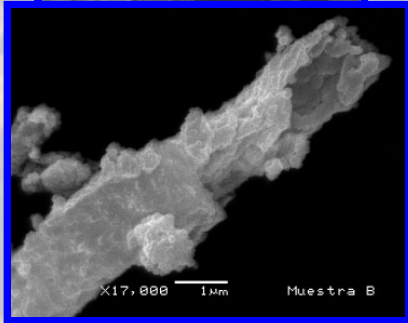
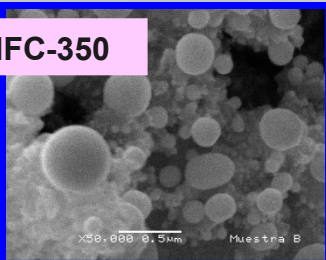


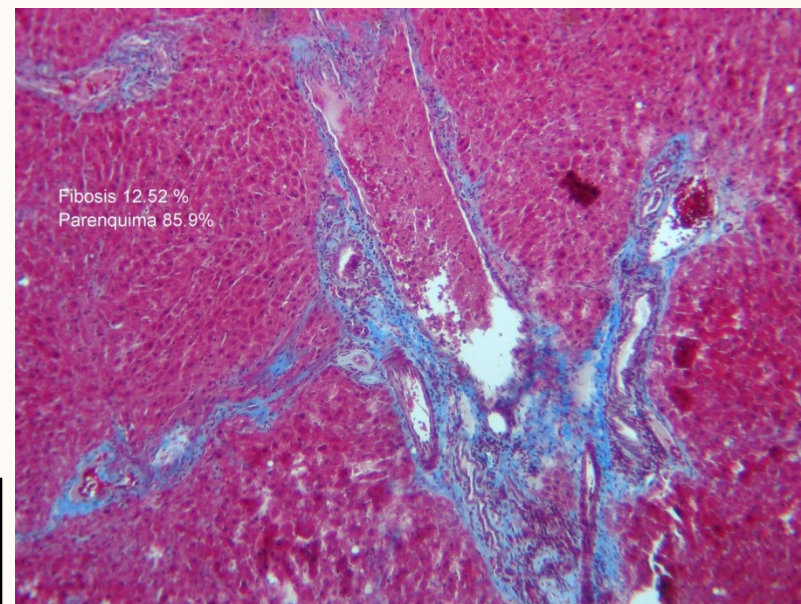
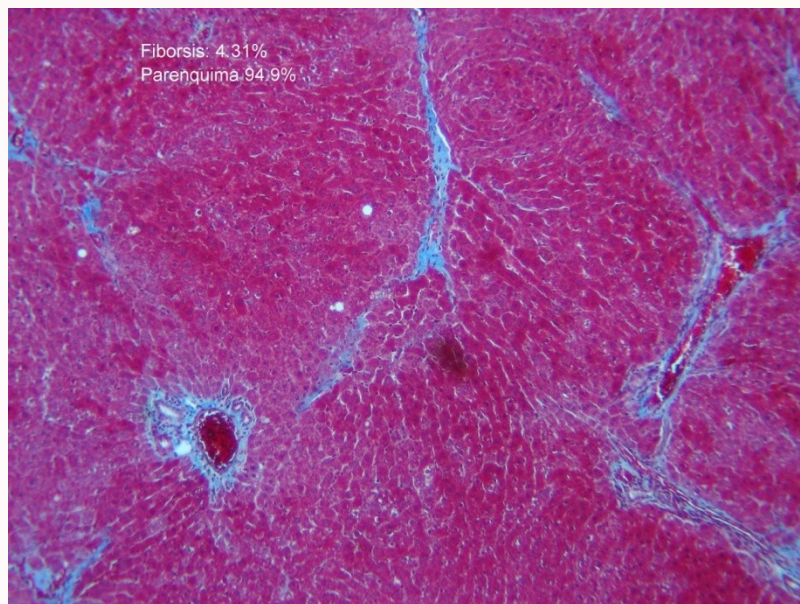
cirrosis



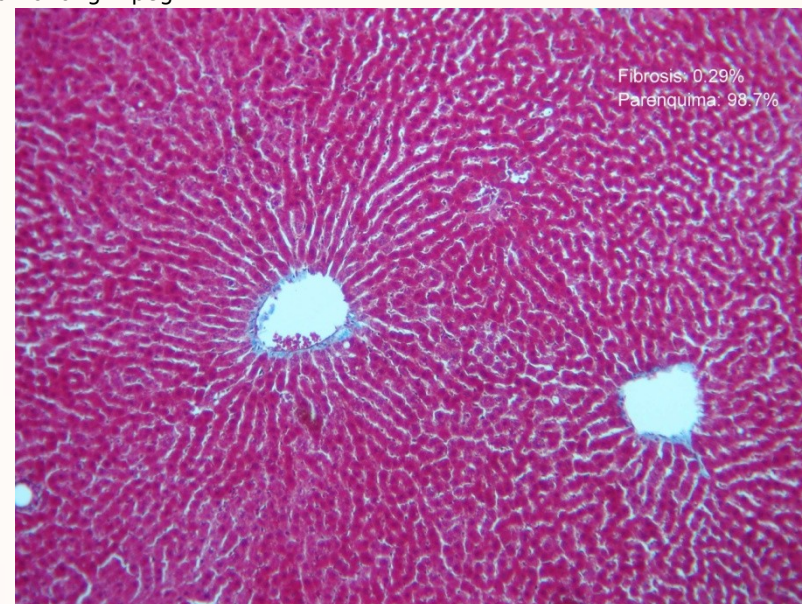
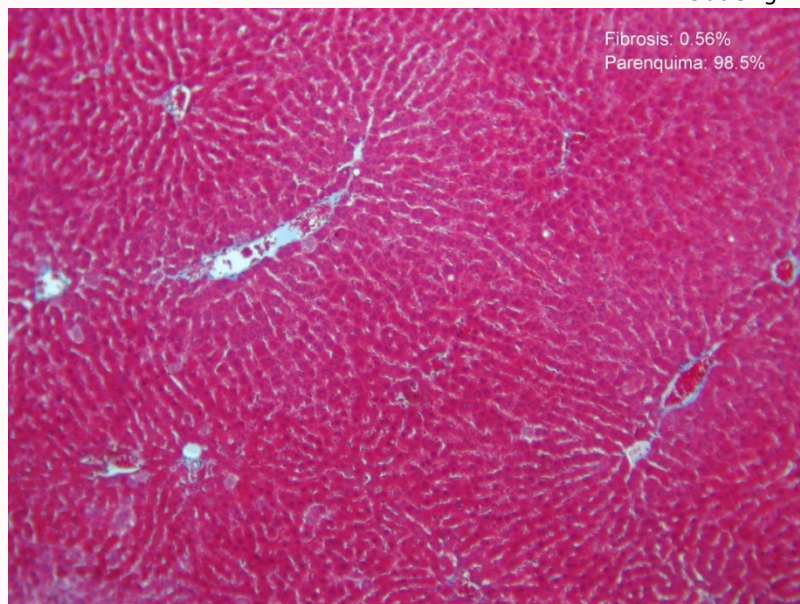


IFC-350





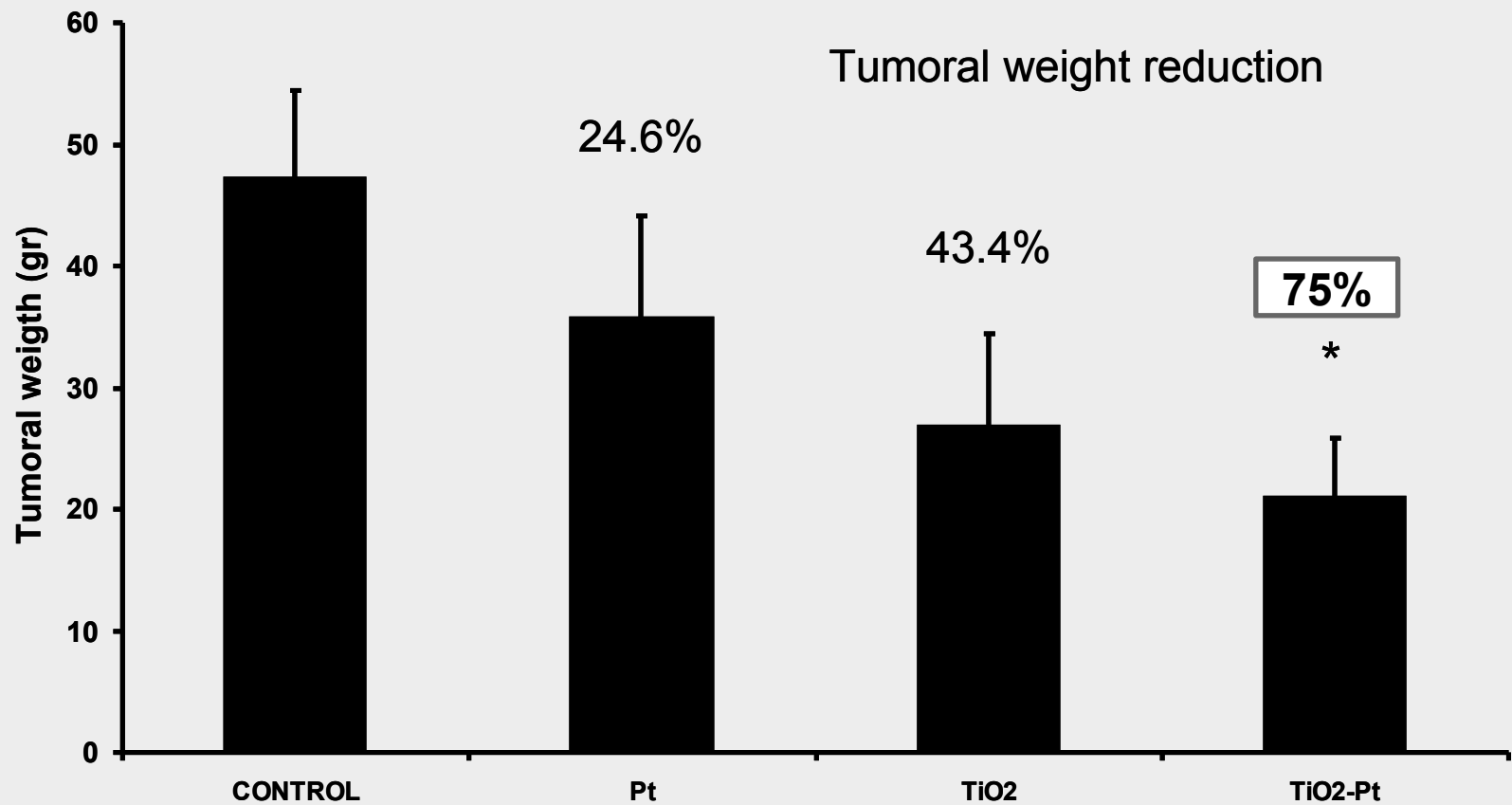
1500G-Ig2-in homo-long.mpeg



CANCER

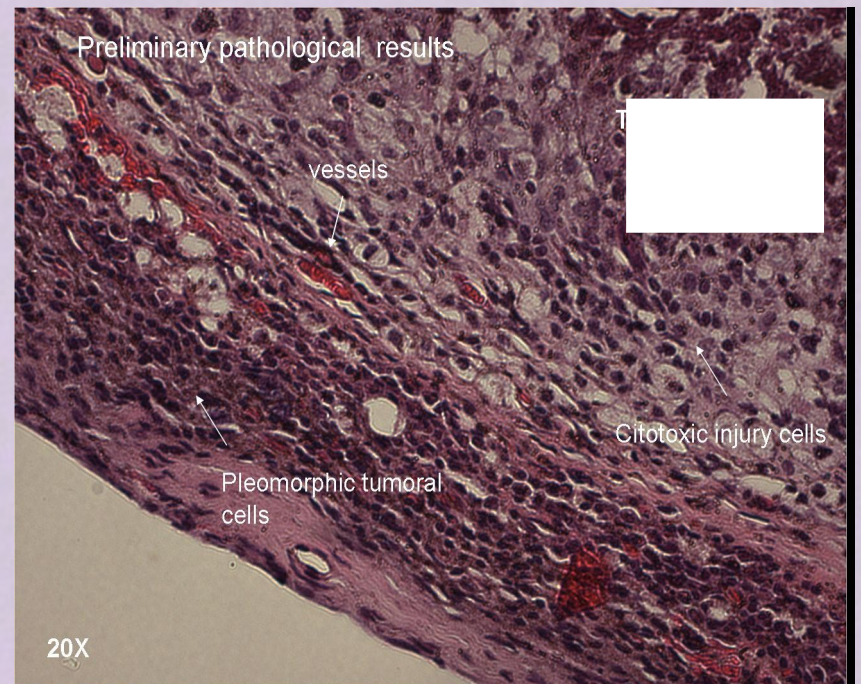
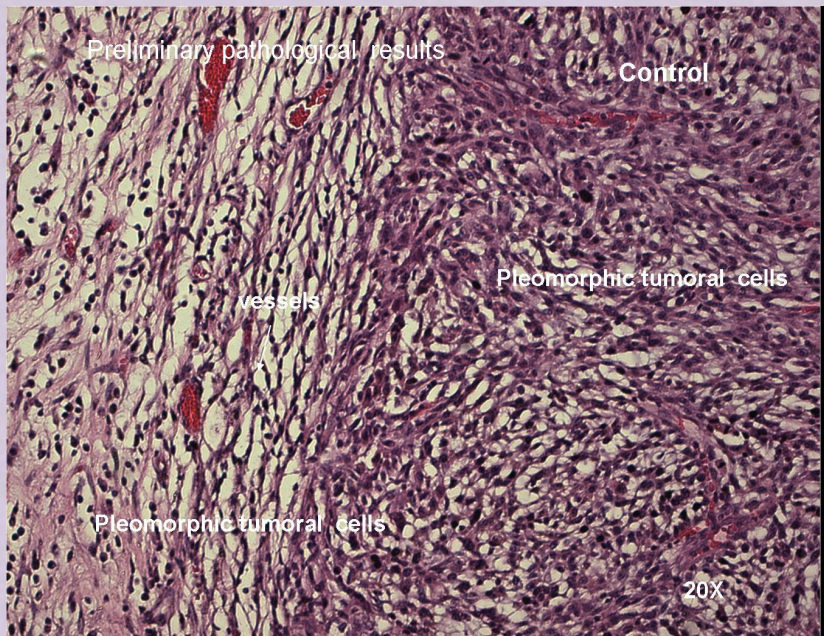


1. **LIBERACIÓN DE CITOTÓXICOS**
2. **NANOMEDICINA CATALÍTICA**

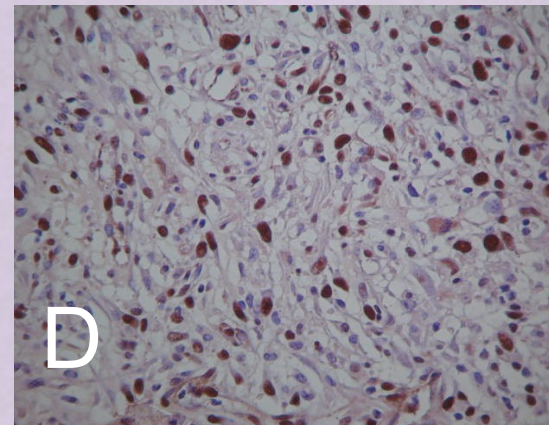
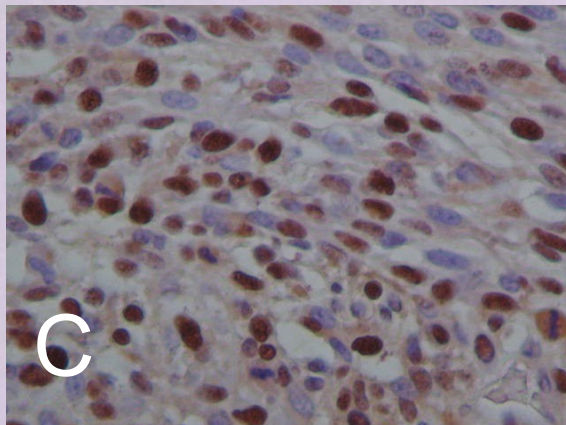
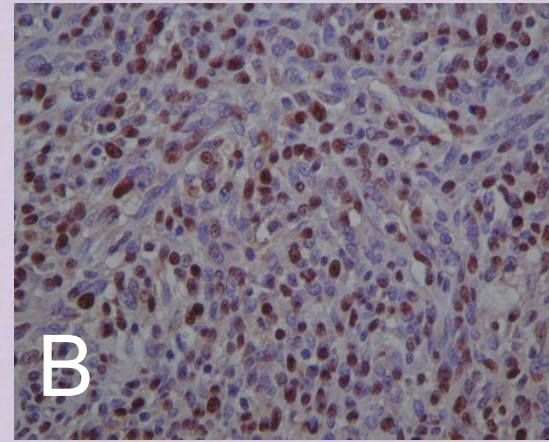
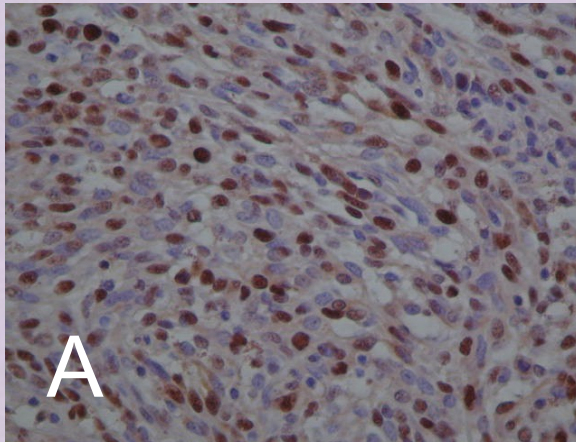


*p=0.03 when compared with control

Average tumor size of C6 glioma in rats after treatment

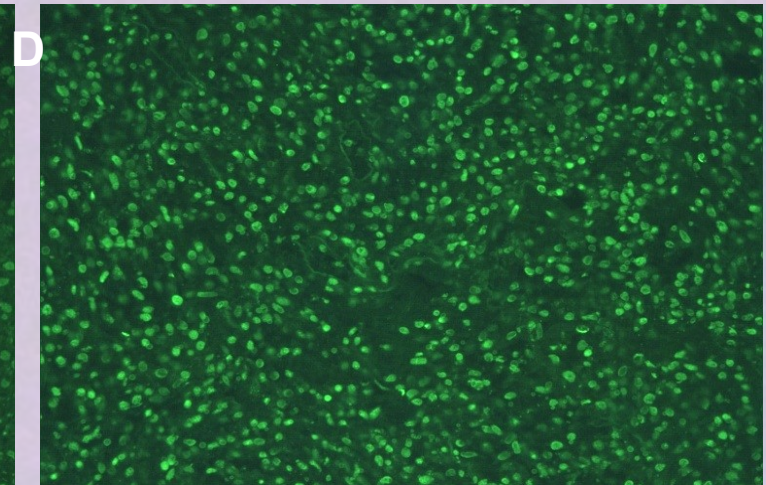
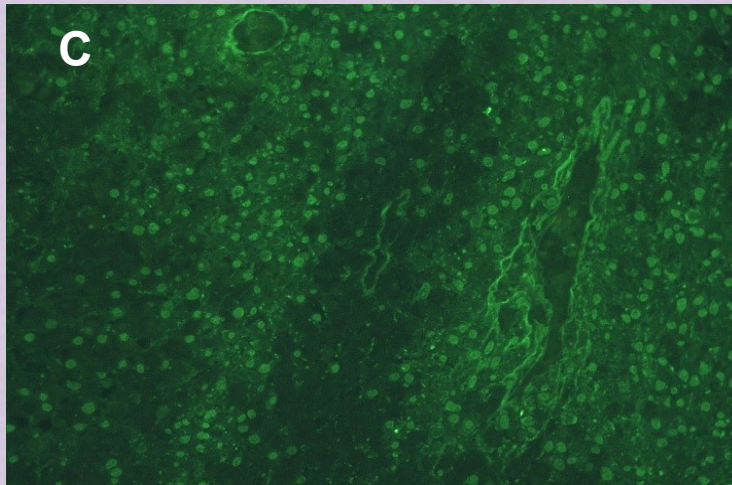
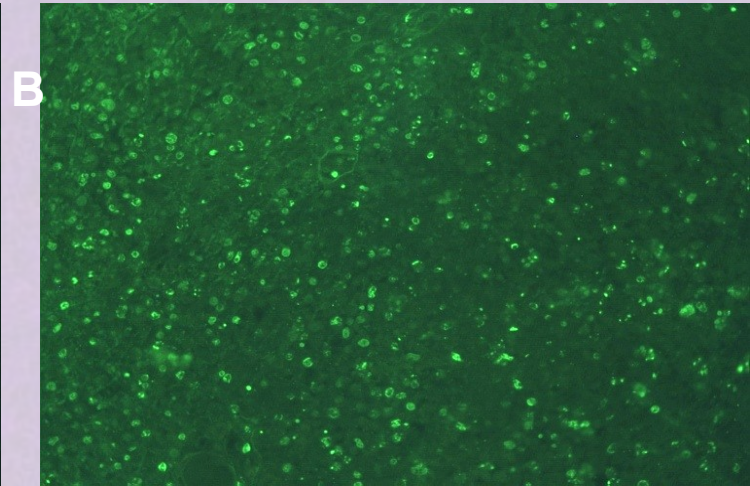
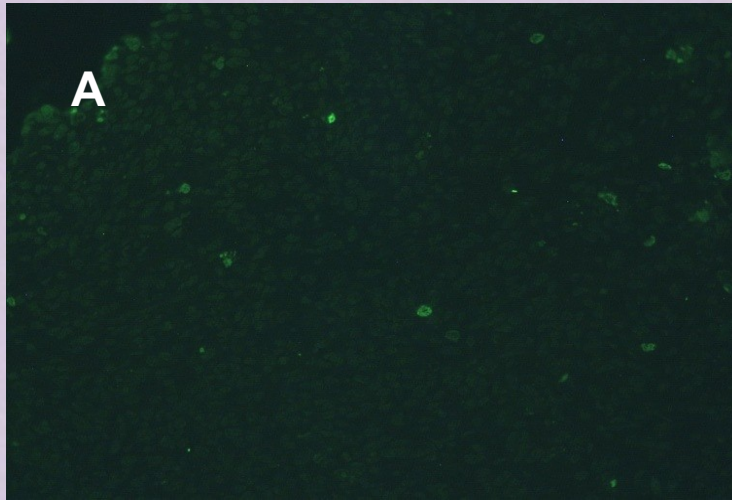


Índice de proliferación celular por inmunohistología. A) Control, B) TiO₂, C) complejo dePt ,D) NPt®



Técnica de TUNEL

A) Control, B) TiO₂, and C) complejo de Pt D) NPt®

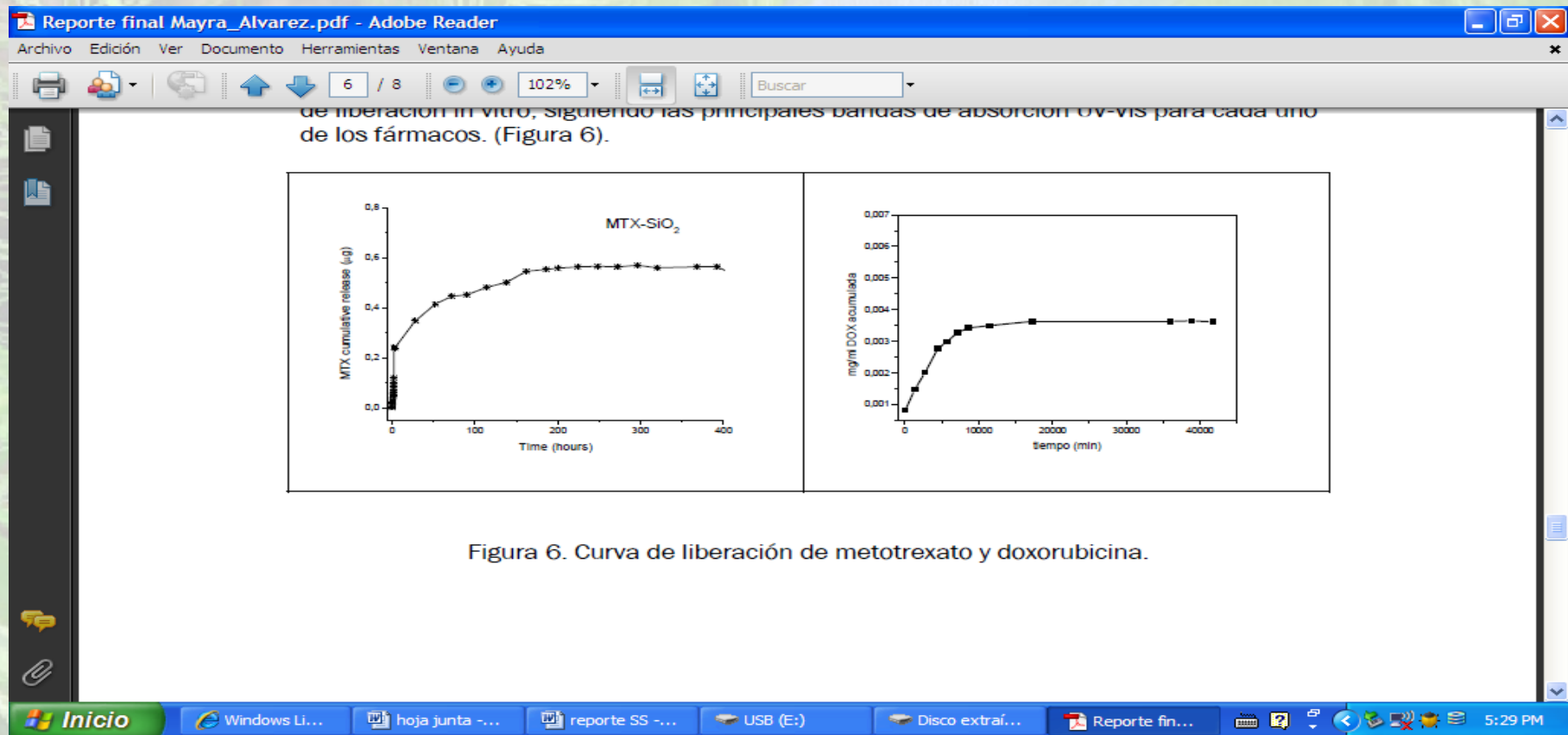




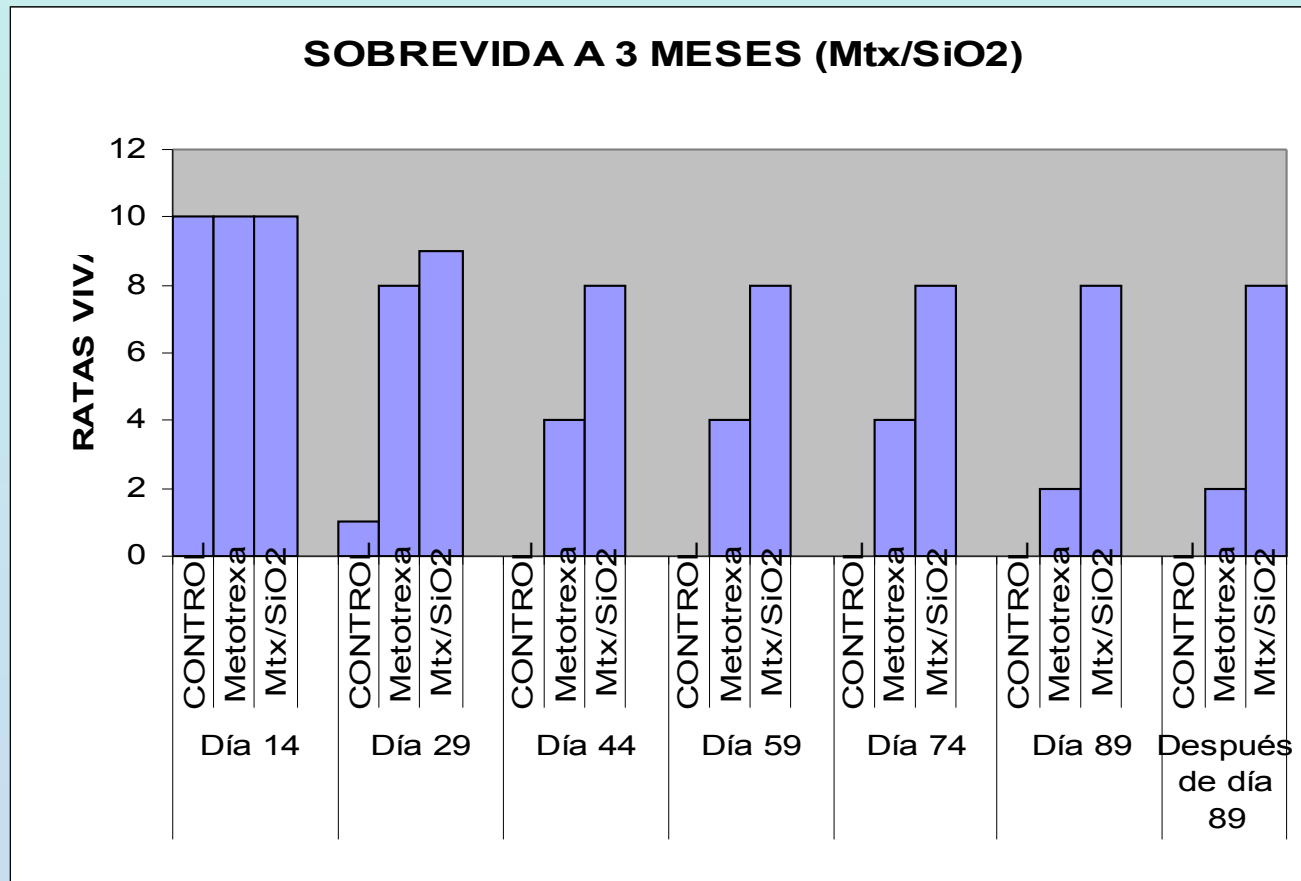
The background of the slide features a soft-focus photograph of several daisy flowers. In the foreground, a large pink daisy with a dark brown center is prominent. Above it and to the right, a white daisy is visible. Other pink and white daisies are scattered in the background, creating a gentle, natural aesthetic. The text is centered over this floral backdrop.

LIBERACIÓN CONTROLADA DE CITOTÓXICOS

Perfiles de liberación de MTX



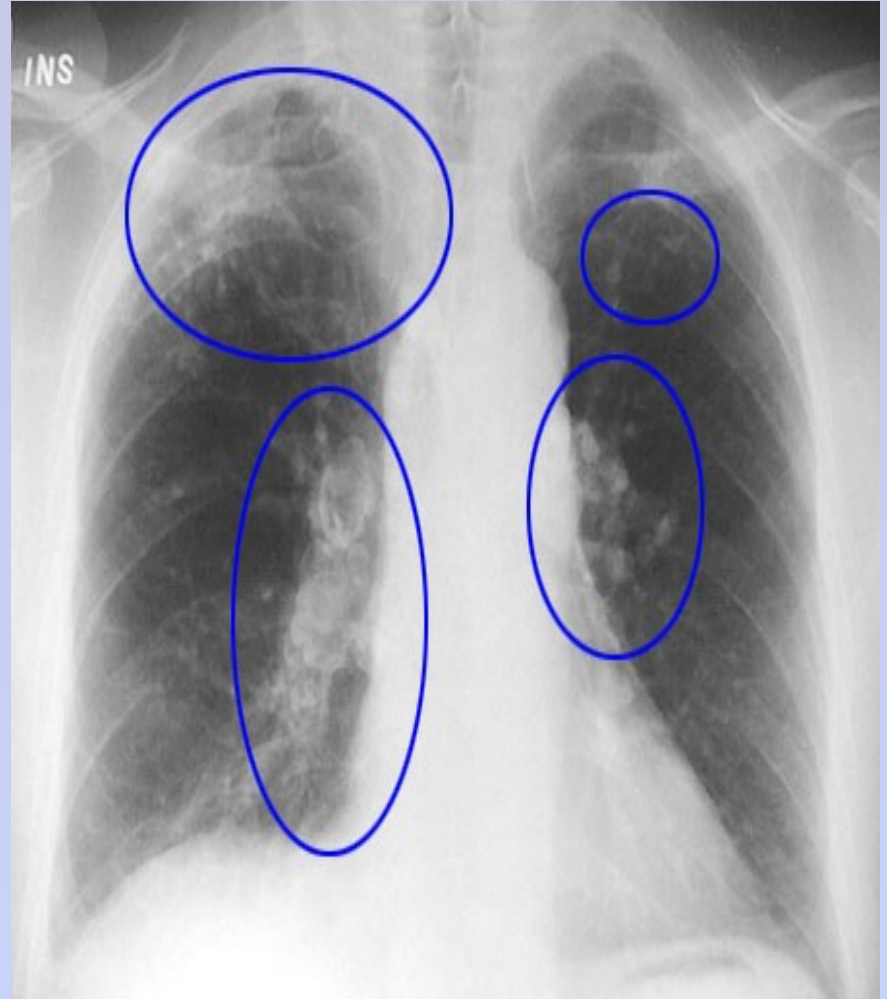
Sobrevivencia a 3 meses de ratas tratadas con MTX y MTX/SiO₂. Se observa mayor efecto en aquellas tratadas con Mtx/SiO₂. El comienzo del efecto ocurre durante los primeros 15 días de la terapia y se mantiene constante a partir de la segunda quincena.



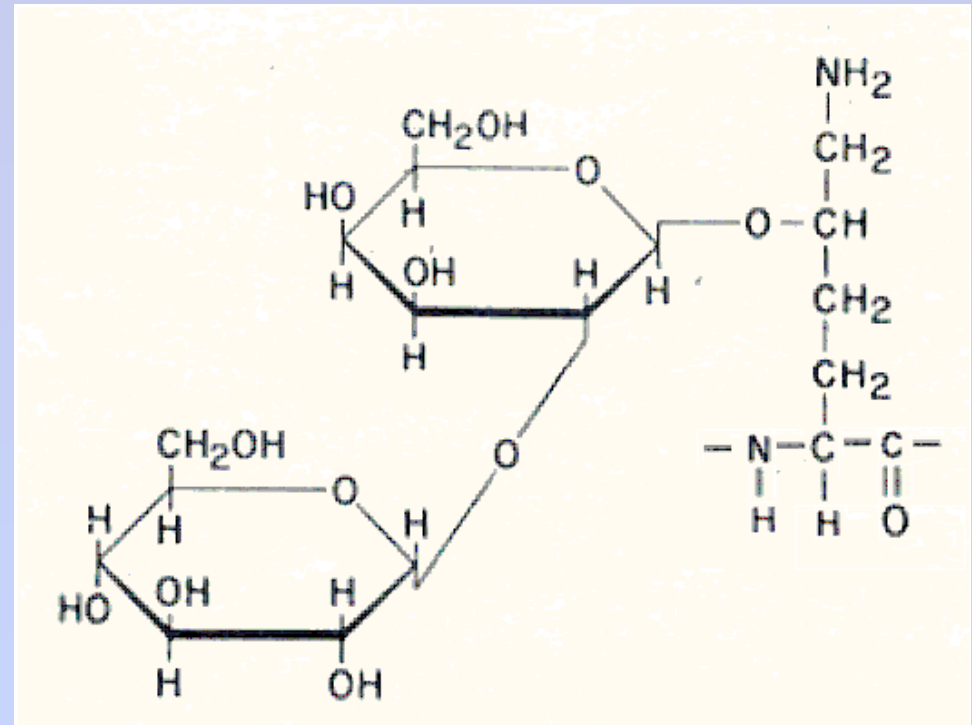
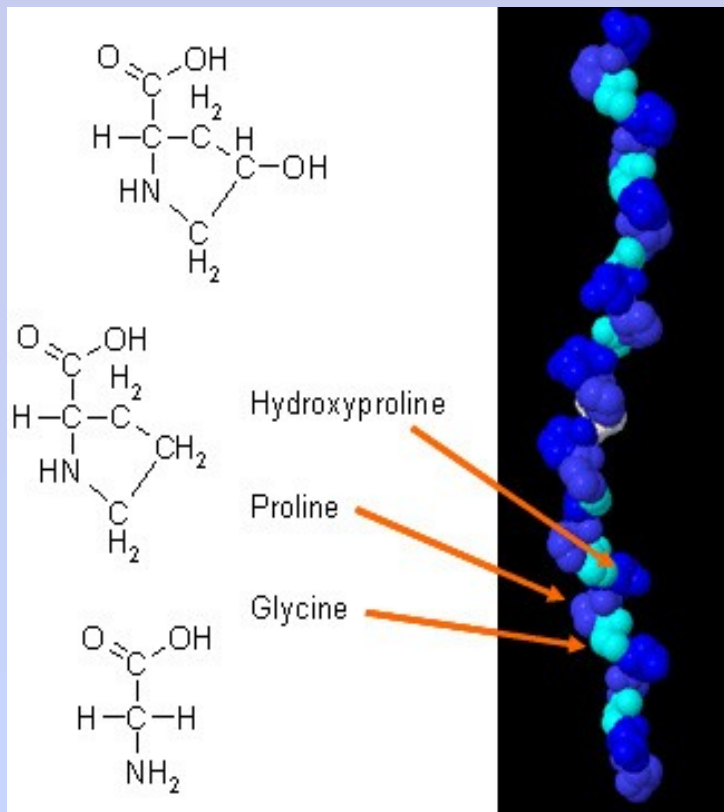
A photograph of three pelicans in a rocky enclosure. One pelican is on the left, another is in the center sitting, and a third is on the right standing. They are all white with long necks and large bills. The background consists of large, dark rocks. A semi-transparent blue banner is overlaid across the middle of the image, containing the title text in white.

FIBROSIS PULMONAR IDIOPÁTICA

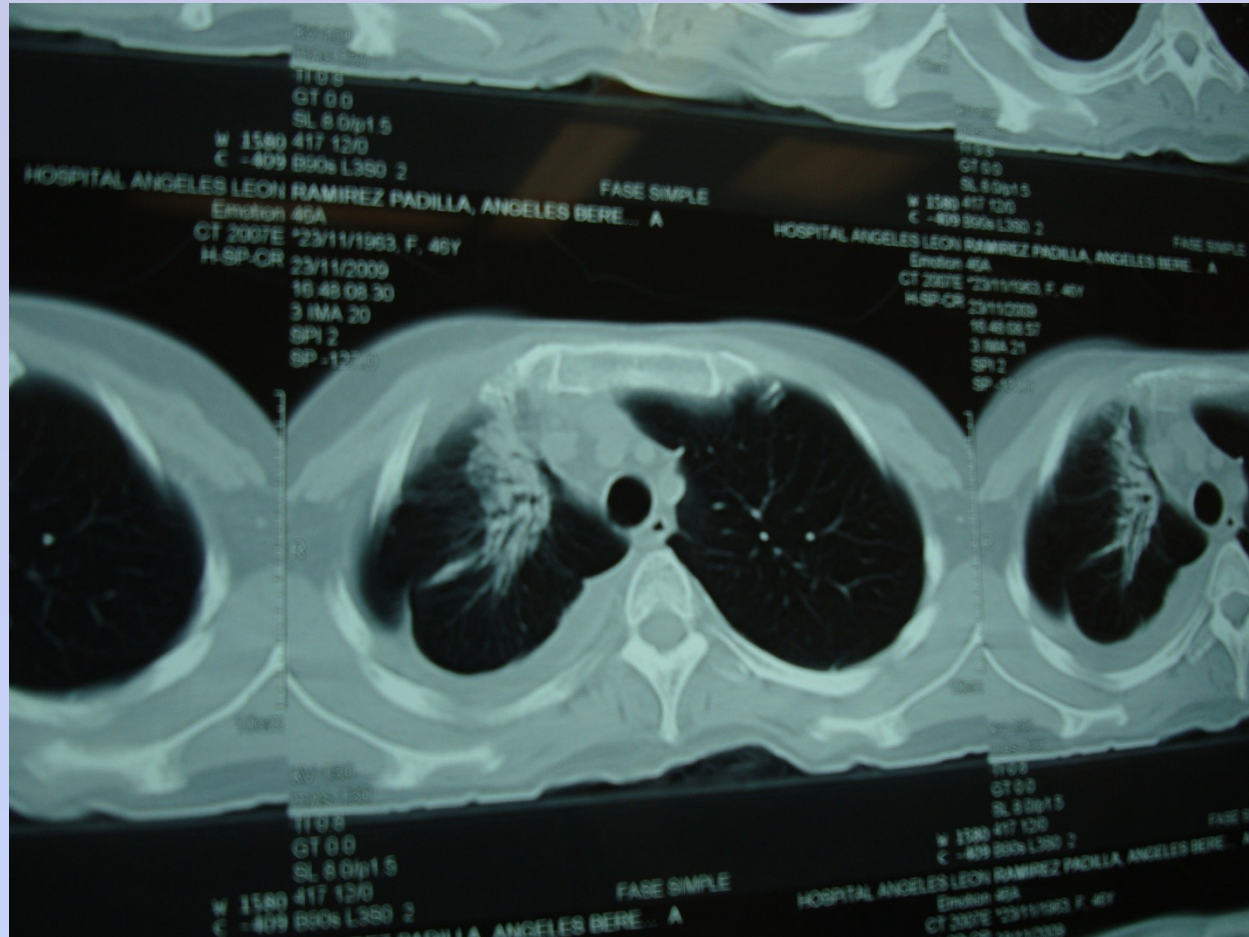
La Fibrosis Pulmonar Idiopática representa un grupo heterogéneo de enfermedades en las cuales la fibrosis progresiva del parénquima altera la estructura y el intercambio de gases necesarios para mantener la función de los pulmones.



Por otra parte, en el microambiente del pulmón se producen diferentes procesos que se caracterizan por un incremento de la población de fibroblastos, aumento en la síntesis y depósito **de colágeno** dentro del pulmón.



Caso Clínico



Febrero 2010

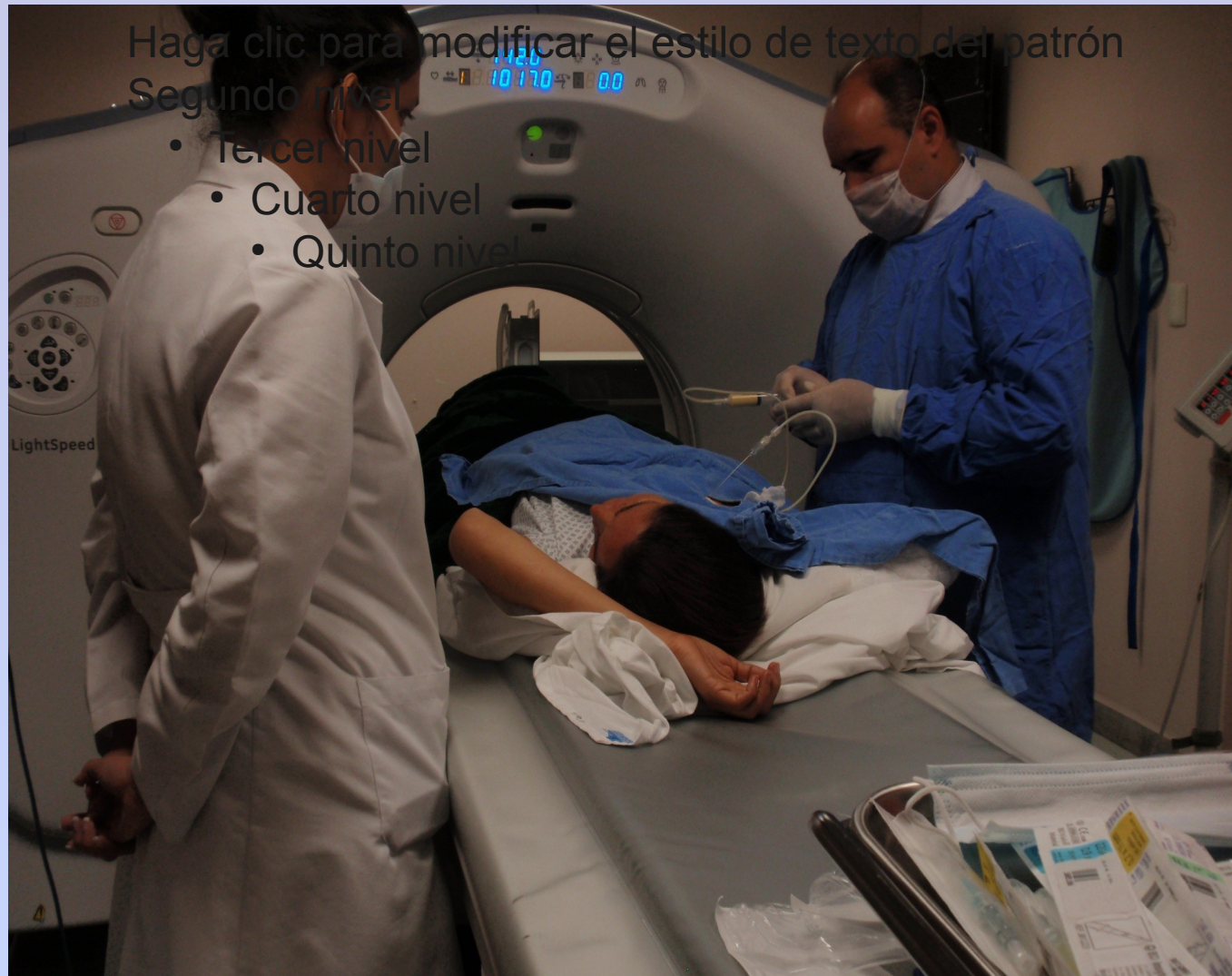
Haga clic para modificar el estilo de texto del patrón

Segundo nivel

- Tercer nivel
- Cuarto nivel
- Quinto nivel



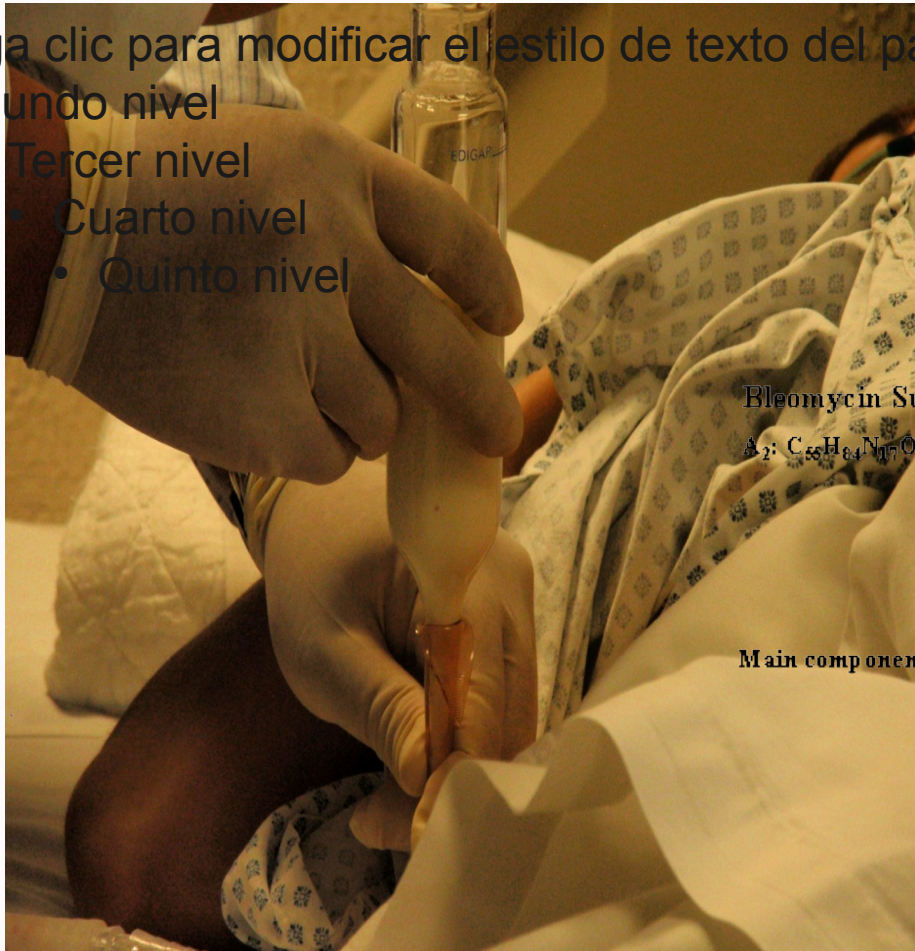
Radiocirugía (agosto2010)



Liberación de Bleomicina

Haga clic para modificar el estilo de texto del patrón
Segundo nivel

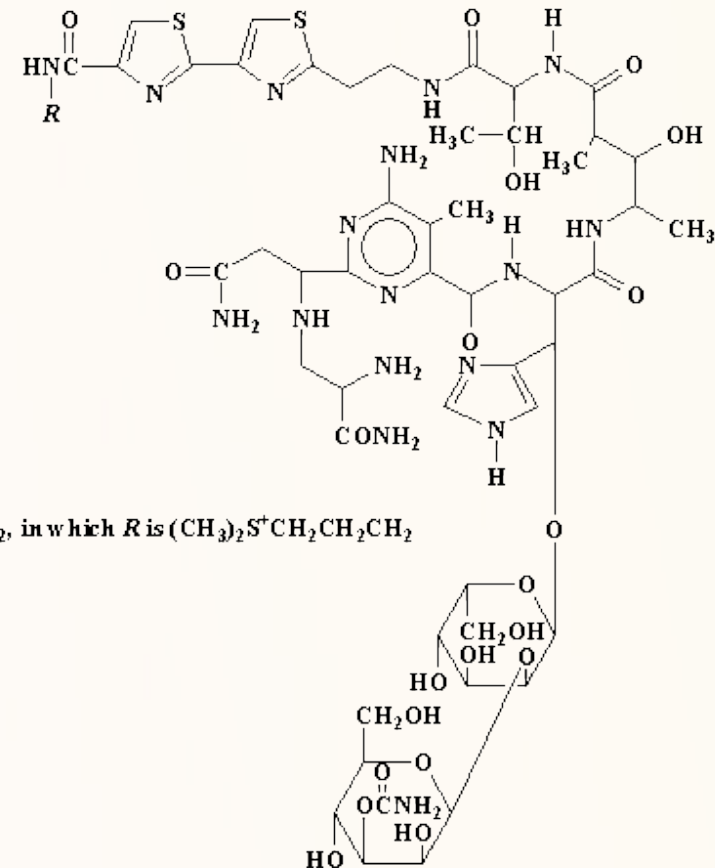
- Tercer nivel
- Cuarto nivel
- Quinto nivel



Bleomycin Sulfate



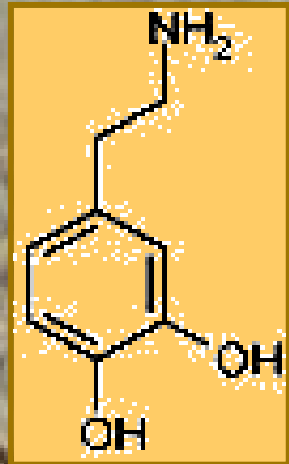
Main component: Bleomycin A_2 , in which R is $(CH_3)_2S^+CH_2CH_2CH_2$



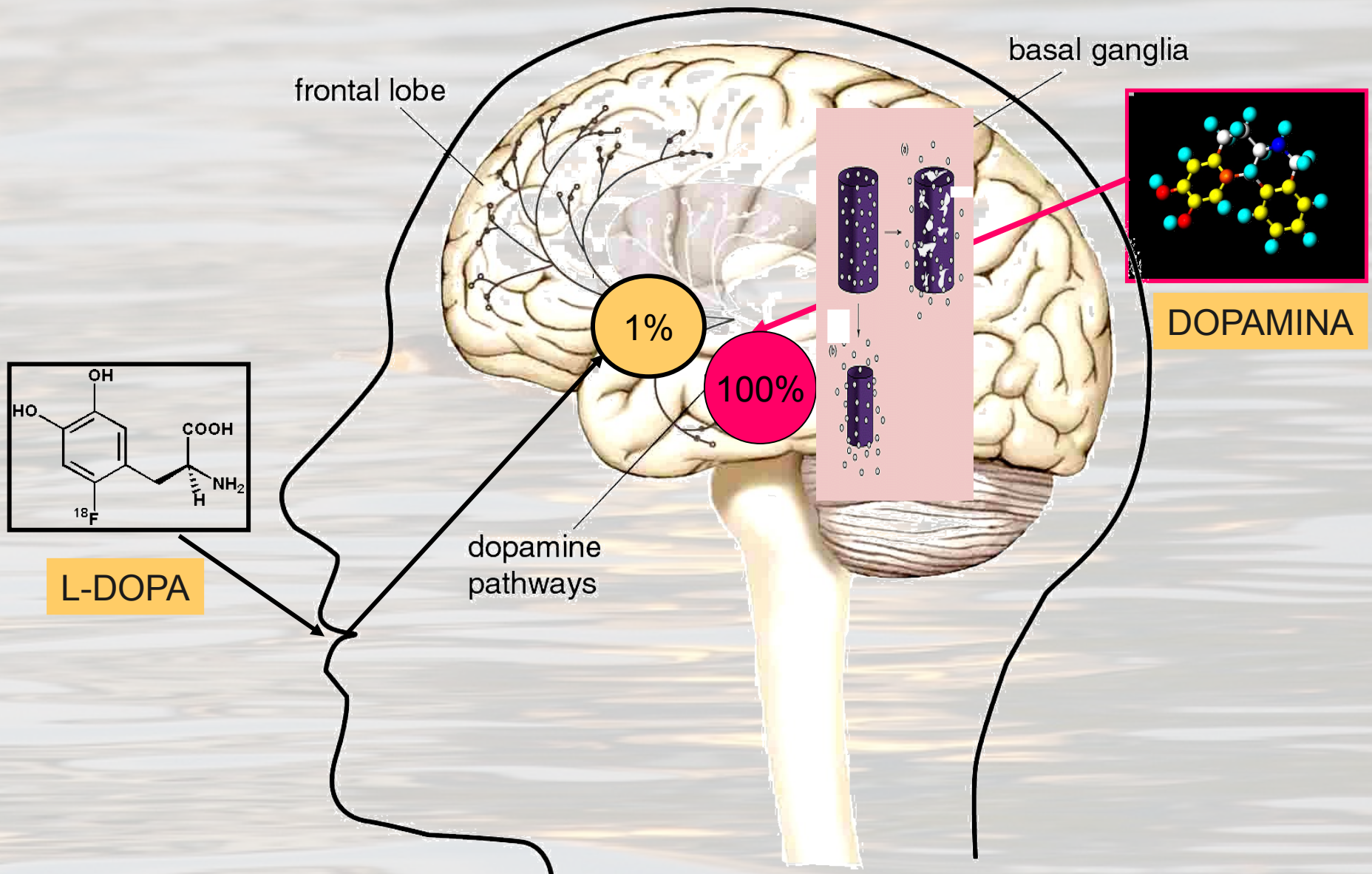
PARKINSON

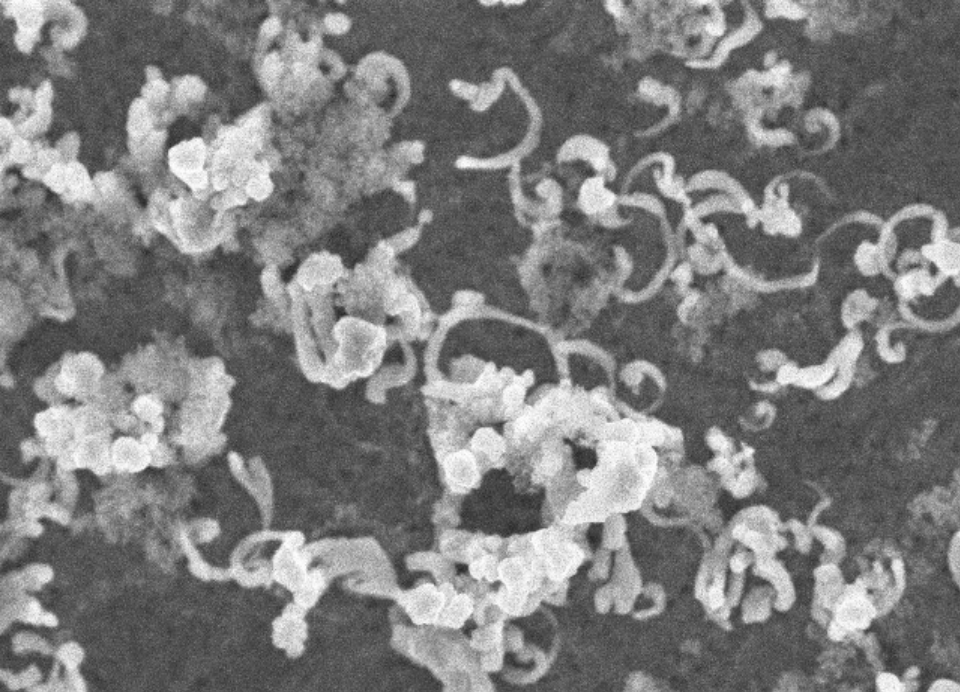


NEURONAS DOPAMINÉRGICAS



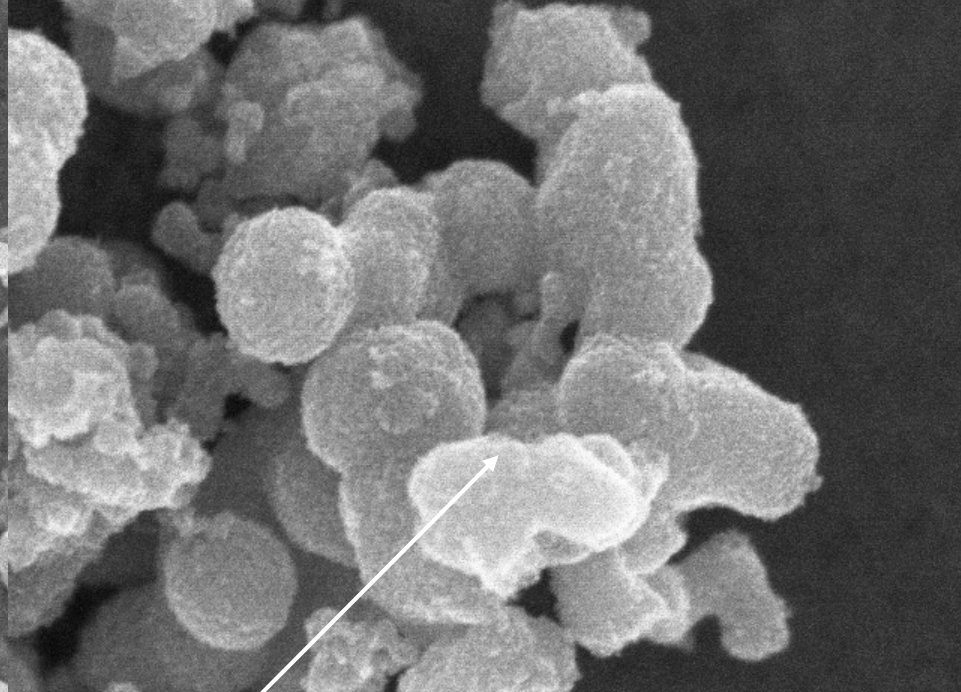
In vitro dopamine neurons





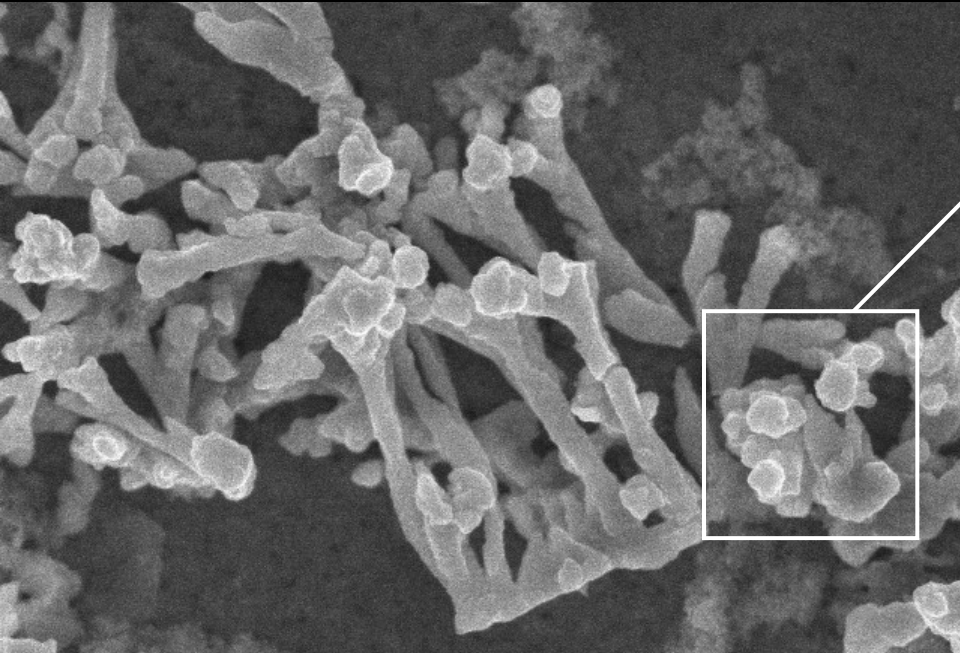
5.0kV 0.0mm x25.0k SE

2.00μm



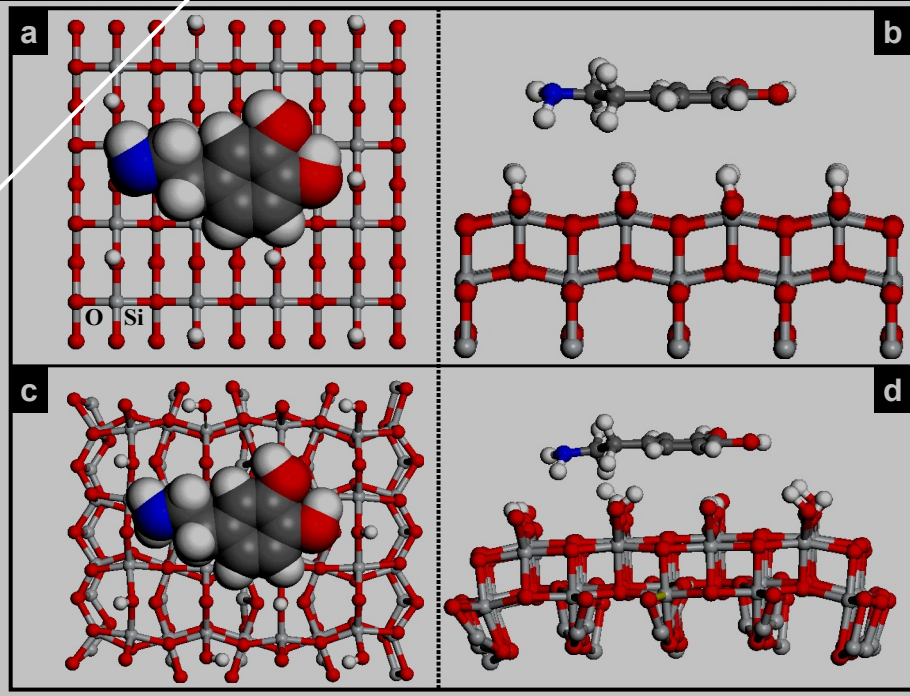
5.0kV 0.0mm x80.0k SE

500nm



5.0kV 0.0mm x40.0k SE

1.00μm



MODELO DE PARKINSON EN ANIMALES (6-HIDROXIDOPAMINA) EVALUACIÓN

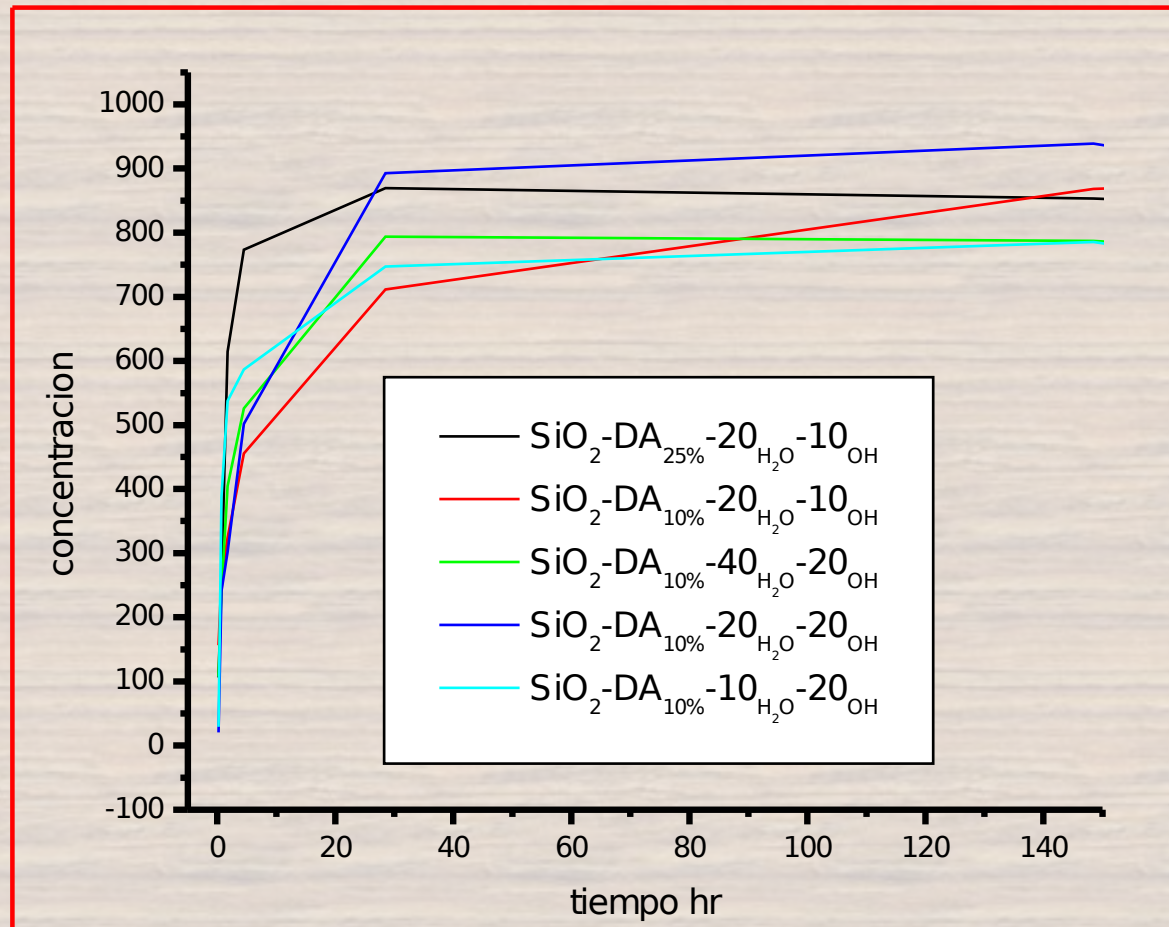


Parámetros de locomoción (numero de cuadros pisados con ambas patas), **tiempo de inmovilidad** (segundos sin movimiento) y **trayectoria de locomoción**.

TAREA DE CILINDRO. Número de veces que la rata coloca las patas anteriores (cada un o ambas) sobre las paredes del cilindro



PERFIL DE LIBERACIÓN DE LA DOPAMINA “IN VITRO”



Gracias...

