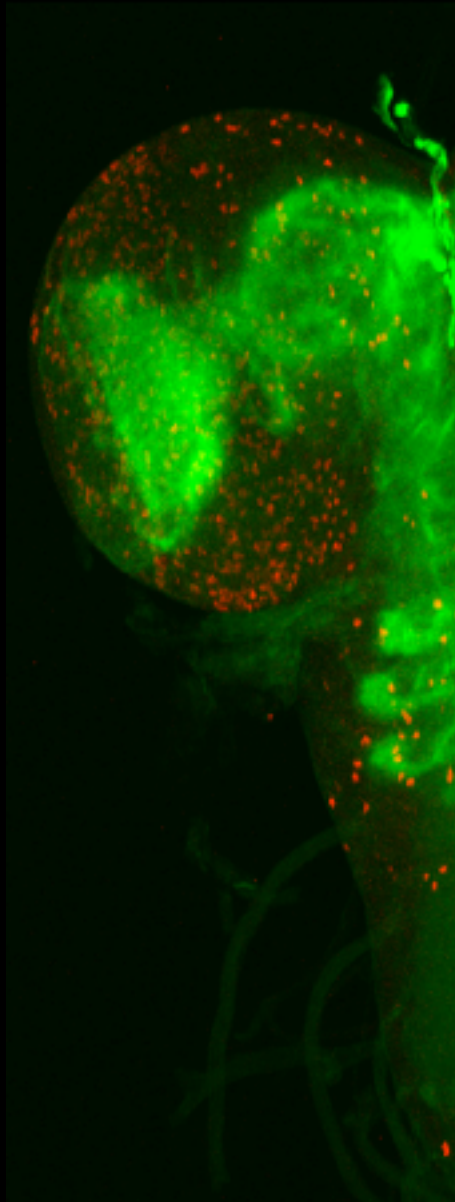




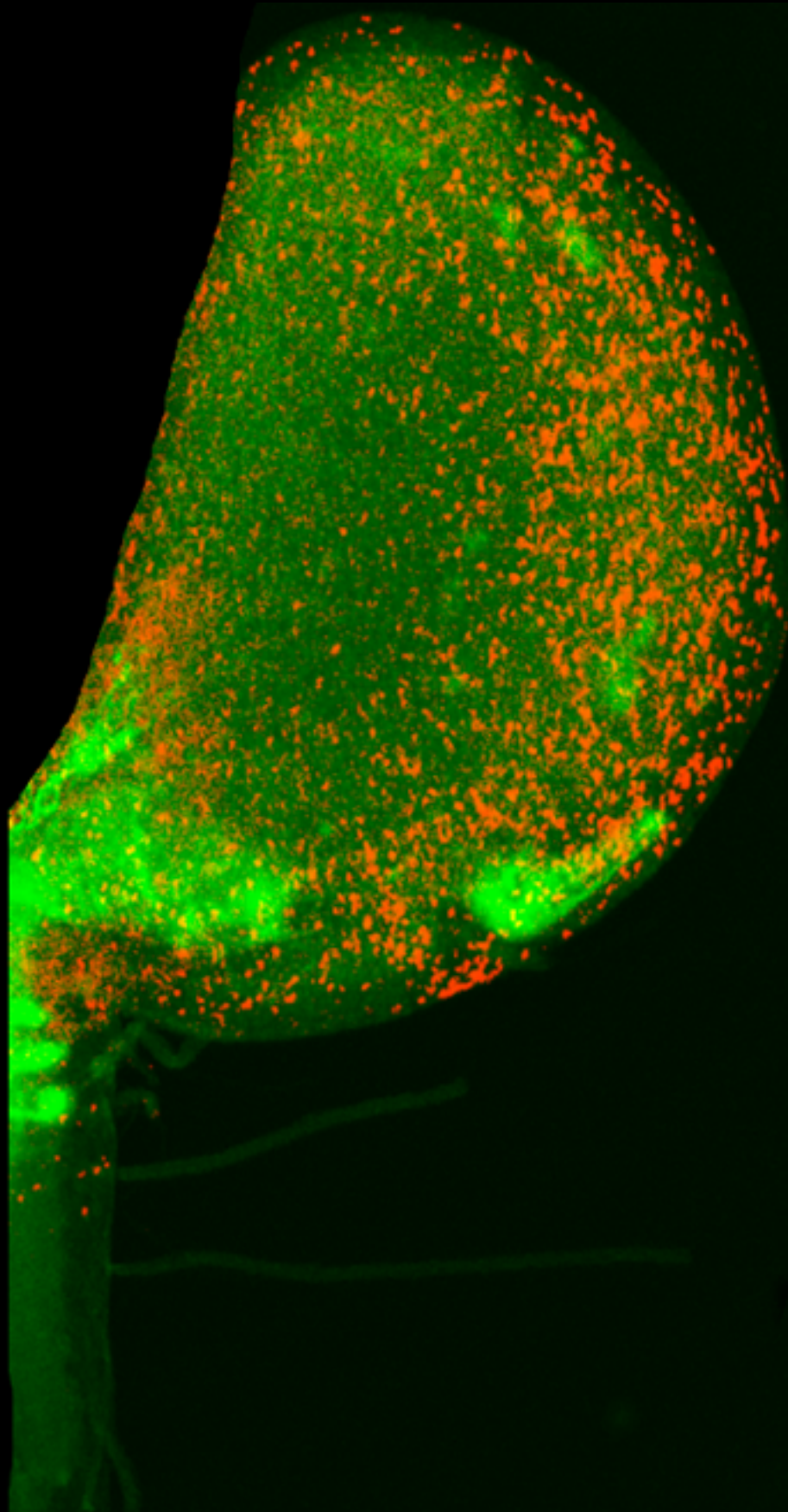
Cayetano Gonzalez
ICREA Research Professor
Cell Division Lab
IRB-Barcelona
SPAIN
gonzalez@irbbarcelona.org

¿ Drosophila para investigar el cáncer ?
¿ Tienen cáncer las moscas?

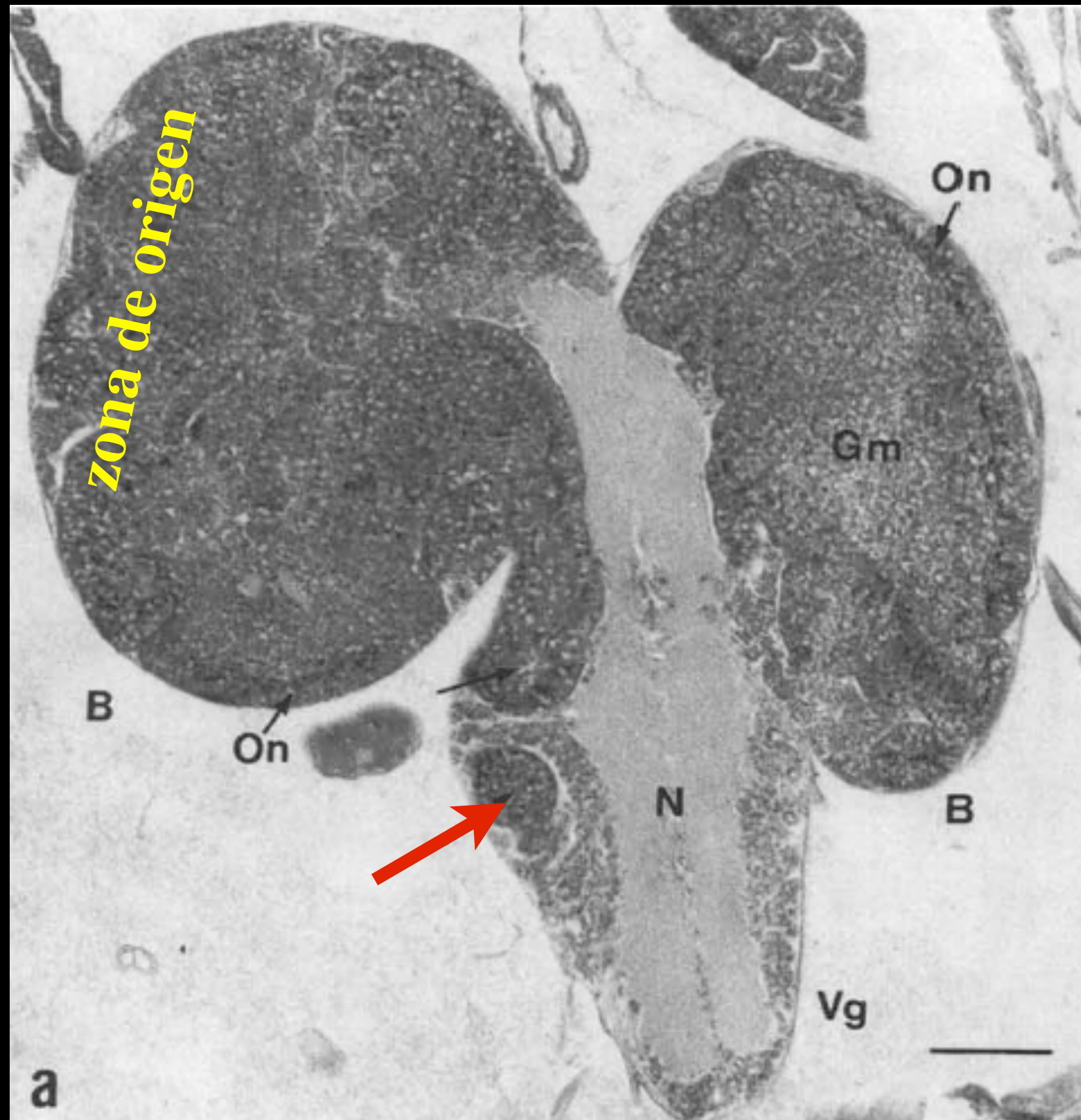
control



tumor

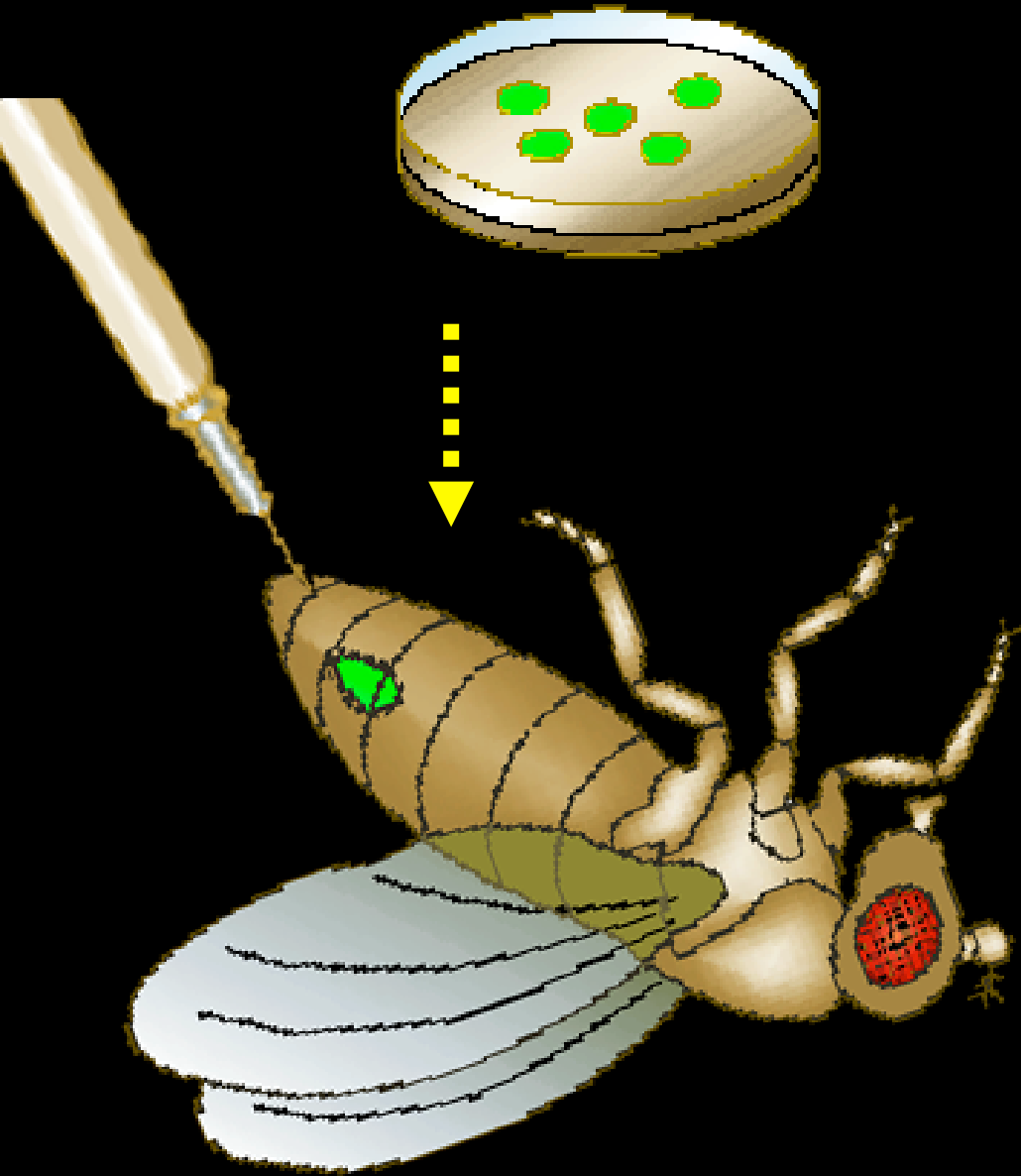


El tumor es invasivo



Donante con cerebro verde

Disecccionar el cerebro



implantar en el abdomen

injection

Rossi and Gonzalez

video en

<http://divisioncelular.irbbbarcelona.org>

Nature Protocols, 2015

video en

<http://divisioncelular.irbbbarcelona.org>

loading the needle
Rossi and Gonzalez

injection

Rossi and Gonzalez

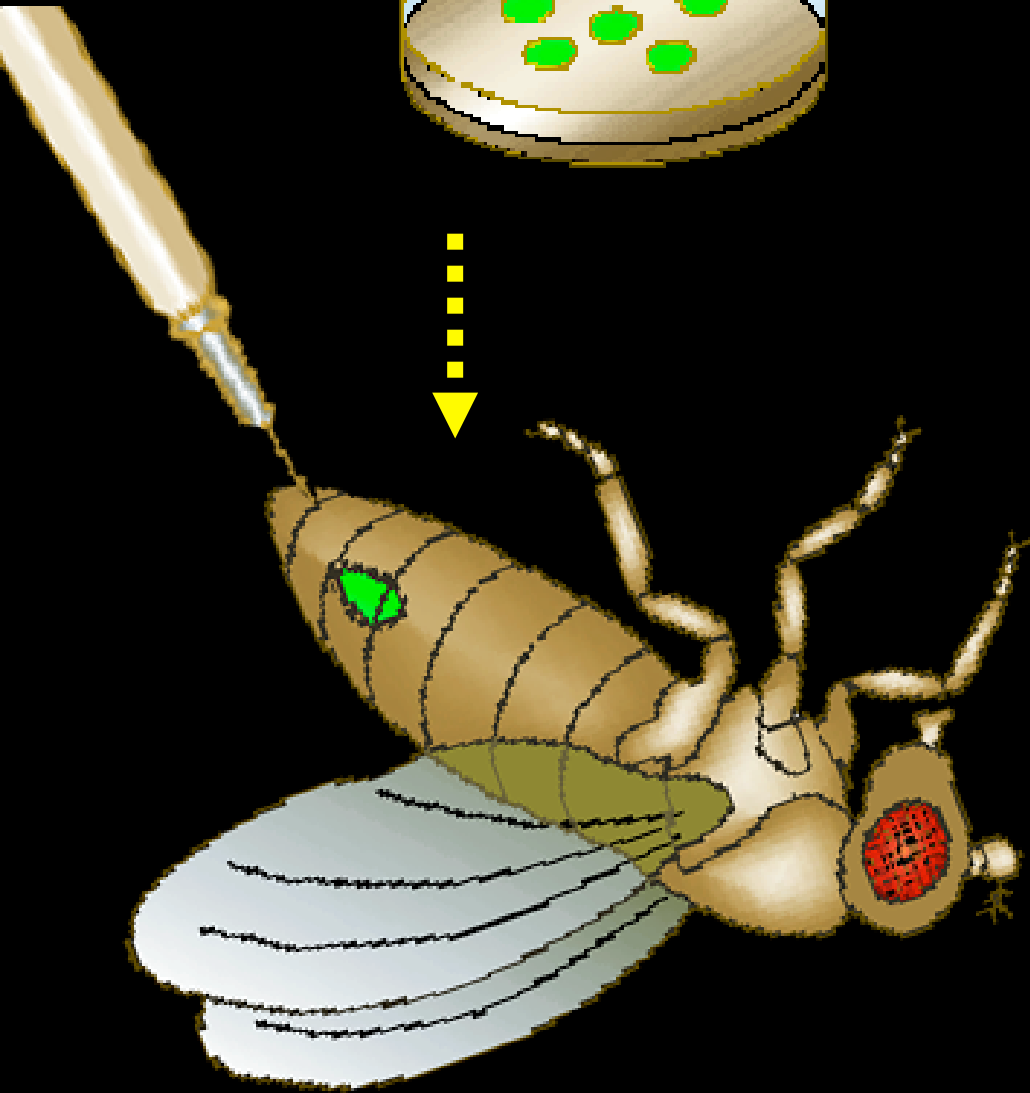
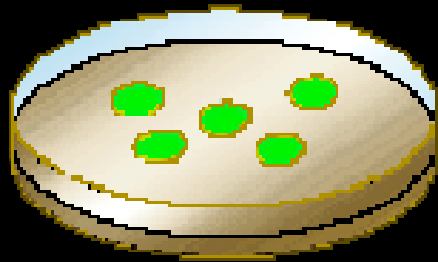
video en

<http://divisioncelular.irbbbarcelona.org>

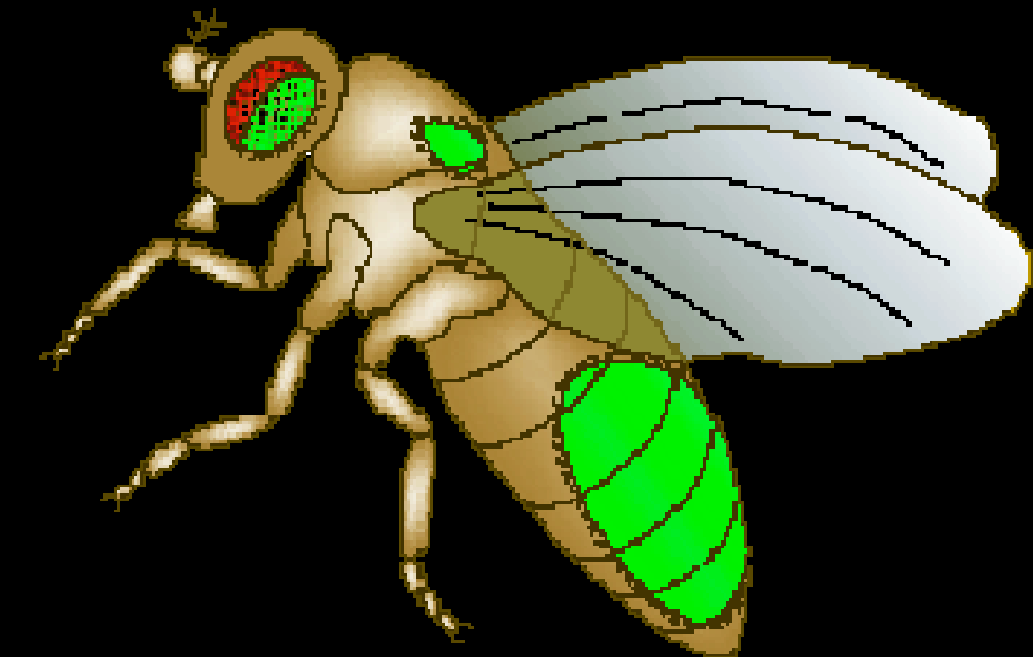
Nature Protocols, 2015

Donante con cerebro verde

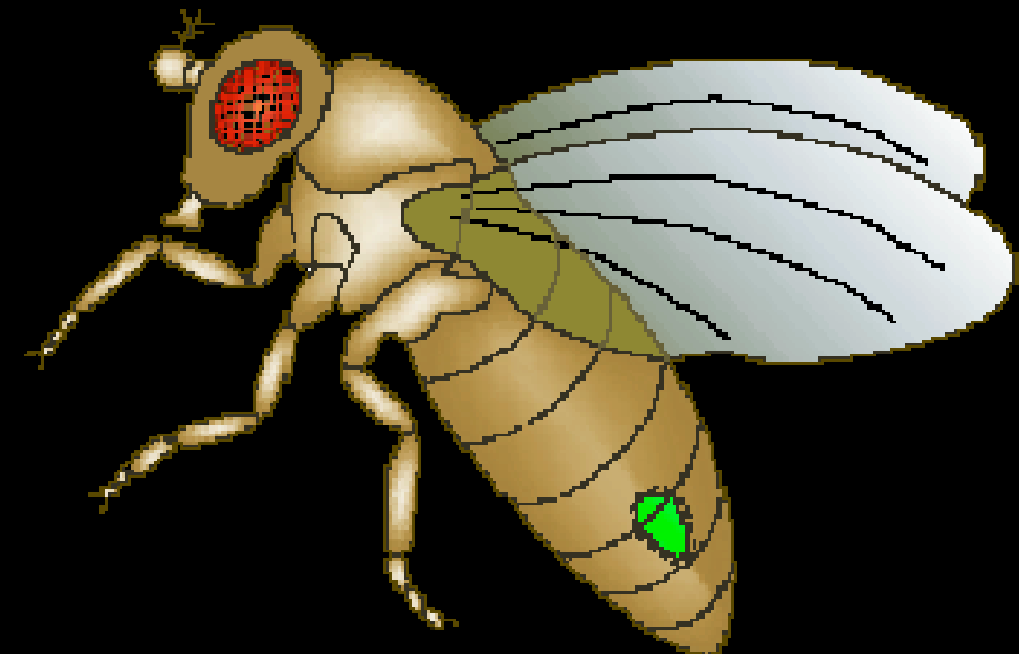
Disecccionar el cerebro



implantar en el abdomen

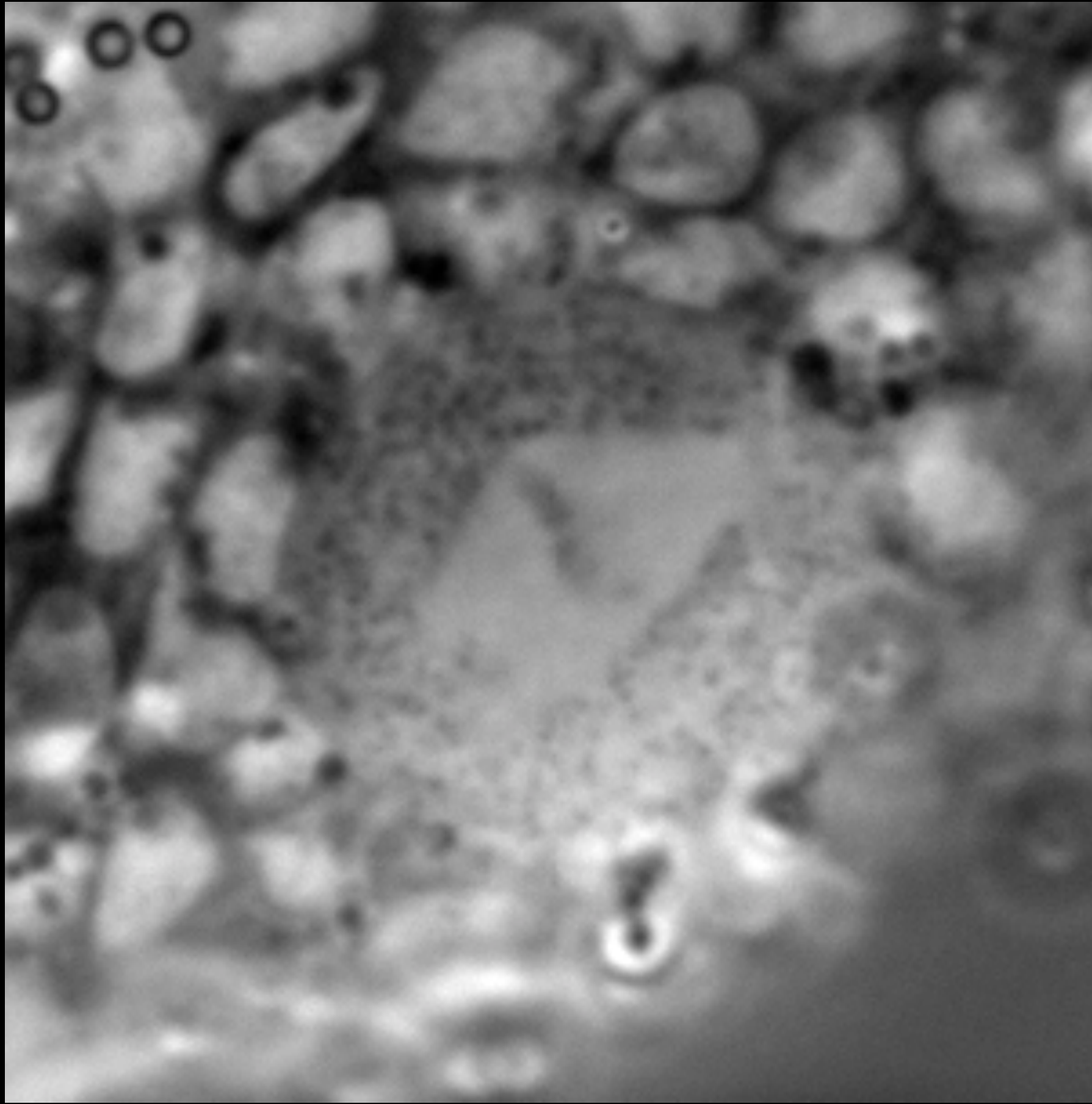


canceroso



No canceroso

División asimétrica de una célula madre



Division asimétrica de una célula madre

PAR-6, Baz, aPKC,

Insc

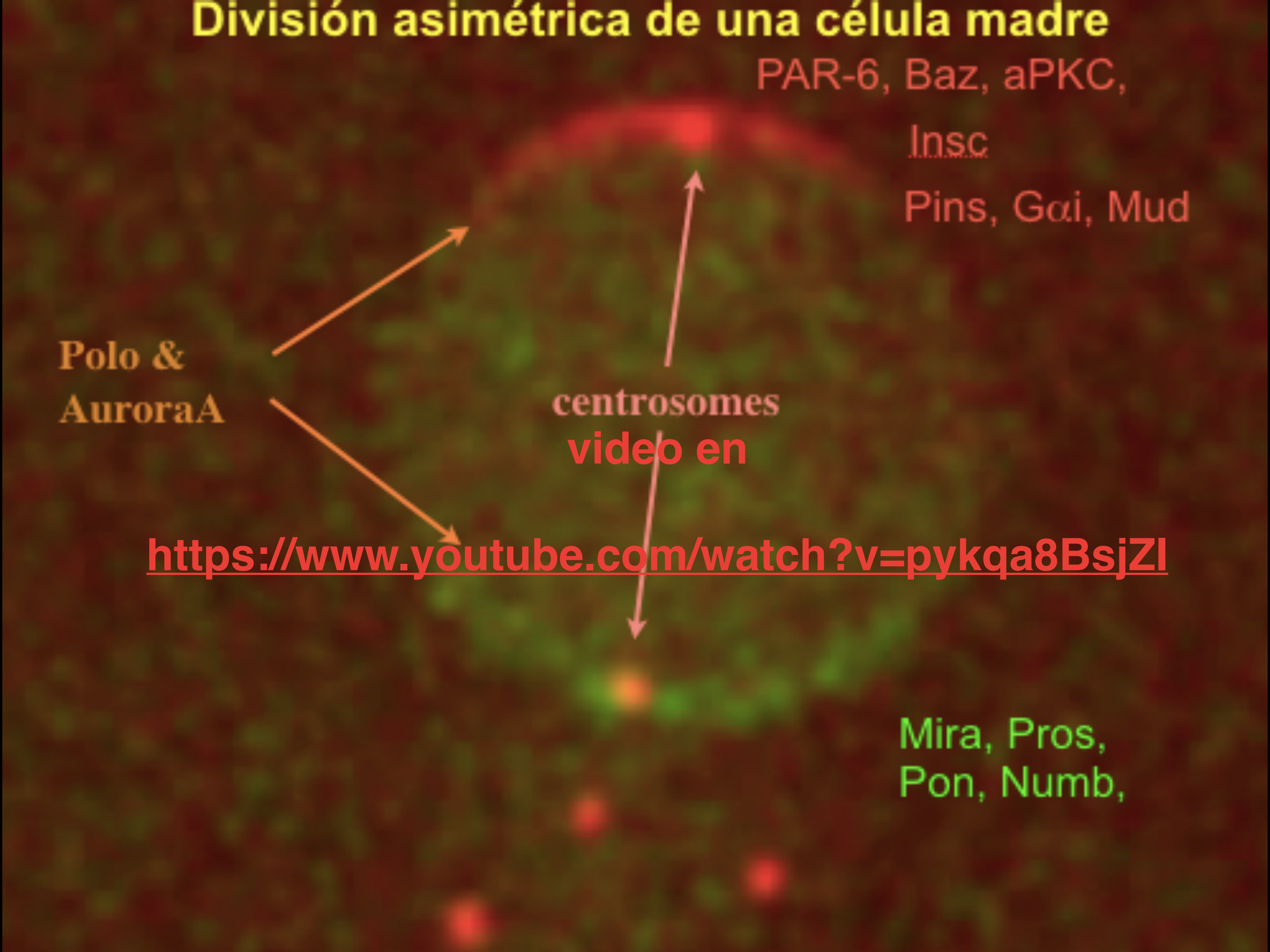
Pins, Gai, Mud

Polo &
AuroraA

centrosomes
video en

<https://www.youtube.com/watch?v=pykqa8BsjZI>

Mira, Pros,
Pon, Numb,



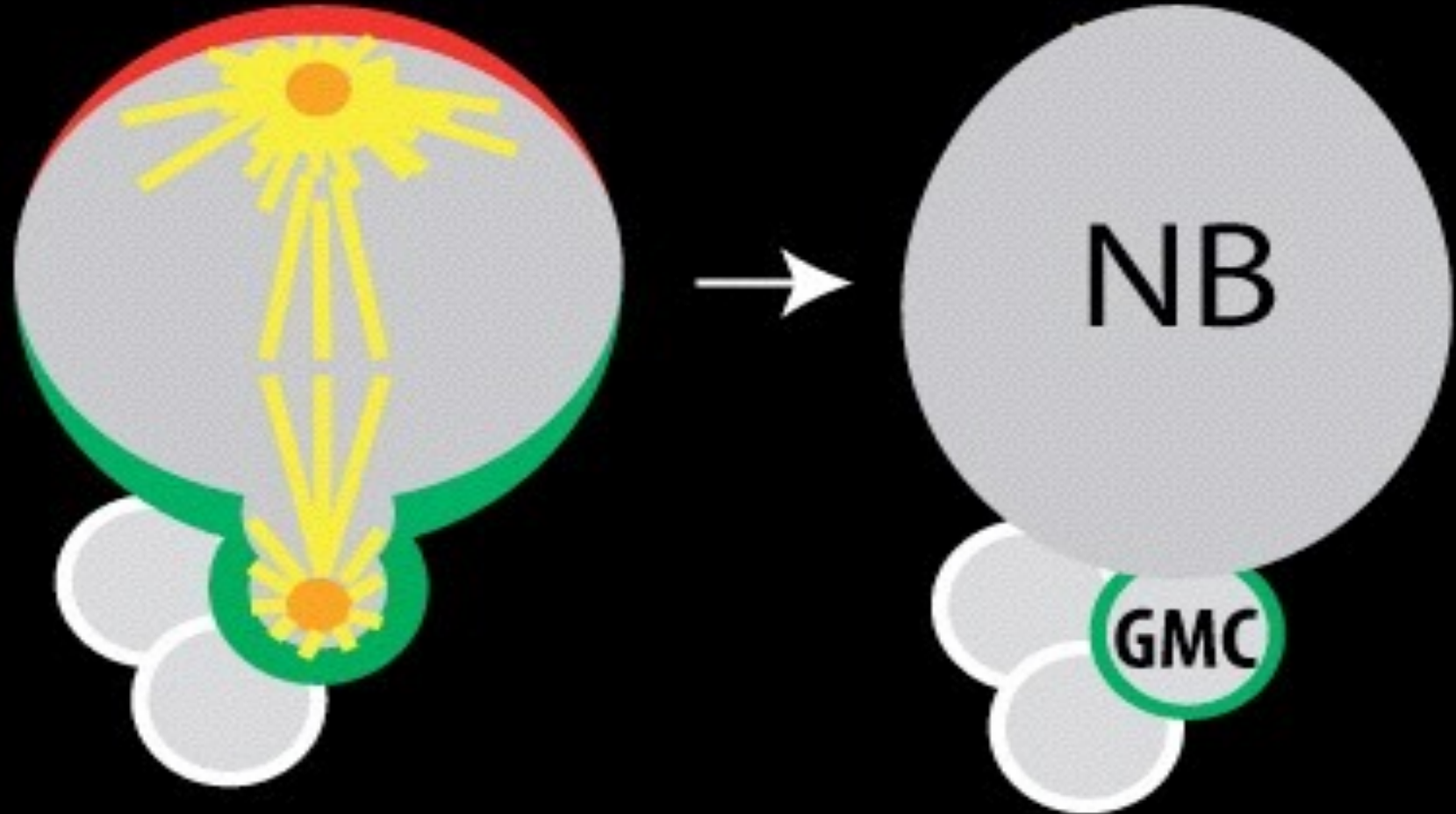
División asimétrica de una célula madre

video en

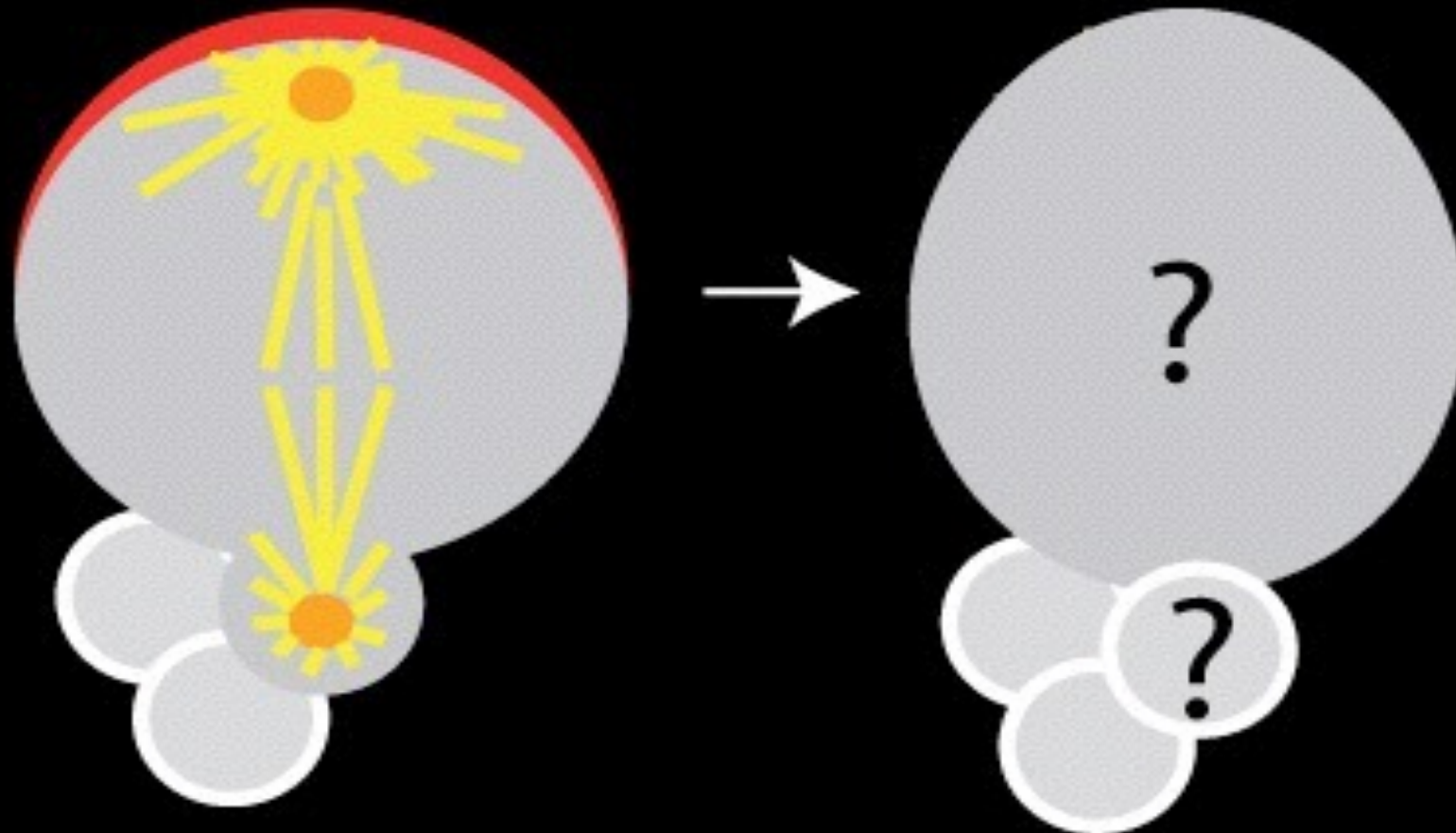
<https://www.youtube.com/watch?v=pykqa8BsjZI>

Potential Tumorigénico de errores en la división de células madre

control



mutante

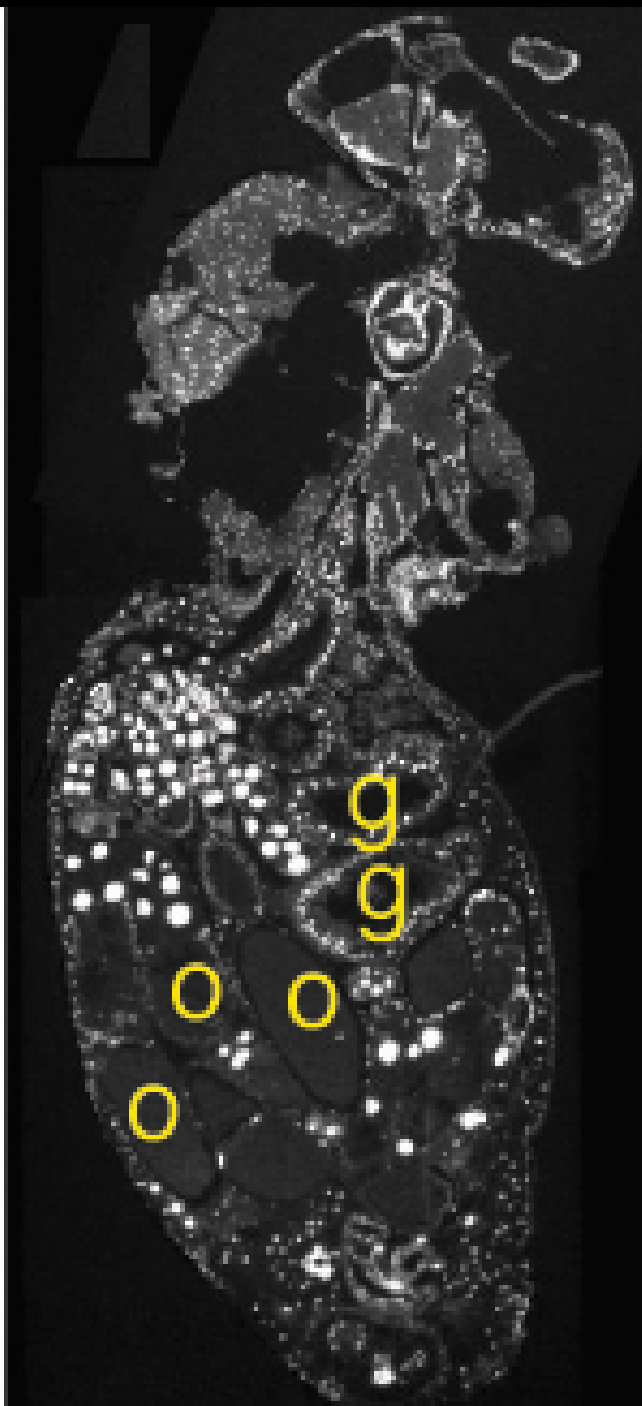


Potential Tumorigénico de errores en la división de células madre

control



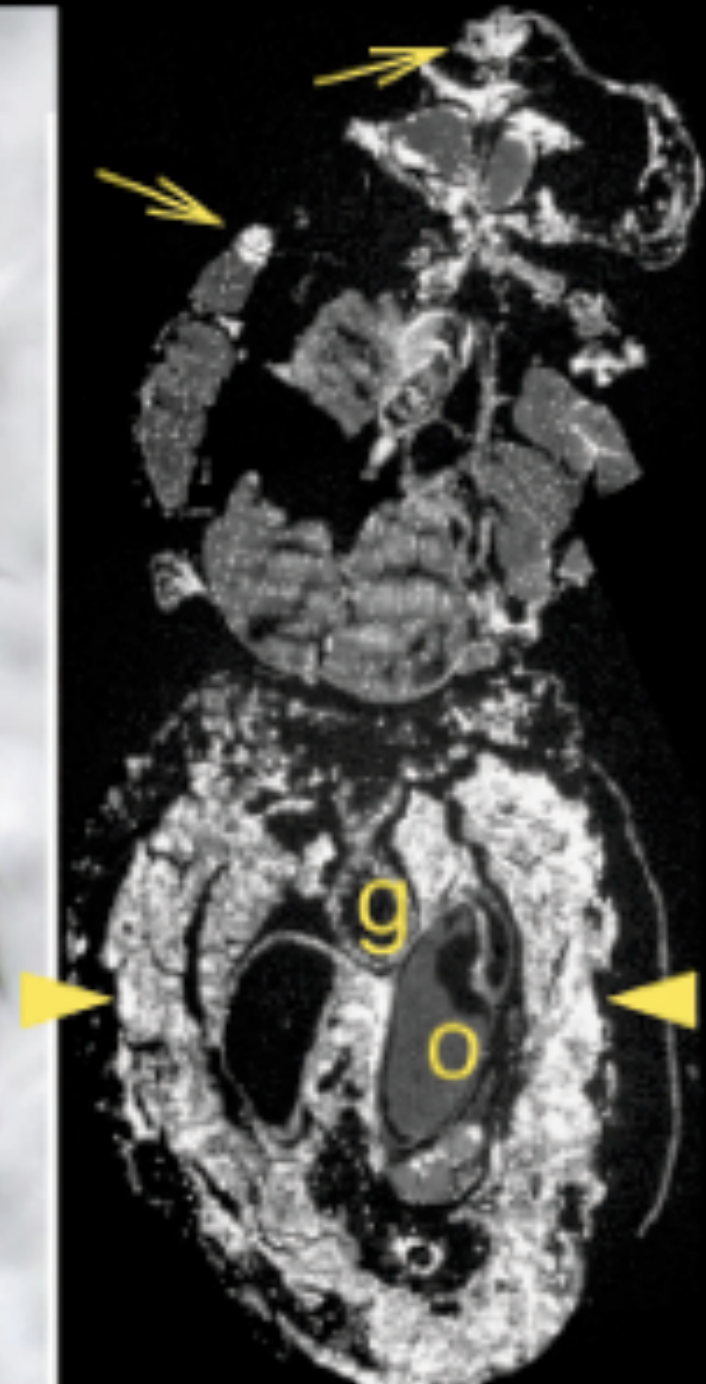
control



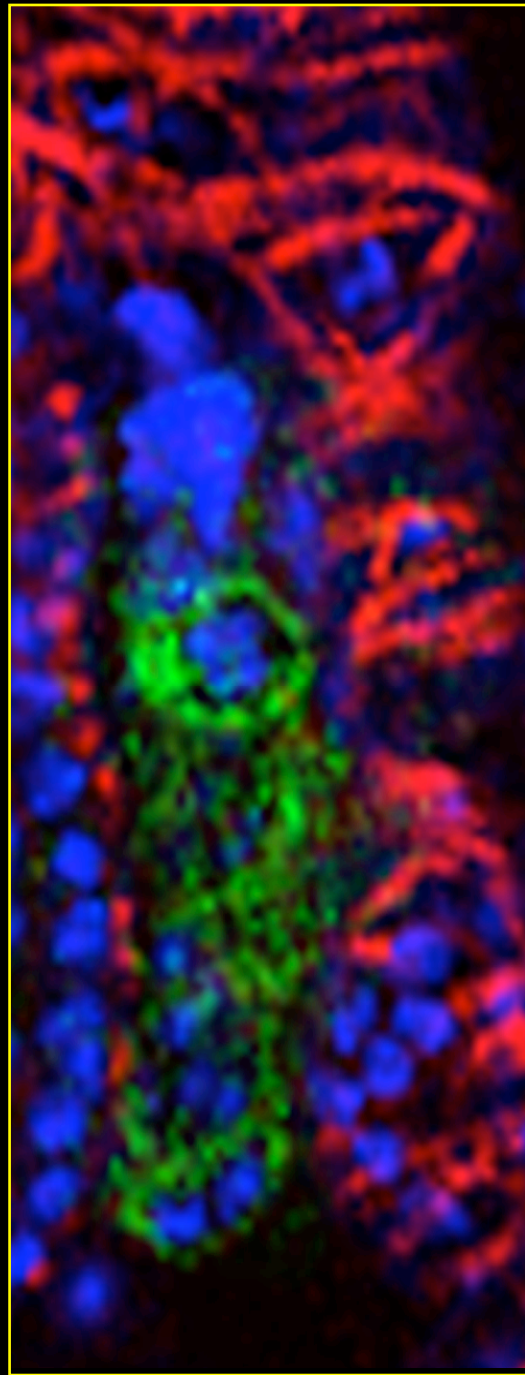
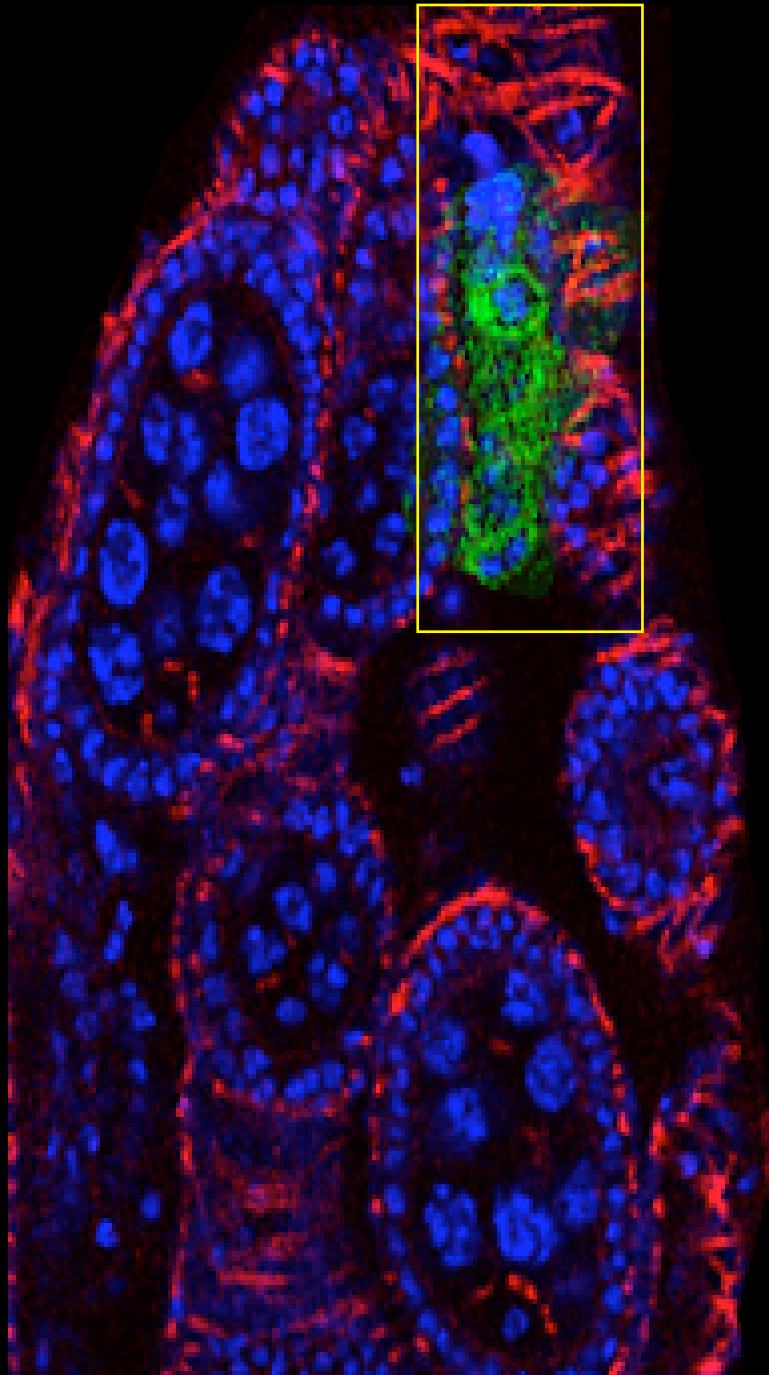
mira



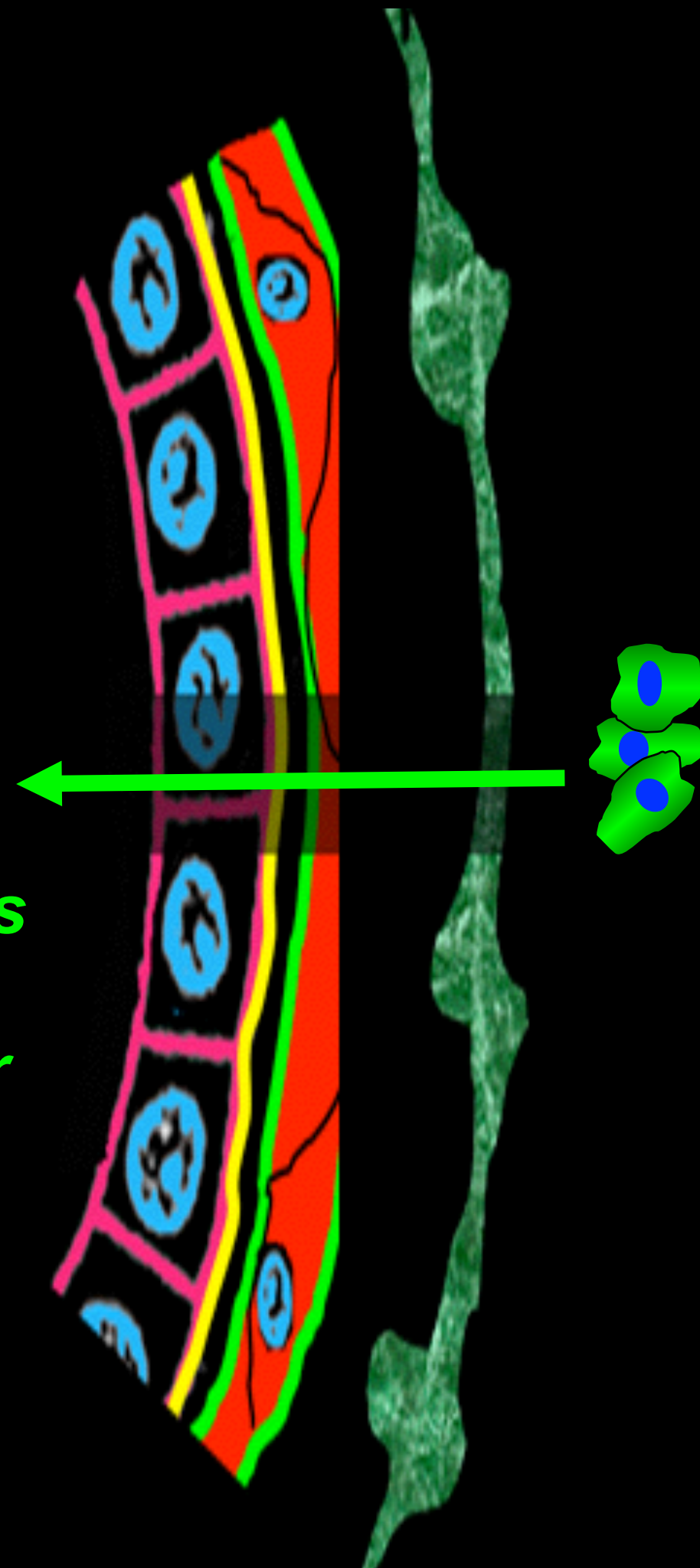
numb



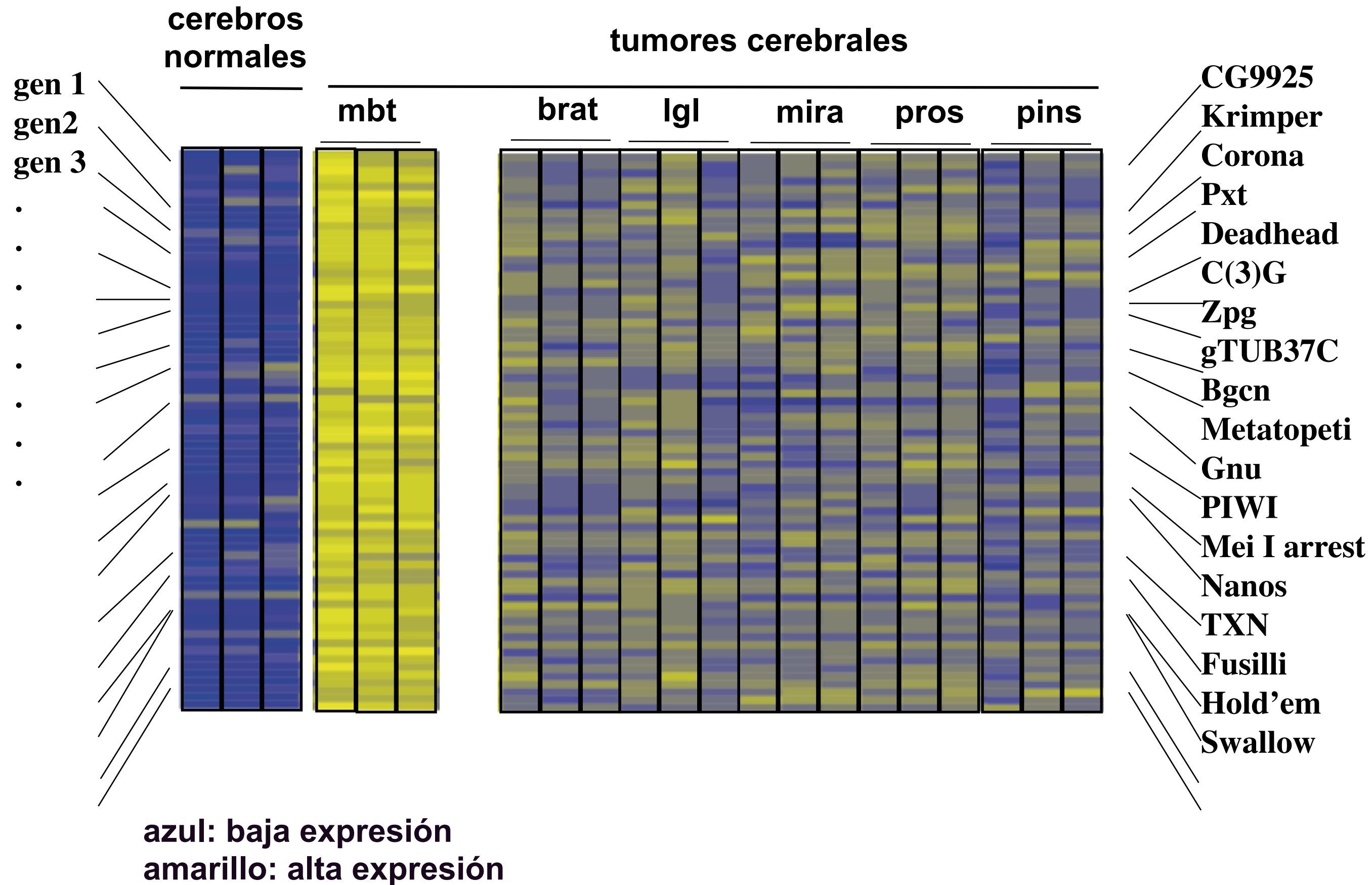
“metástasis” en ovario



*células
del
tumor*



Línea germinal (testículos/ovarios) y Cáncer



Review

Nature Reviews Cancer **5**, 615–625 (1 August 2005) | doi:10.1038/nrc1669

Cancer/testis antigens, gametogenesis and cancer

Antígenos “Cáncer/Testículo”: genes que normalmente se expresan SOLO en testículos y/o ovarios pero que se expresan también en algunos tumores.

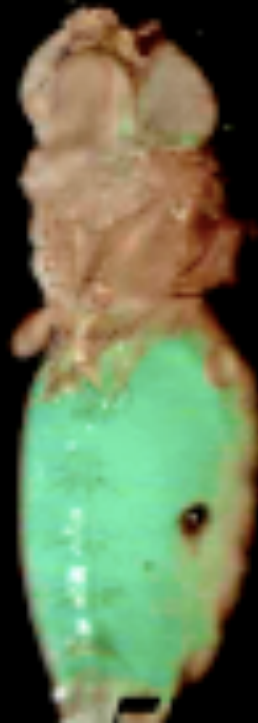
Se sospecha que puedan contribuir al carácter maligno del tumor.

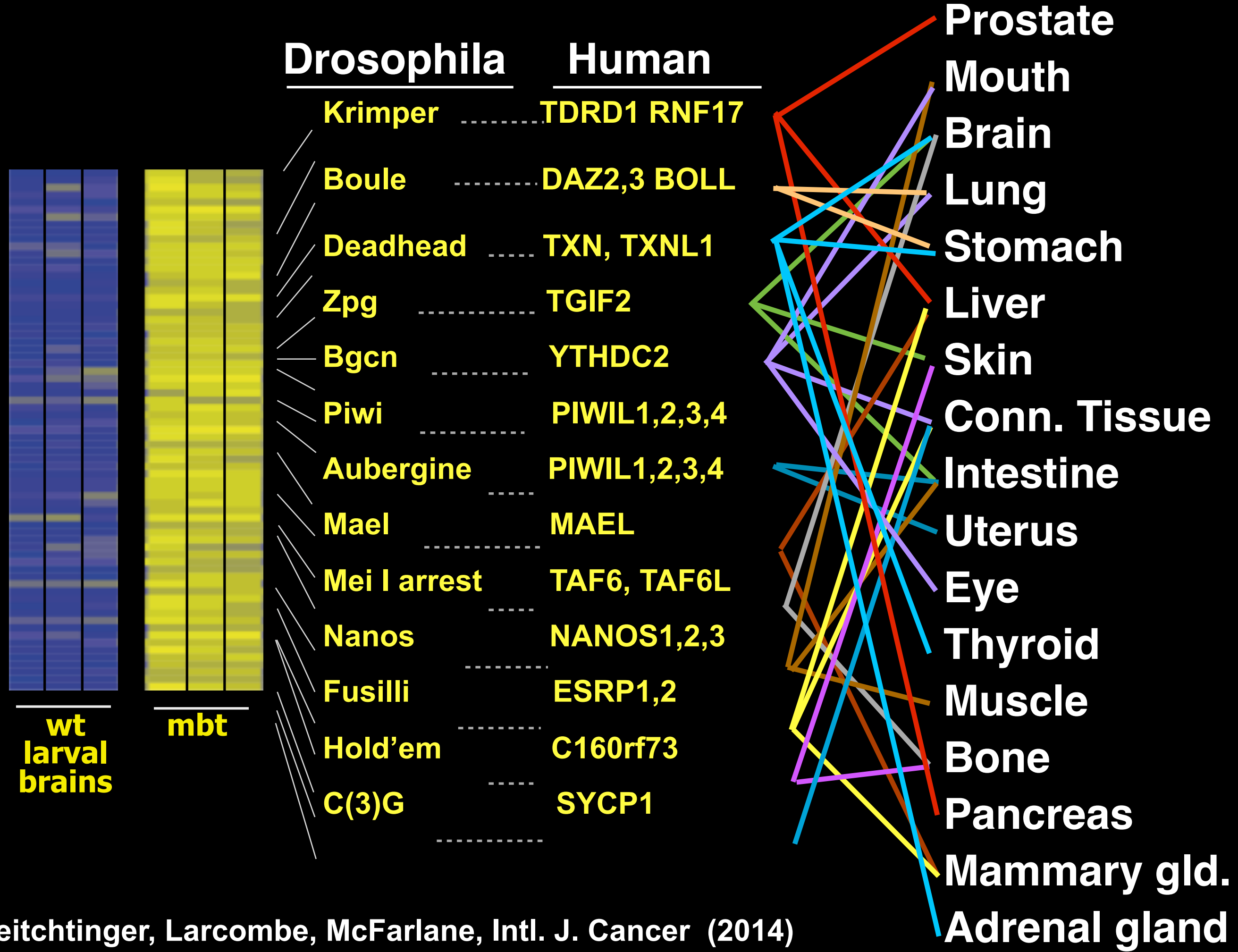
CONTROL

mbt

mbt
pxt

mbt
nanos





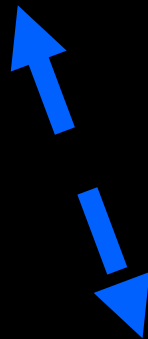
Cancer humano

Tumores mbt en
Drosophila



Expresion en el SOMA de
genes de LÍNEA GERMINAL

?



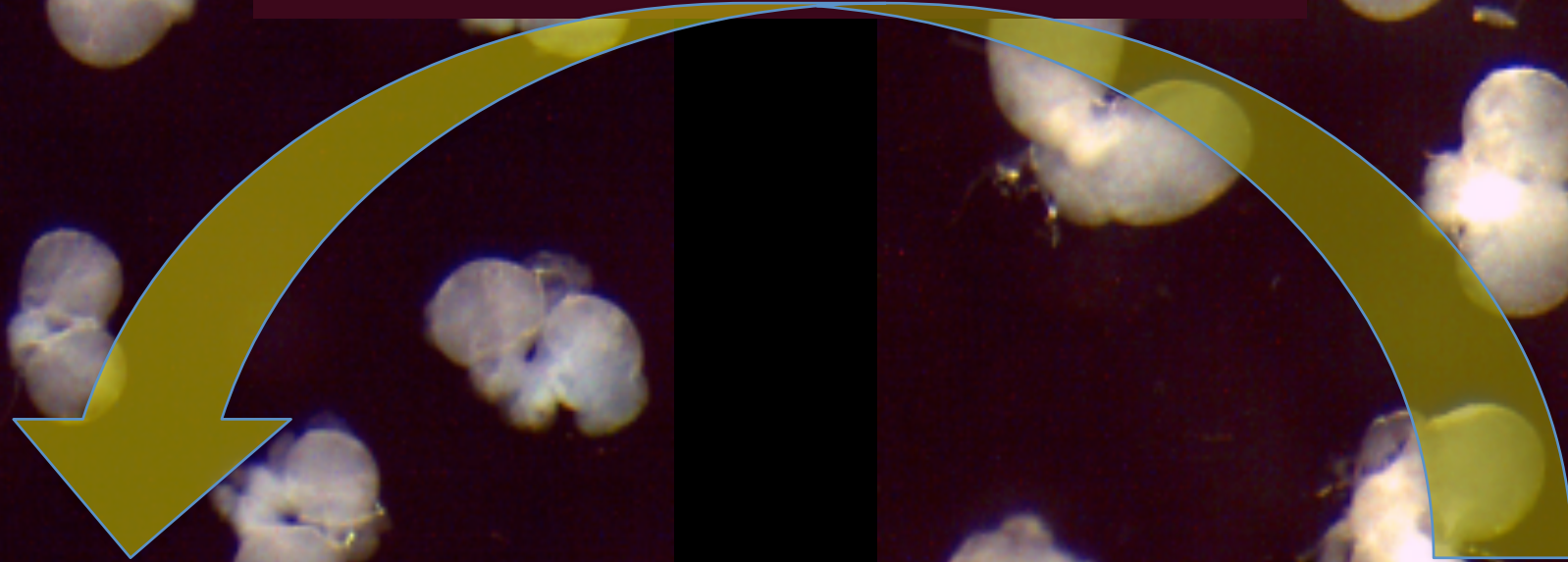
crecimiento del tumor

Identificación de dianas terapéuticas

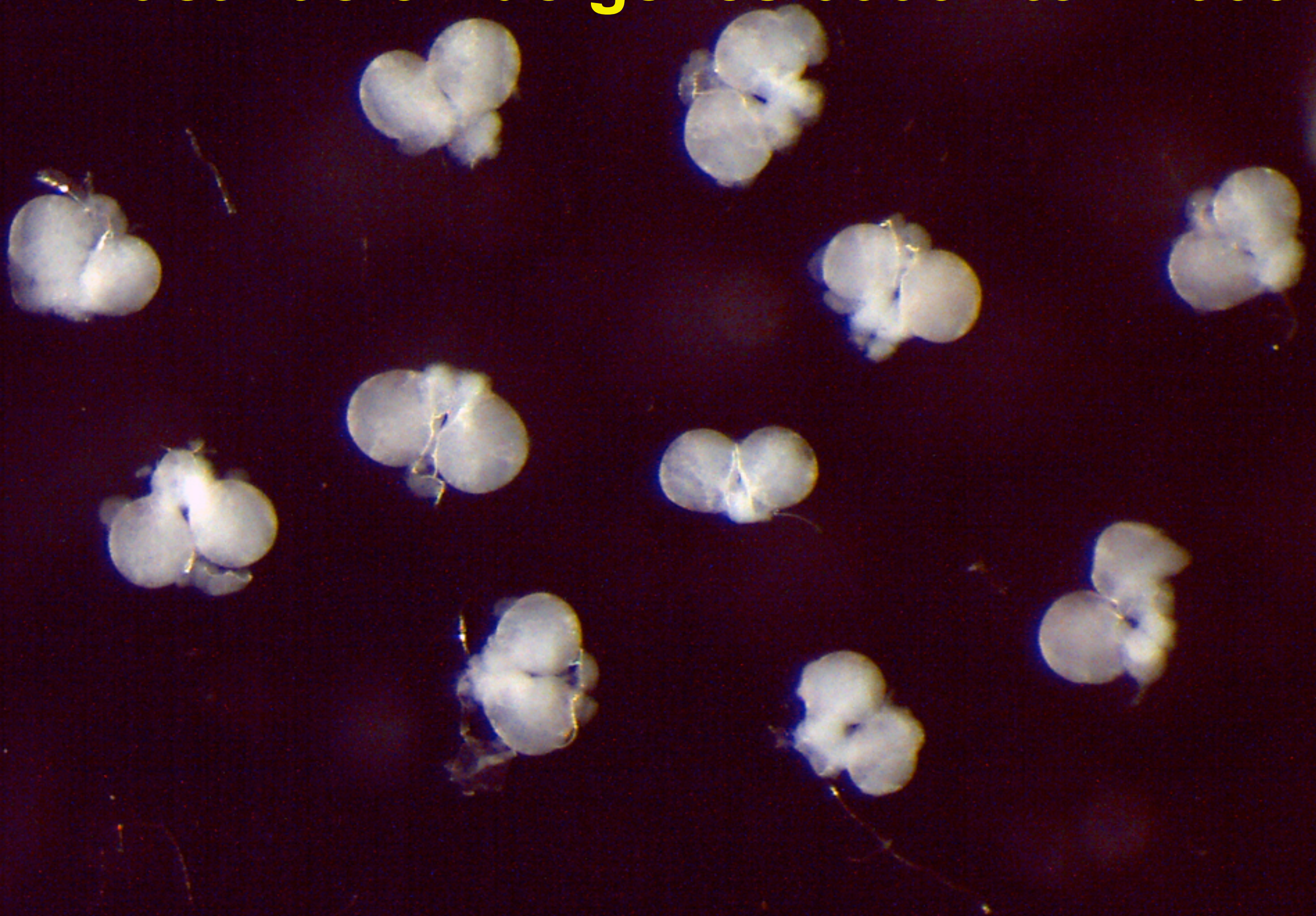
control

mbt

RNAi 00001 to 12000



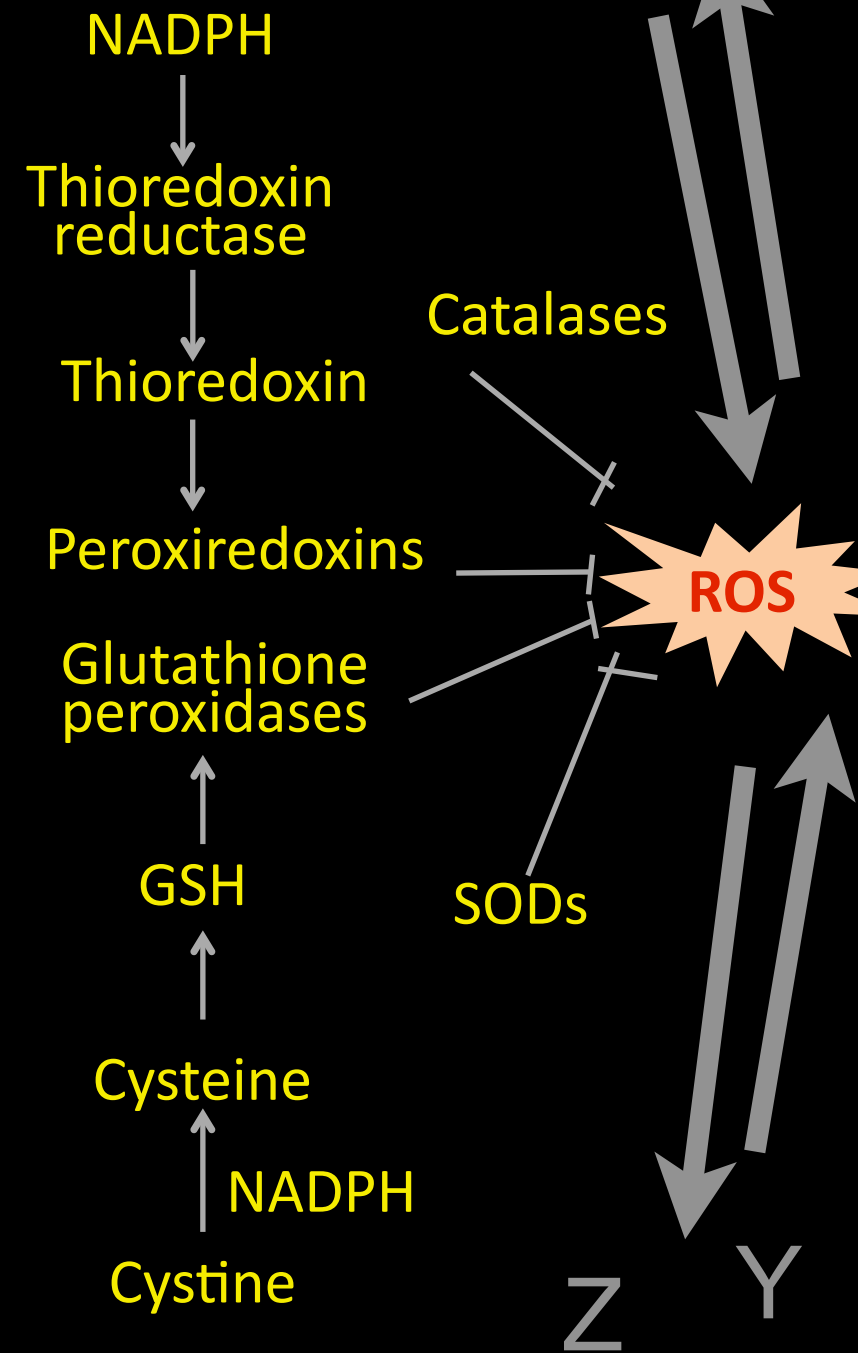
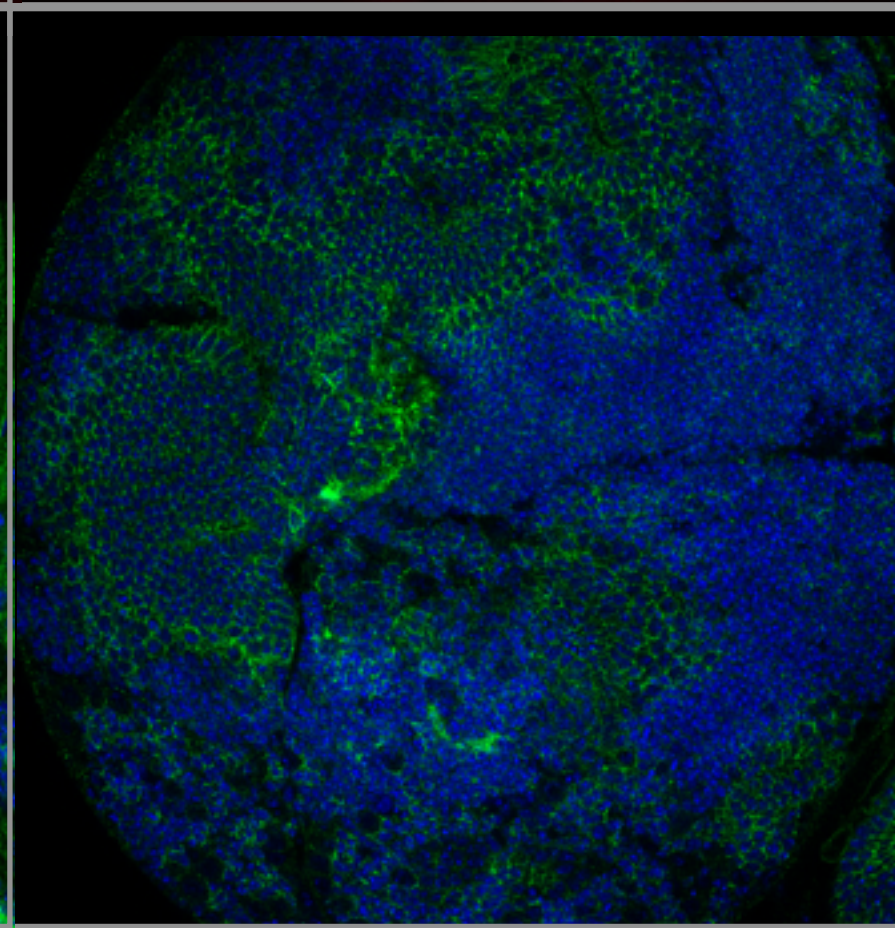
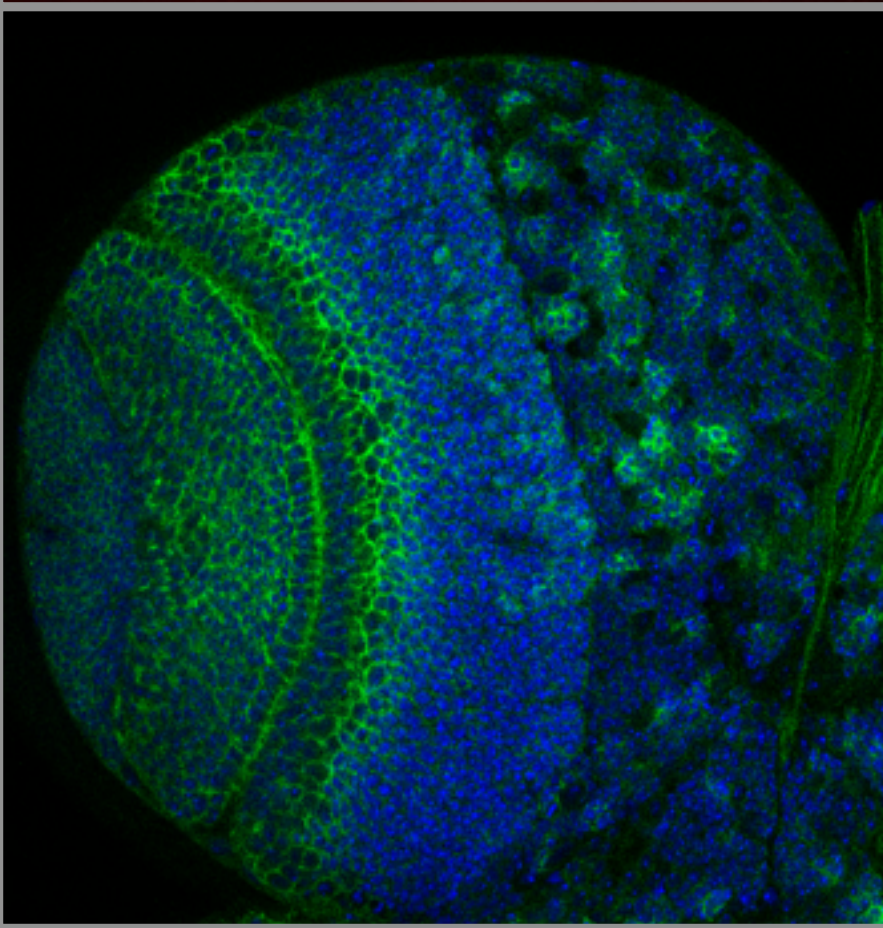
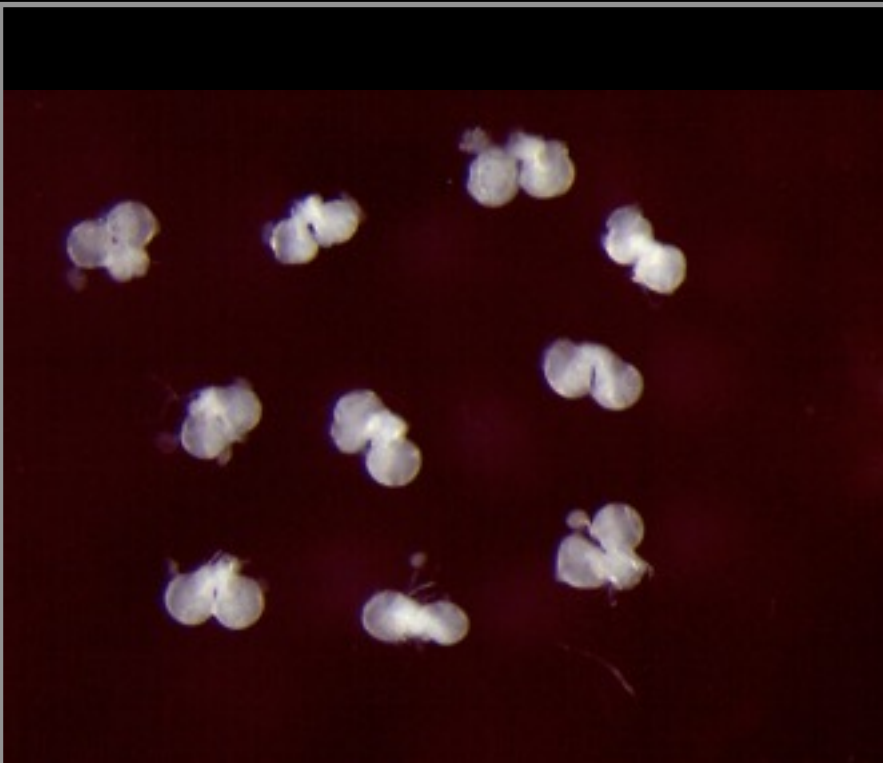
Inactivación de genes 00001 to 12000



Identificación de dianas terapéuticas

control

mbt

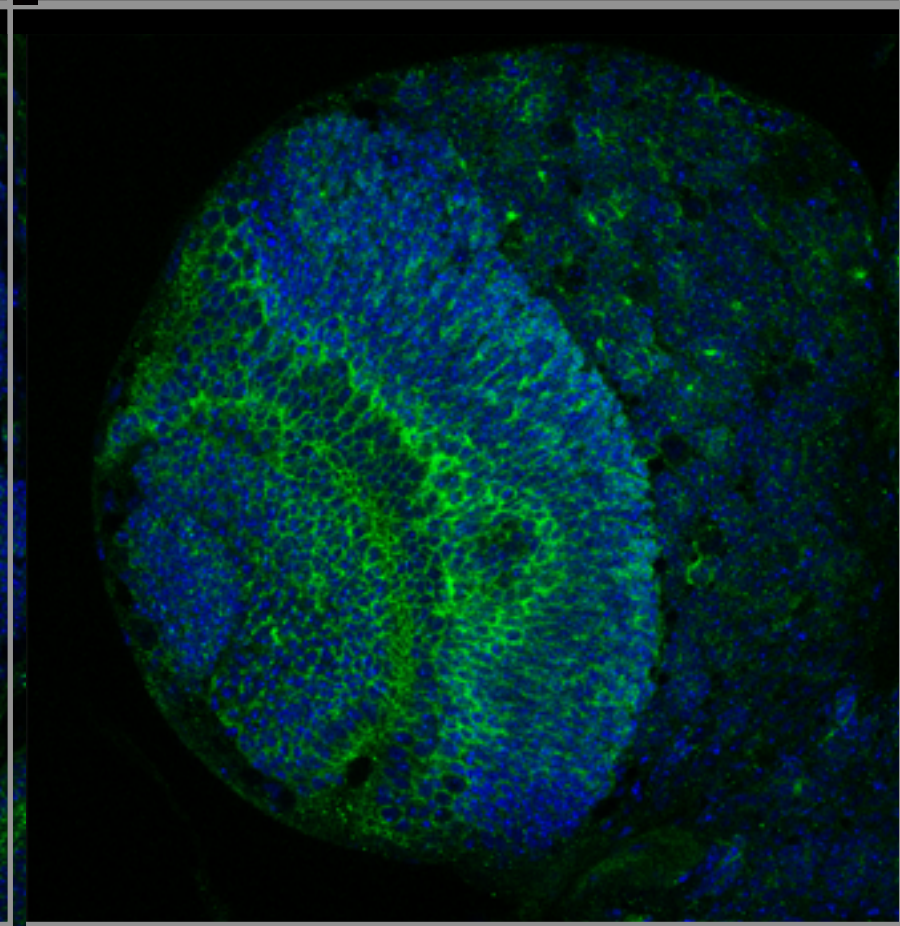
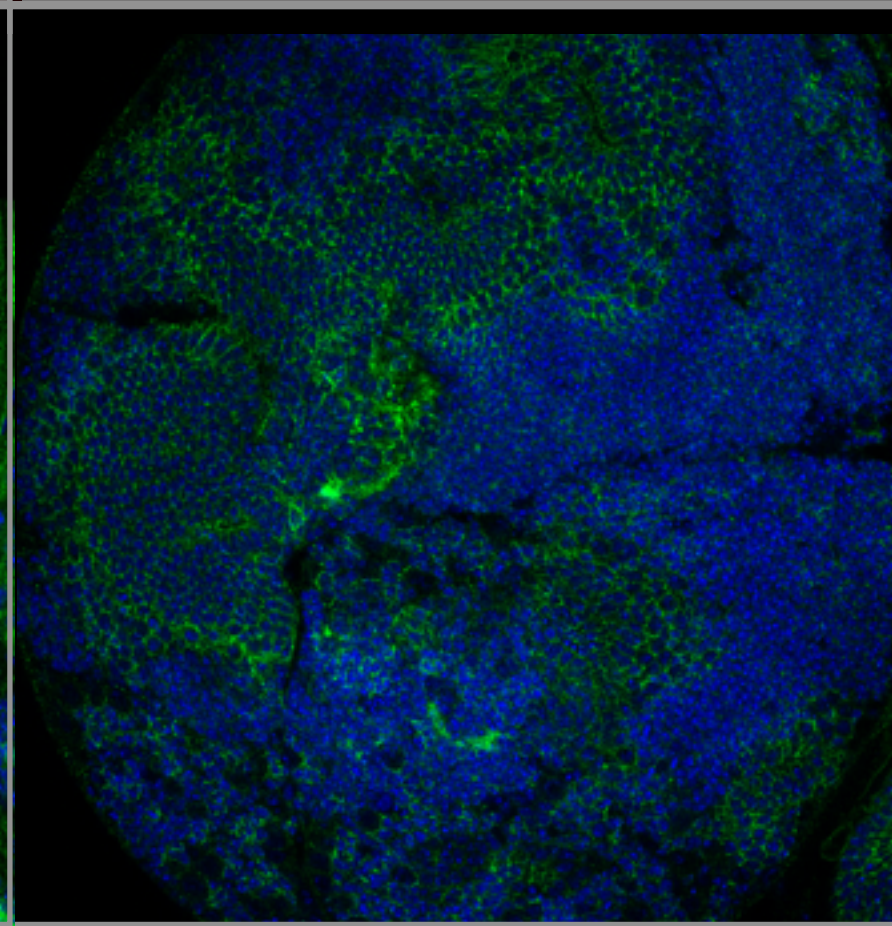
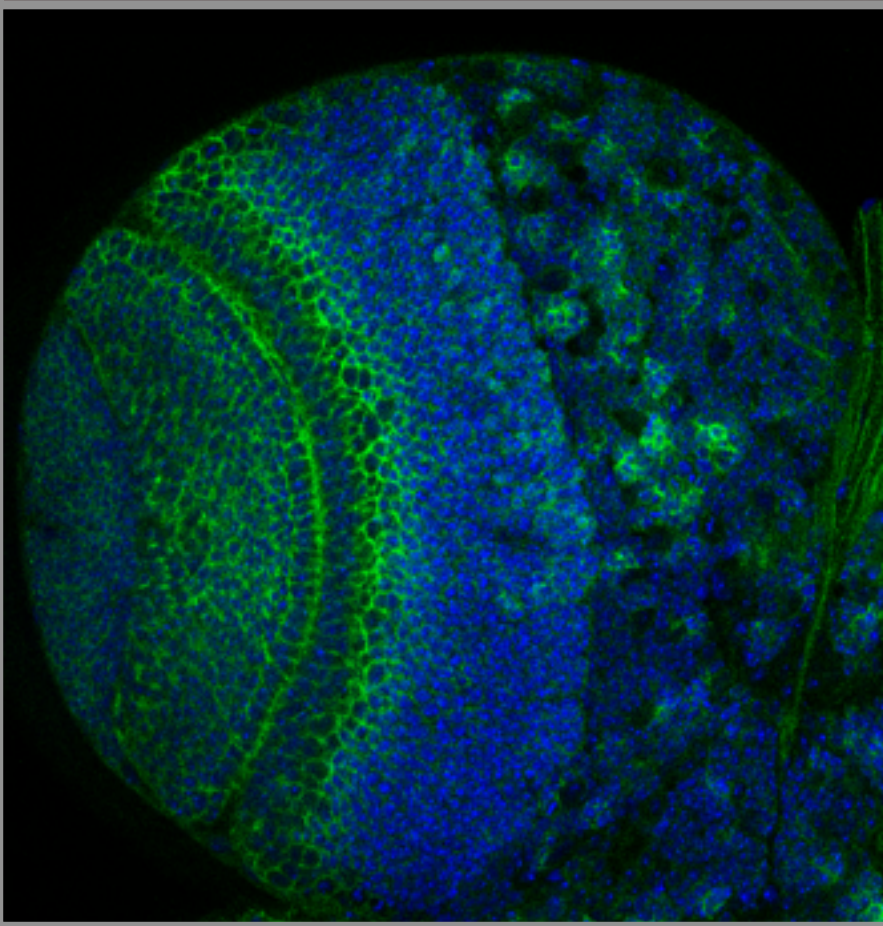
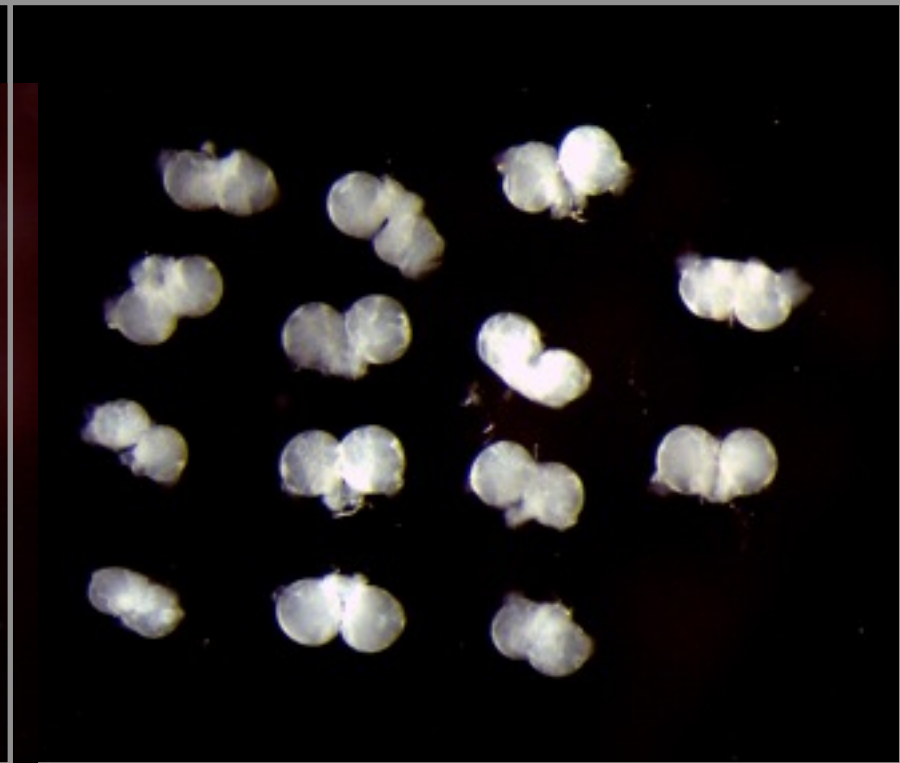
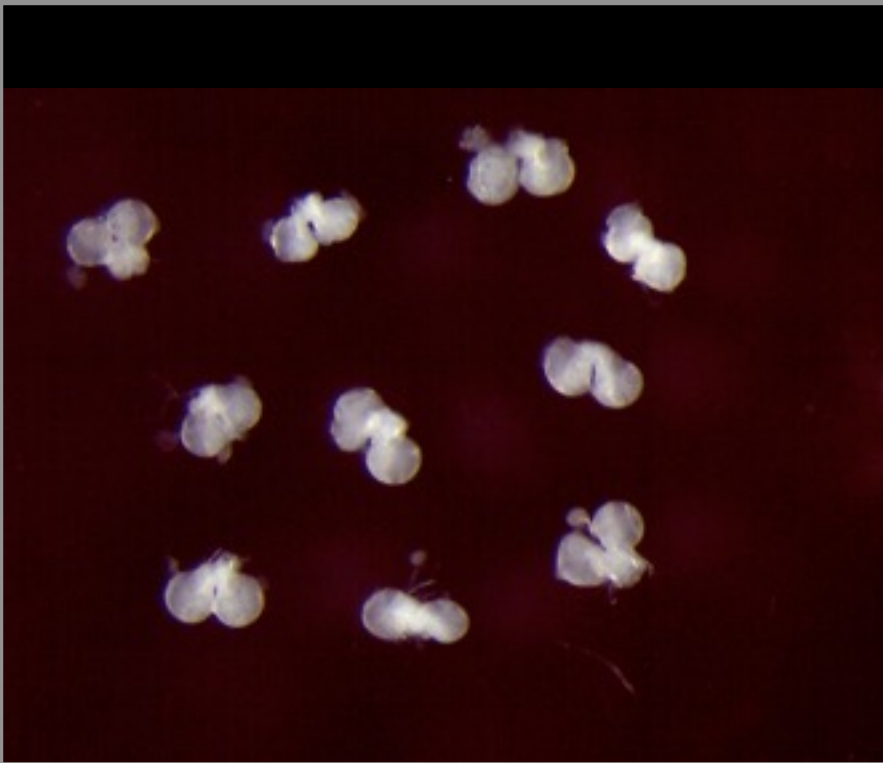


Identificación de dianas terapéuticas

control

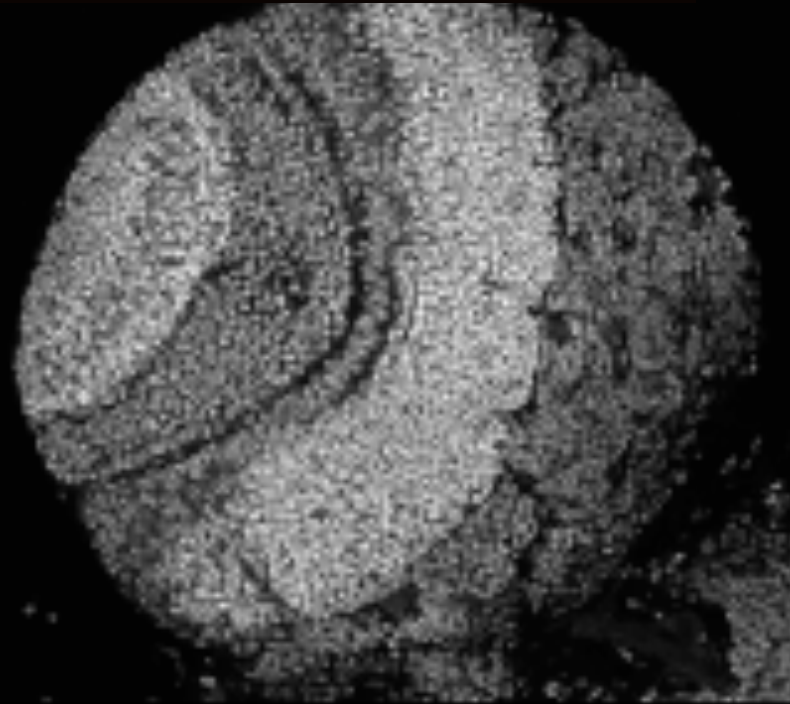
mbt

Oxidación & mbt

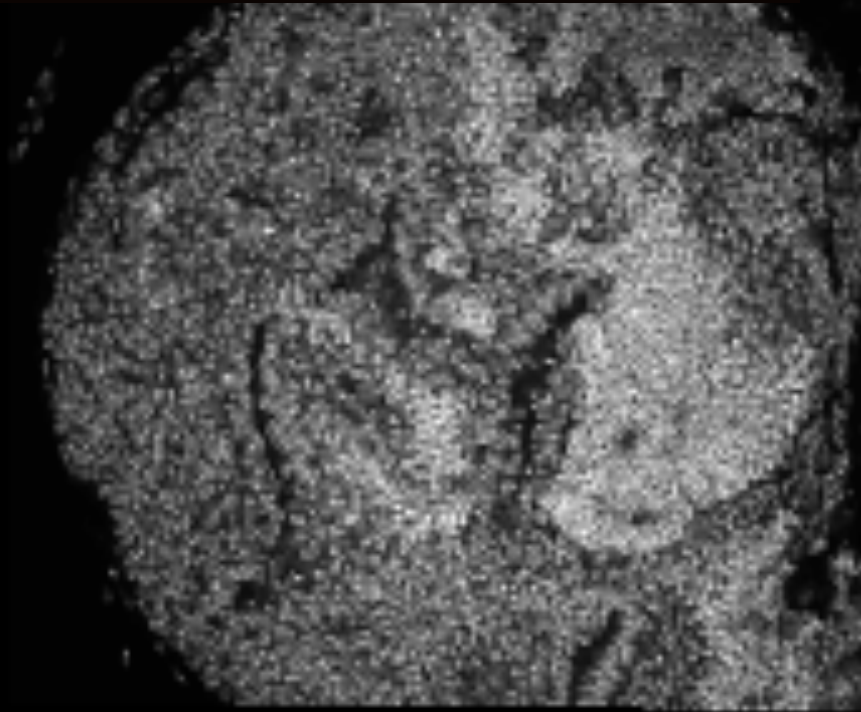


Identificacion de dianas terapéuticas

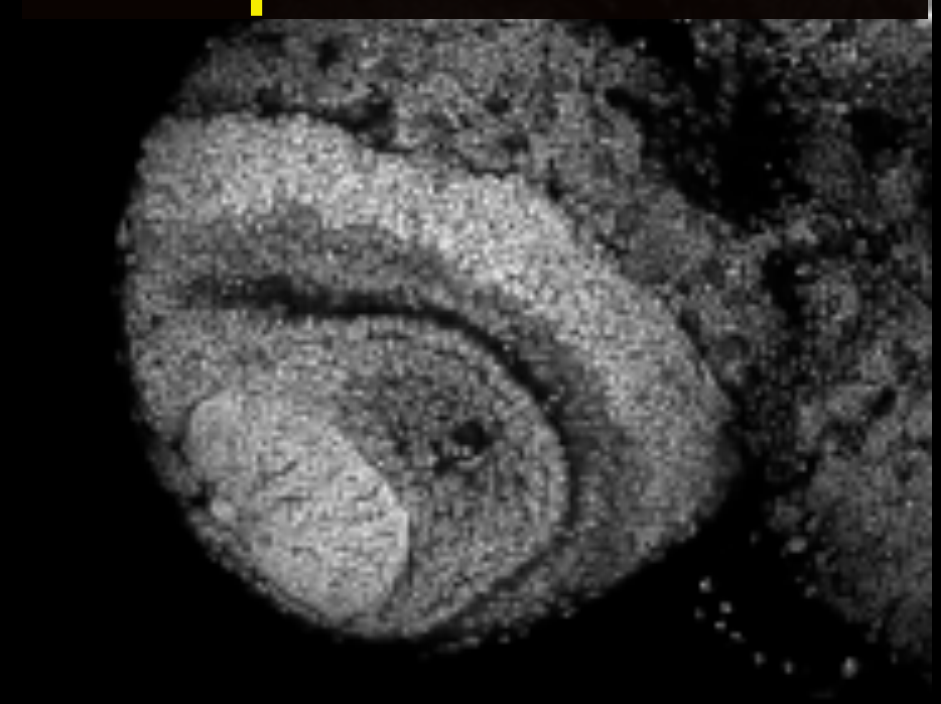
control



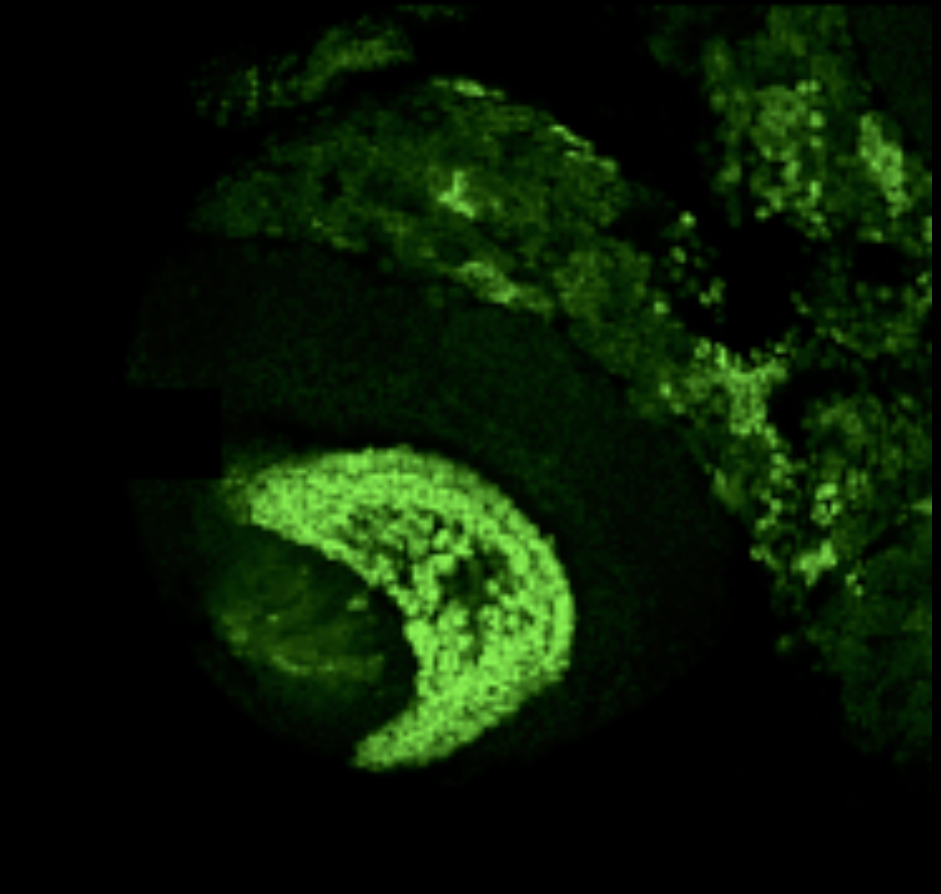
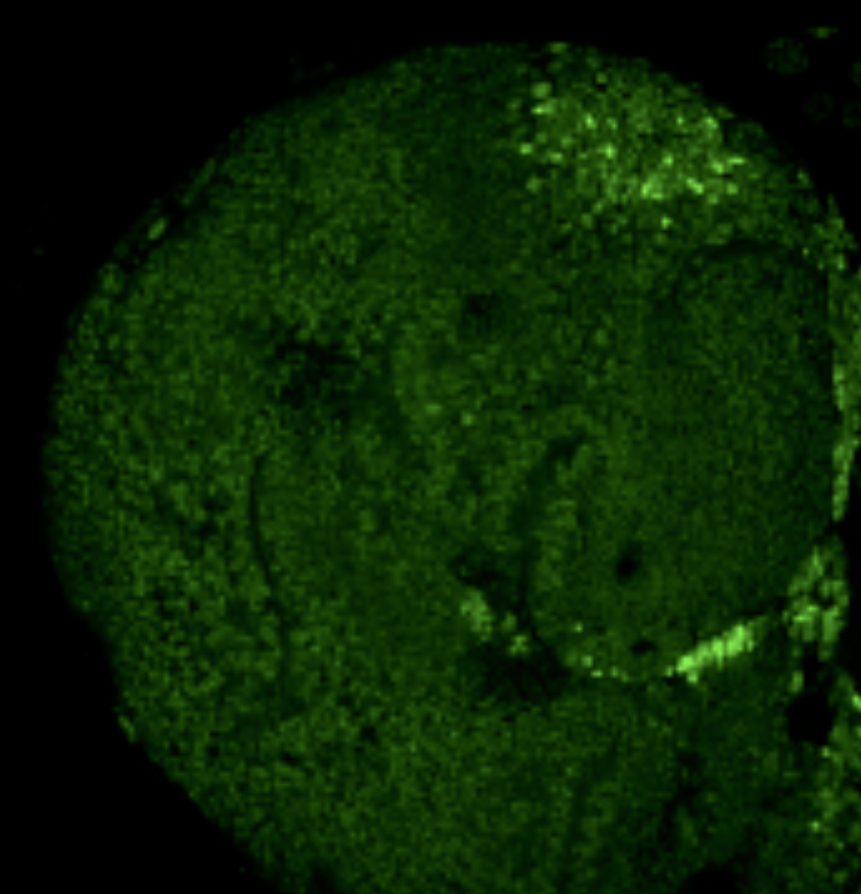
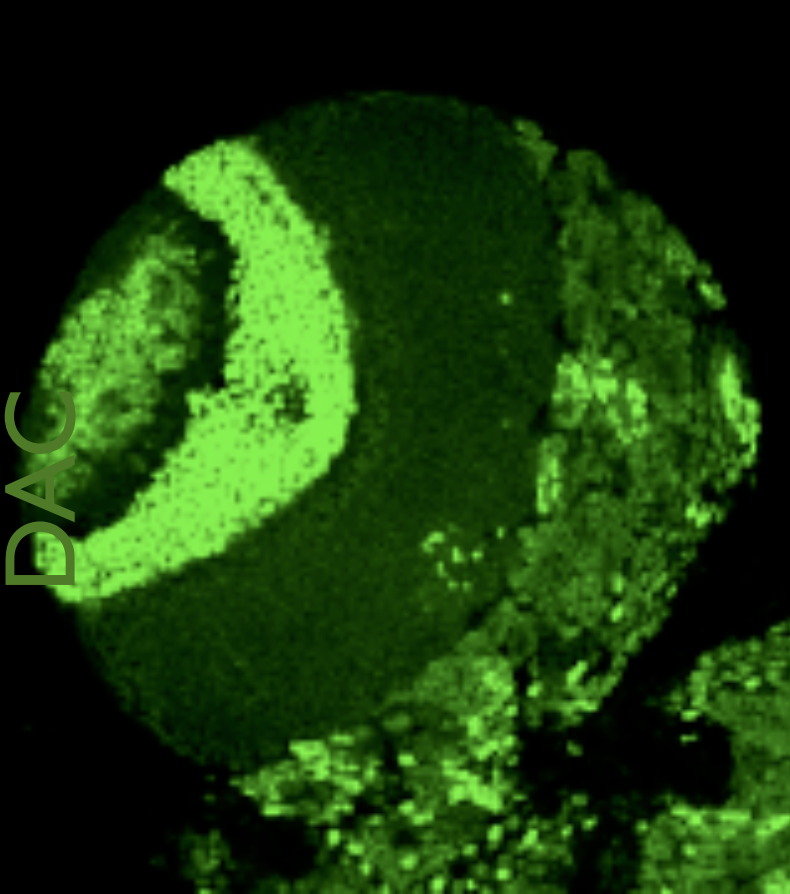
mbt



Sup#1 & mbt



DAC



CTDatabase

LUDWIG
INSTITUTE
FOR
CANCER
RESEARCH



Laboratório
Nacional de
Computação
Científica

**Drosophila Sup#1 tiene un homólogo humano
que está catalogado como
gen de la clase cáncer-testículo
en la base de datos del Ludwig Institute**



INSTITUTE
FOR RESEARCH
IN BIOMEDICINE



EXCELENCIA
SEVERO
OCHOA



ICREA



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD