

Magnification Alone

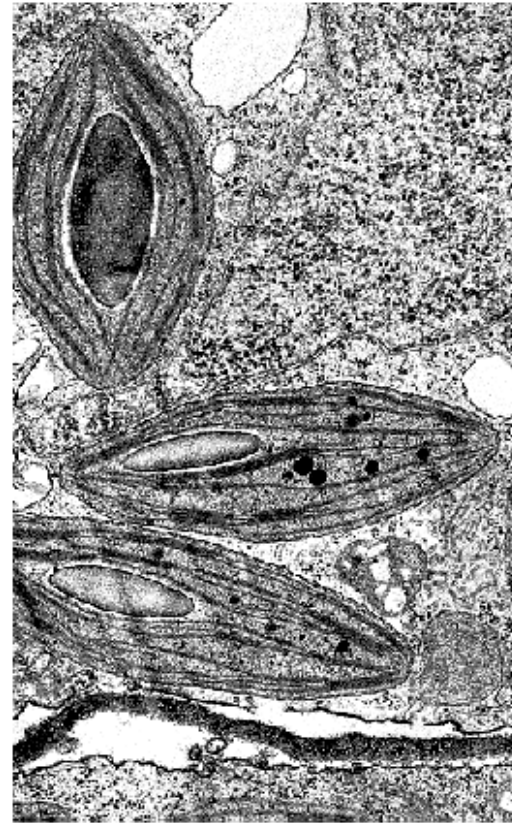
Magnification with Resolution



10X

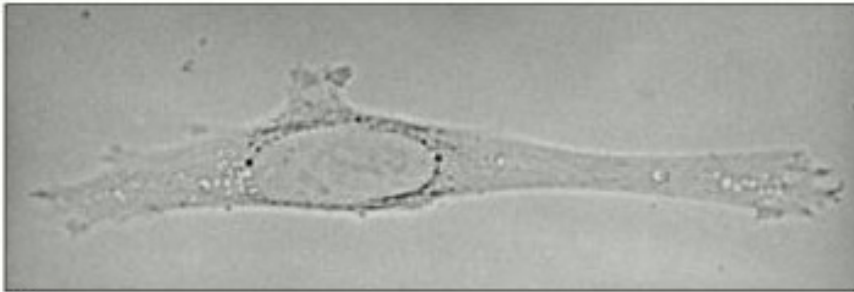


45X

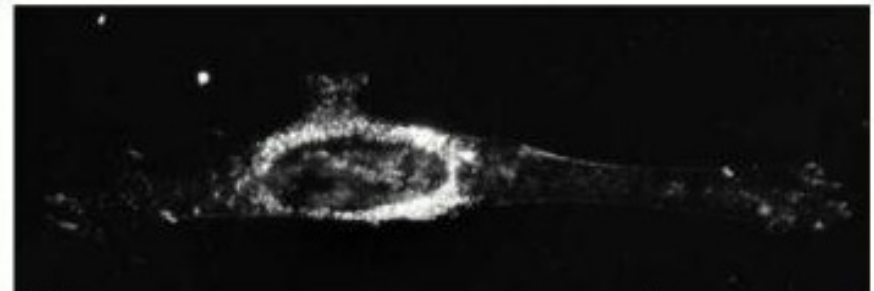
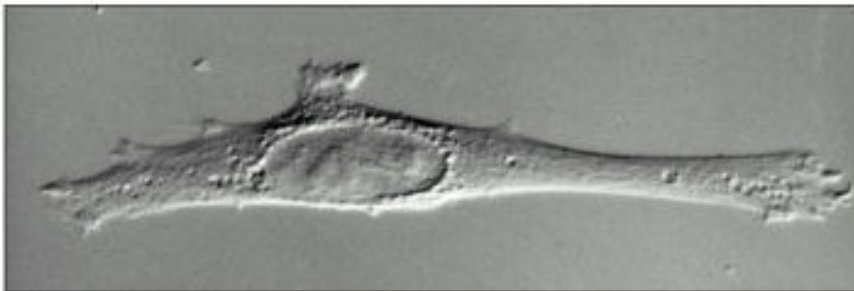
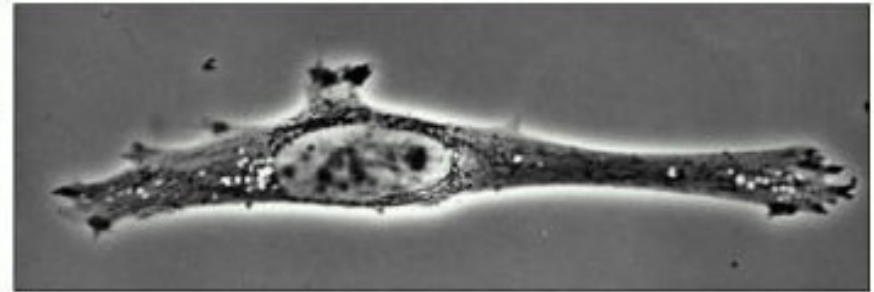


100X

brightfield



phase contrast

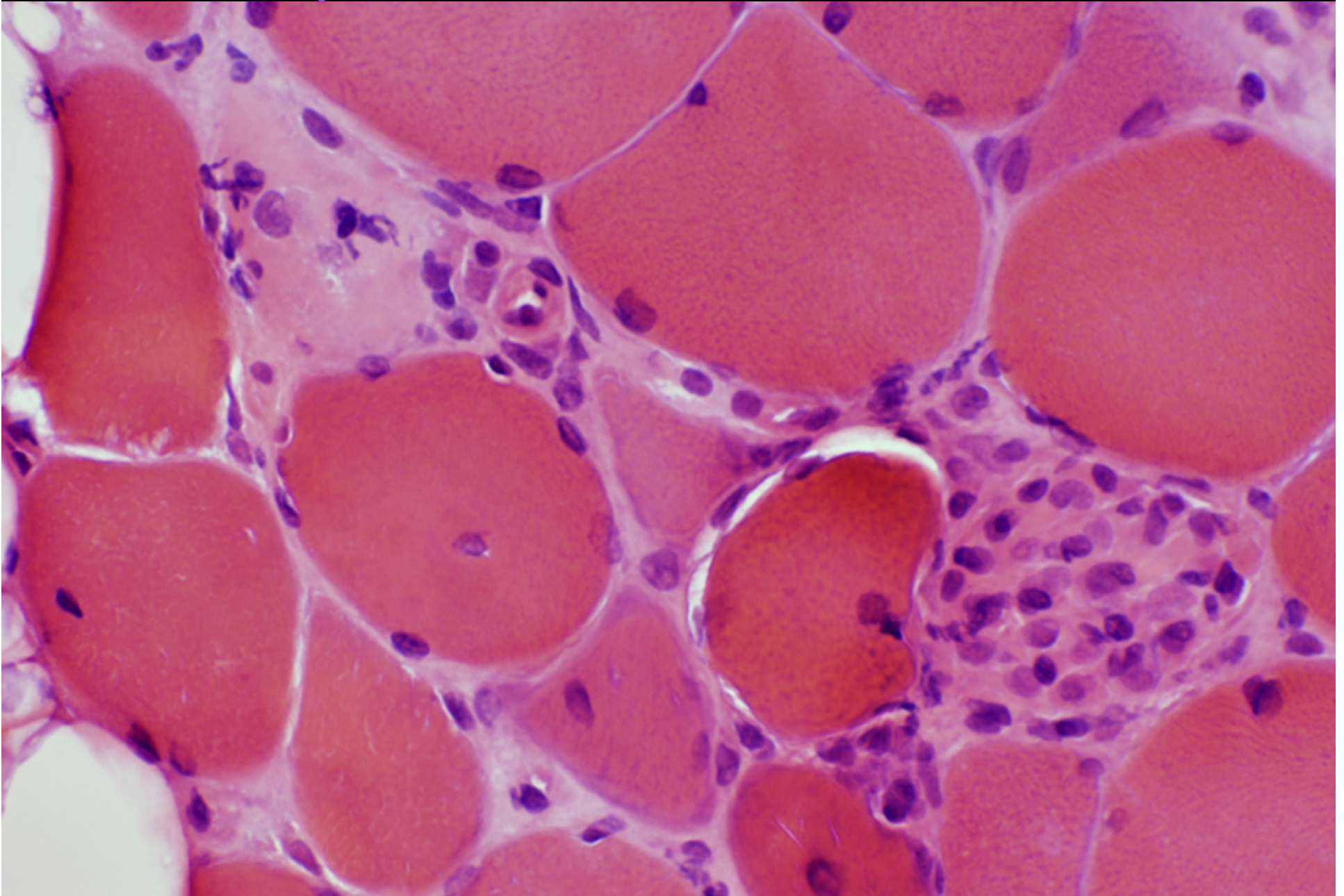


**differential interference contrast
(Nomarski)**

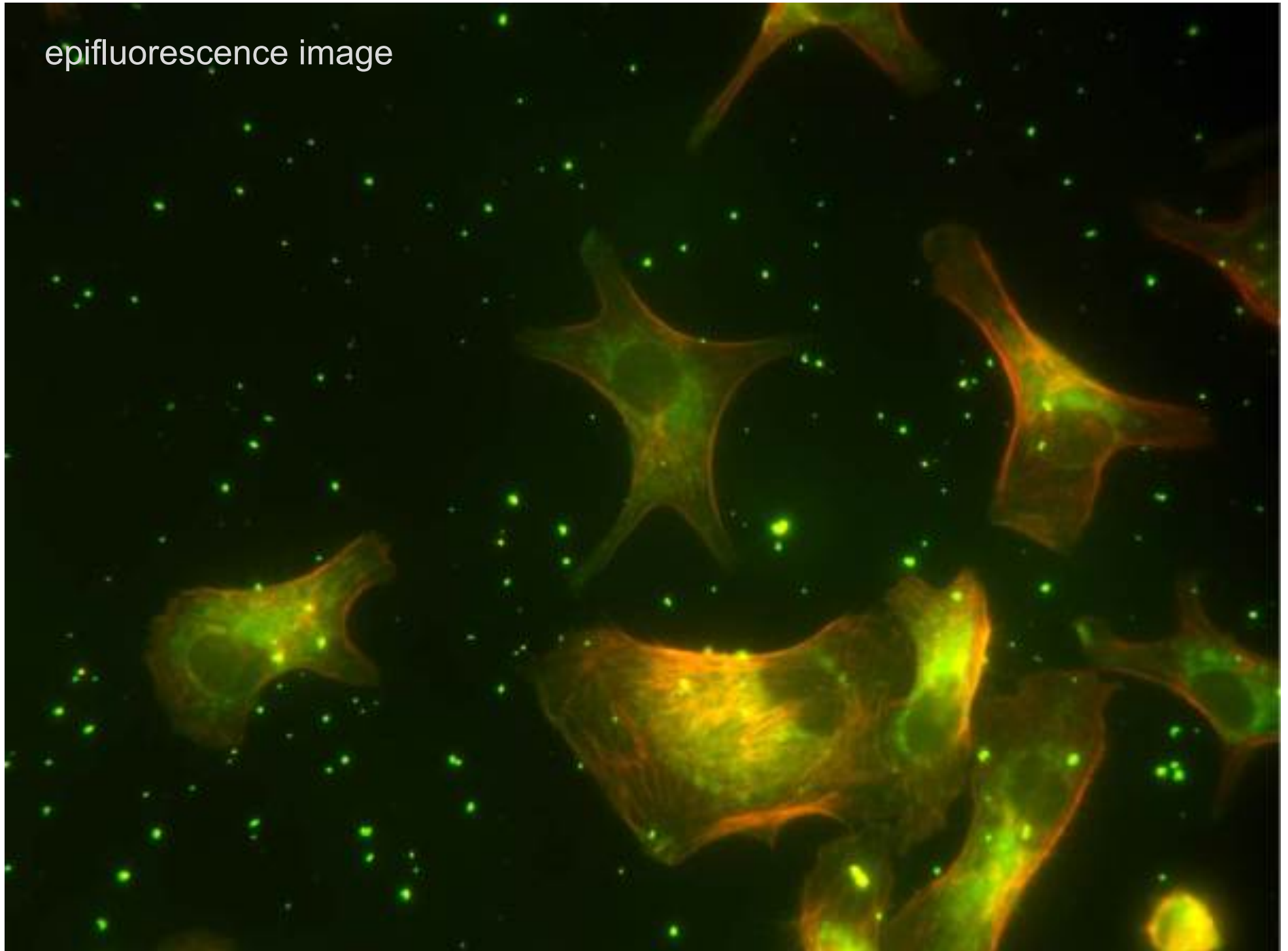
darkfield

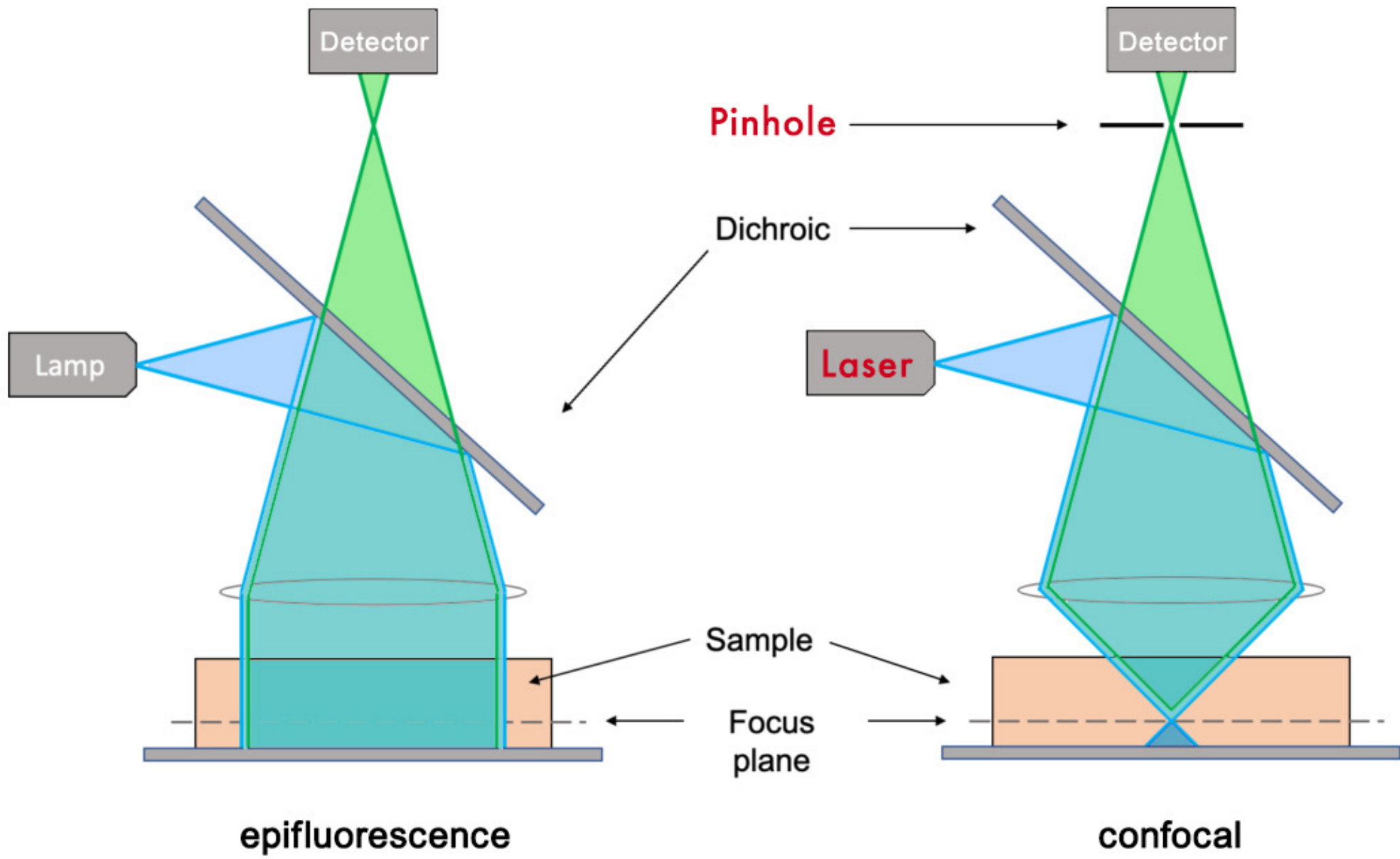
50 μm

hematoxylin & eosin

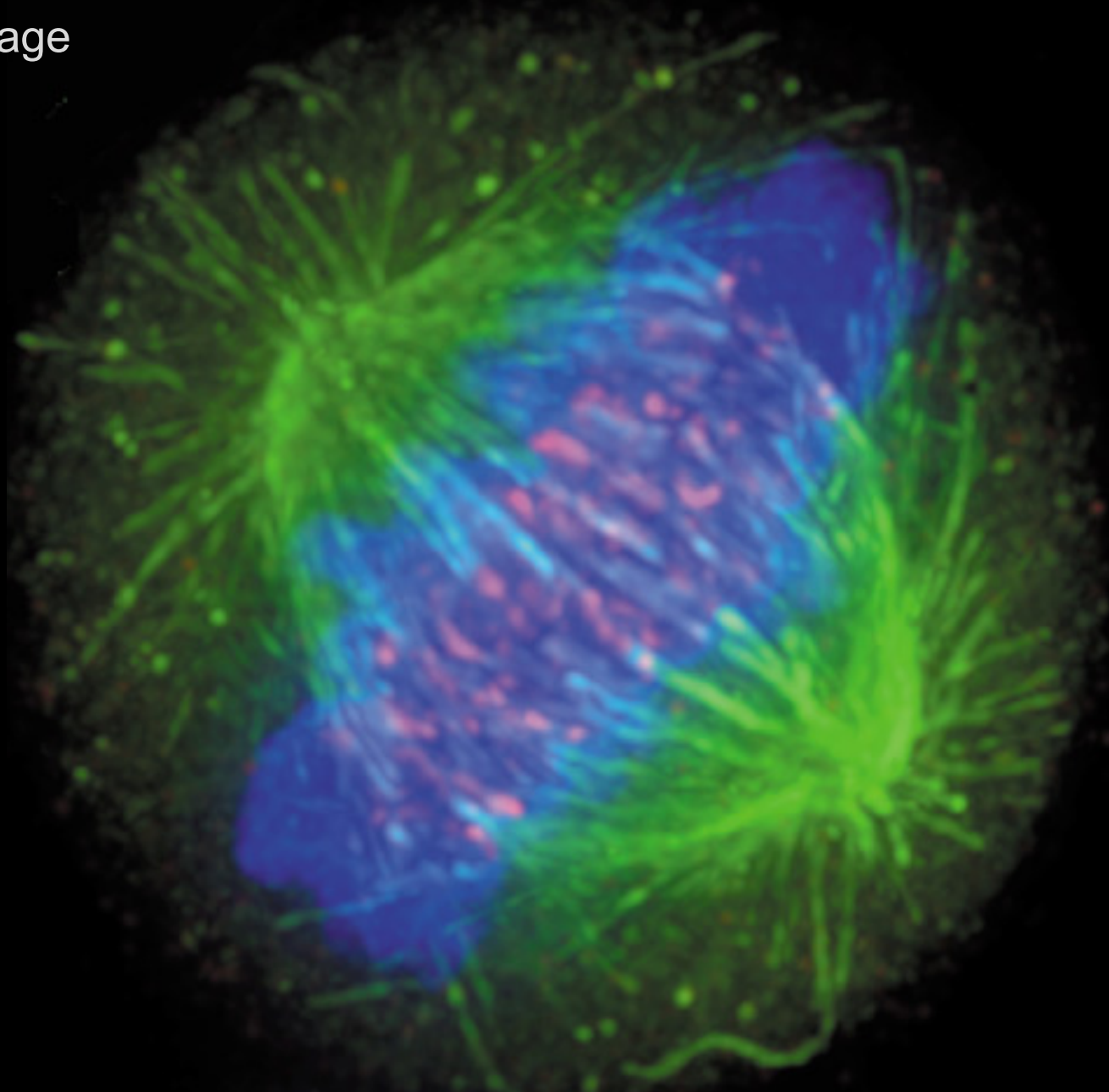


epifluorescence image





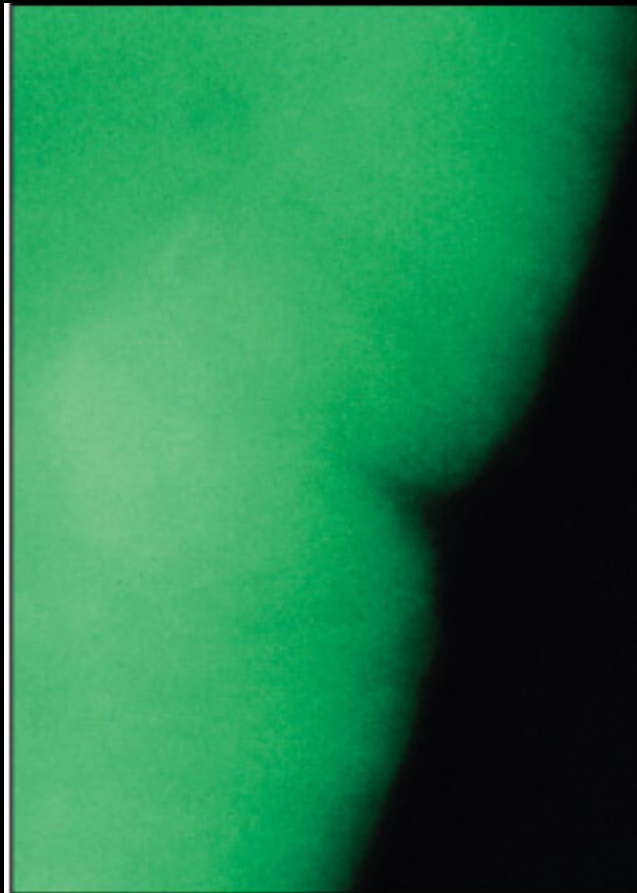
confocal image



10 μm

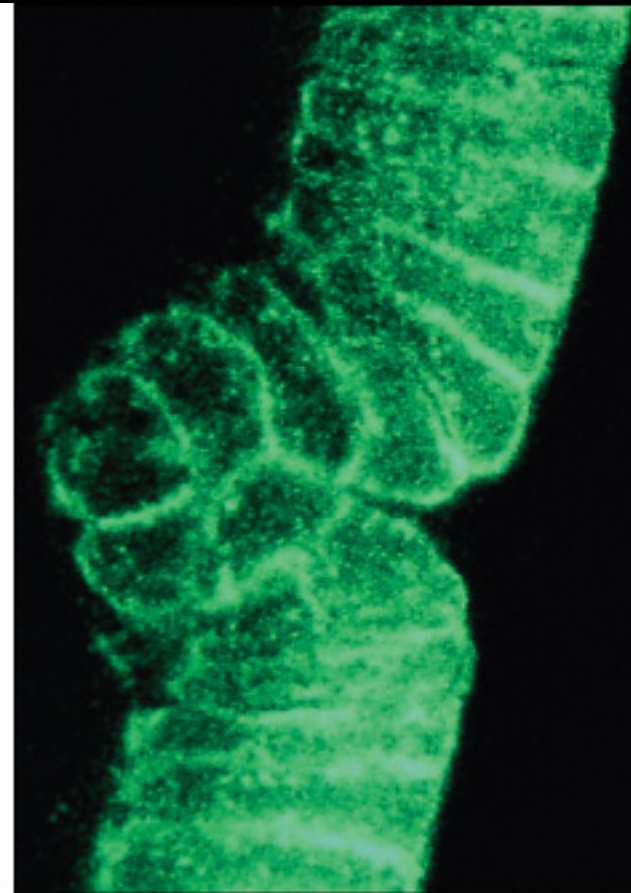
Figure 9-14. Molecular Biology of the Cell, 4th Edition.

epifluorescence image



(A)

confocal image

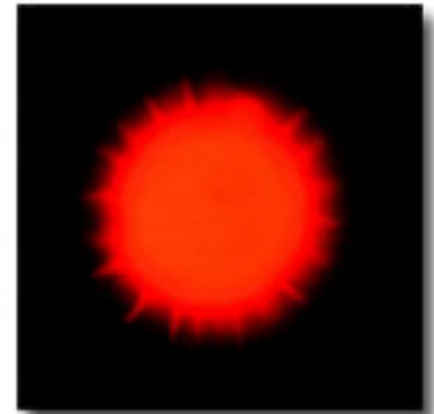
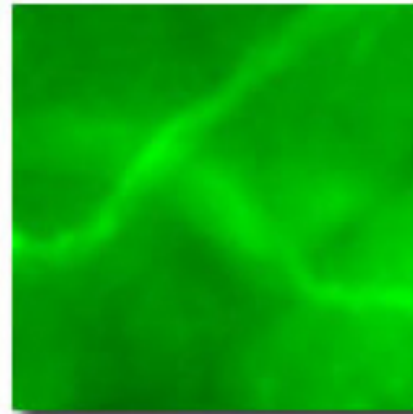
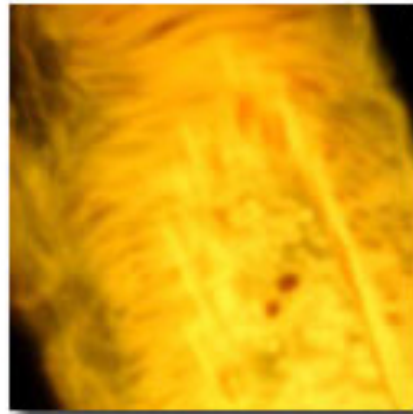


(B)

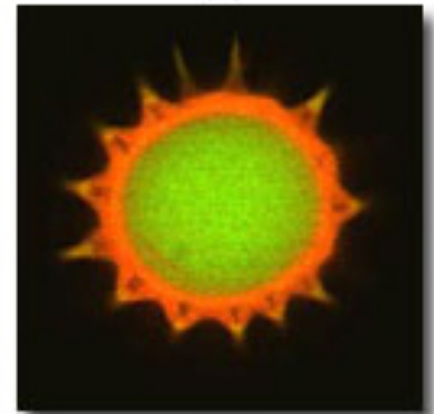
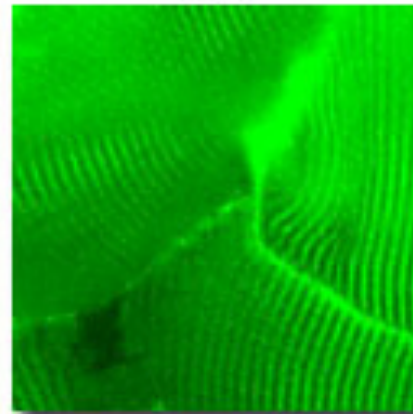
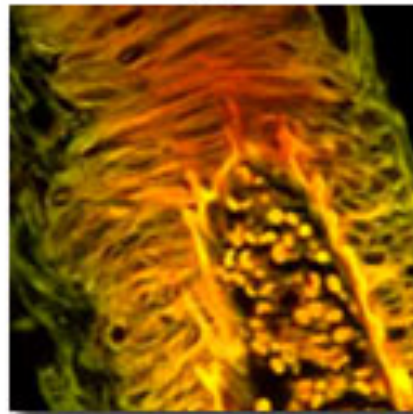
10 μm

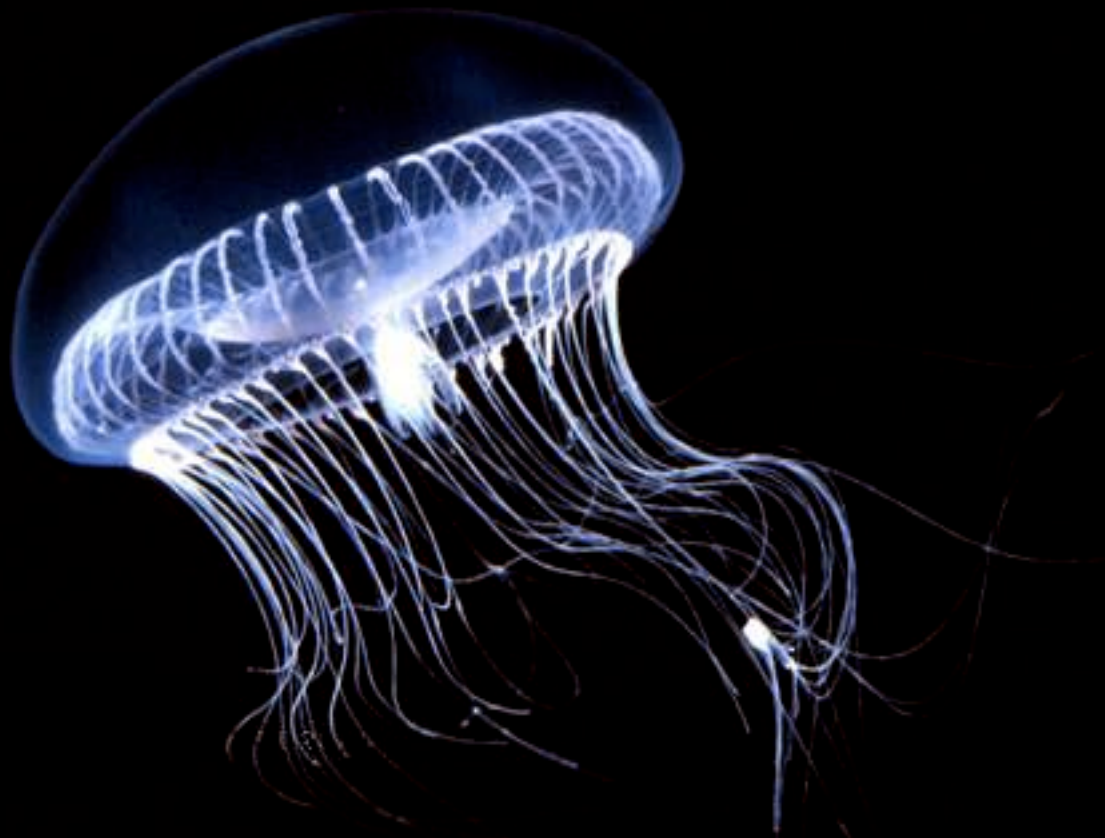
Figure 9–19. Molecular Biology of the Cell, 4th Edition.

epifluorescence:

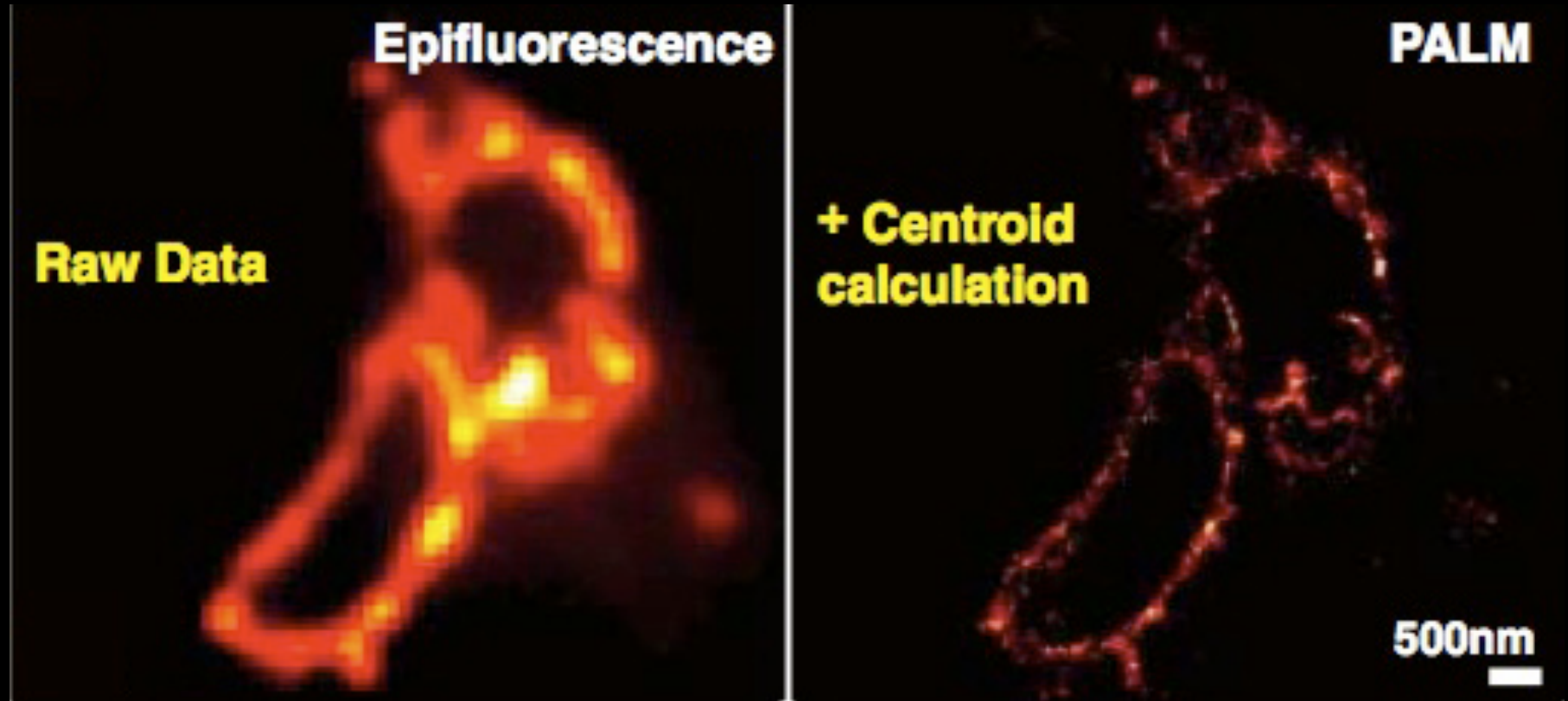


confocal:



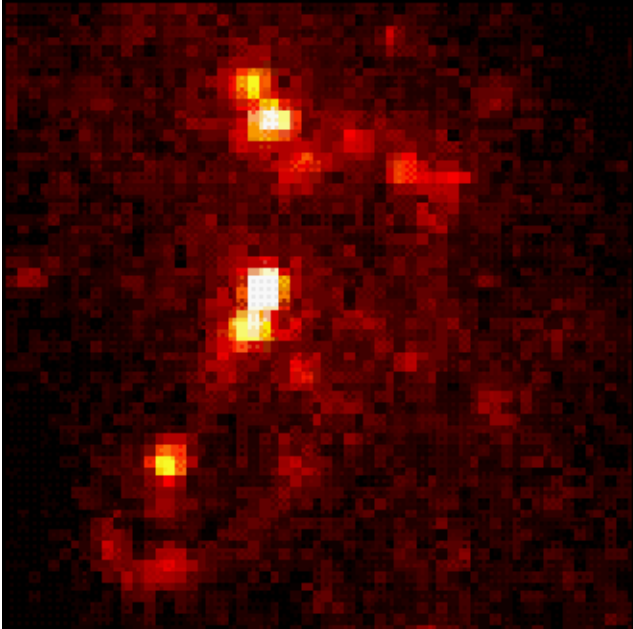


PALM

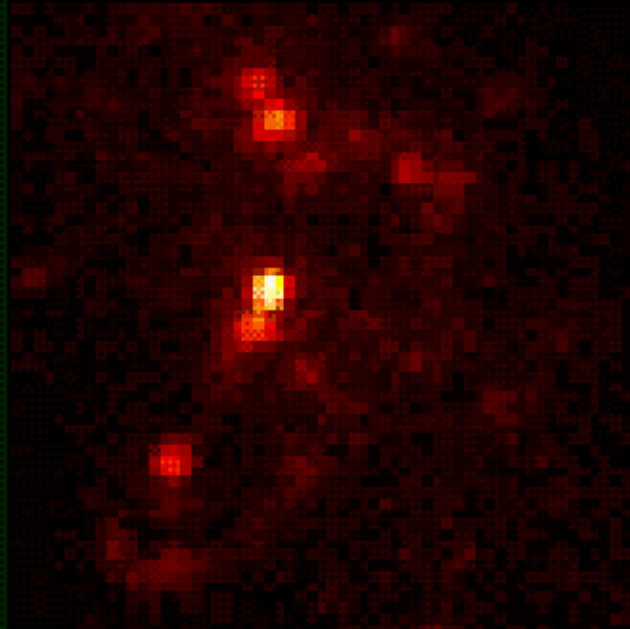


PALM

collecting image over time



building a normal image



calculated center of each spot

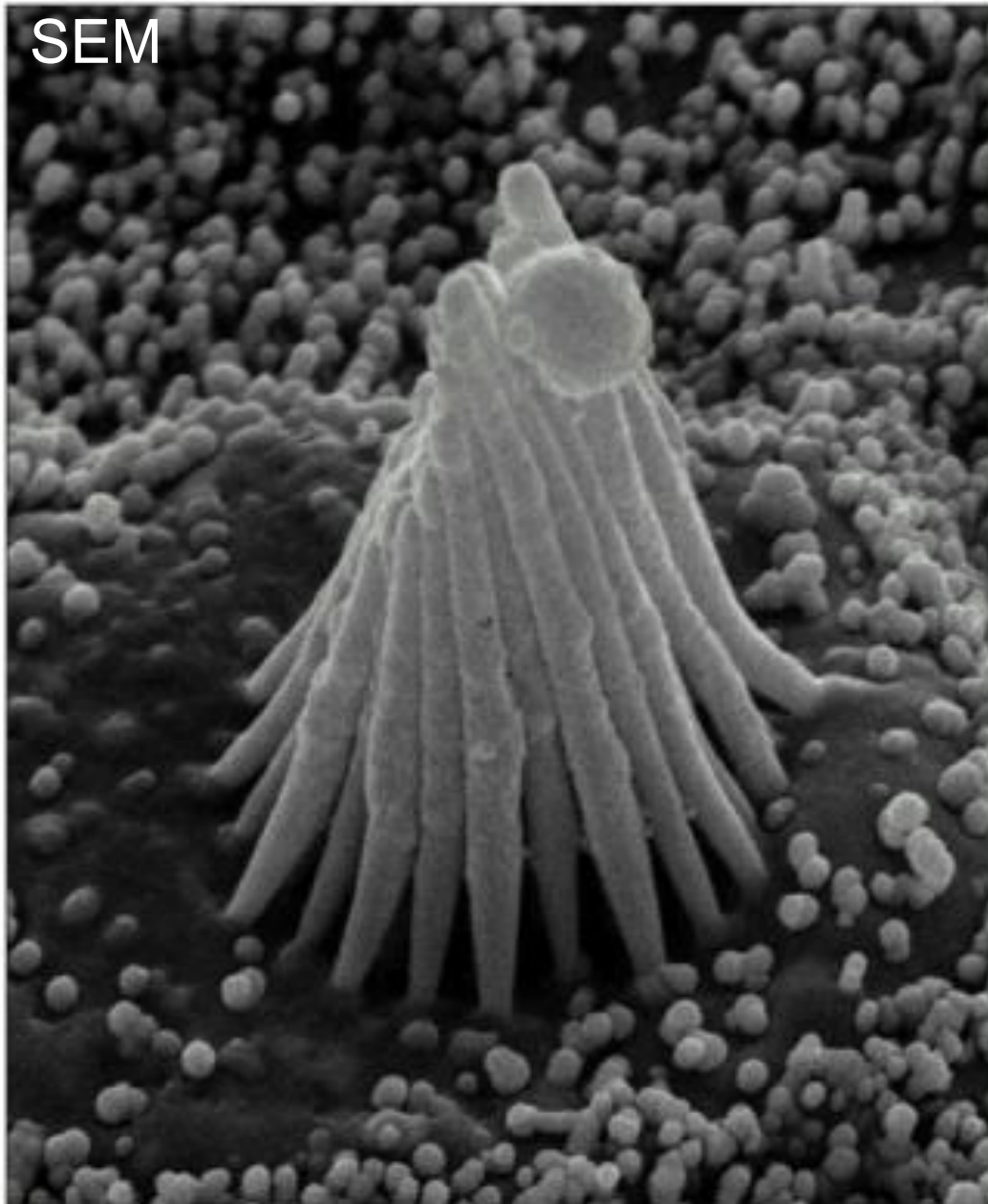


(Harald Hess, Eric Betzig)



original PALM set-up in Harald Hess' living room

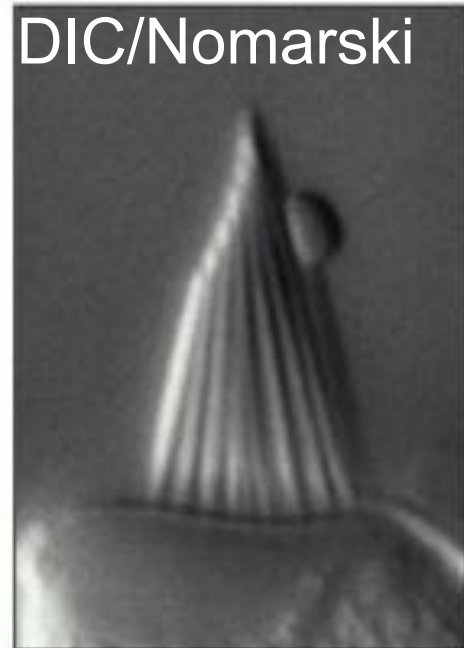
SEM



(A)

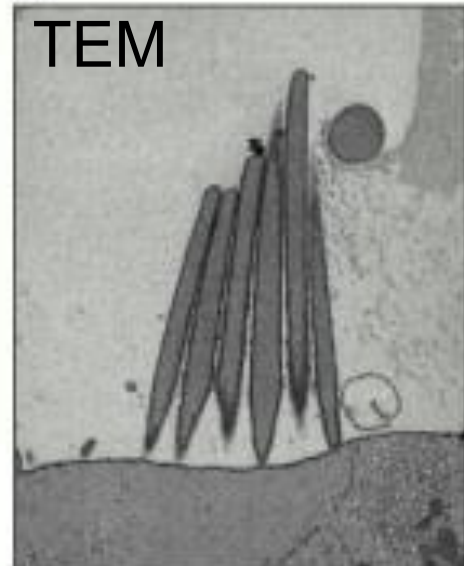
1 μm

DIC/Nomarski



(B)

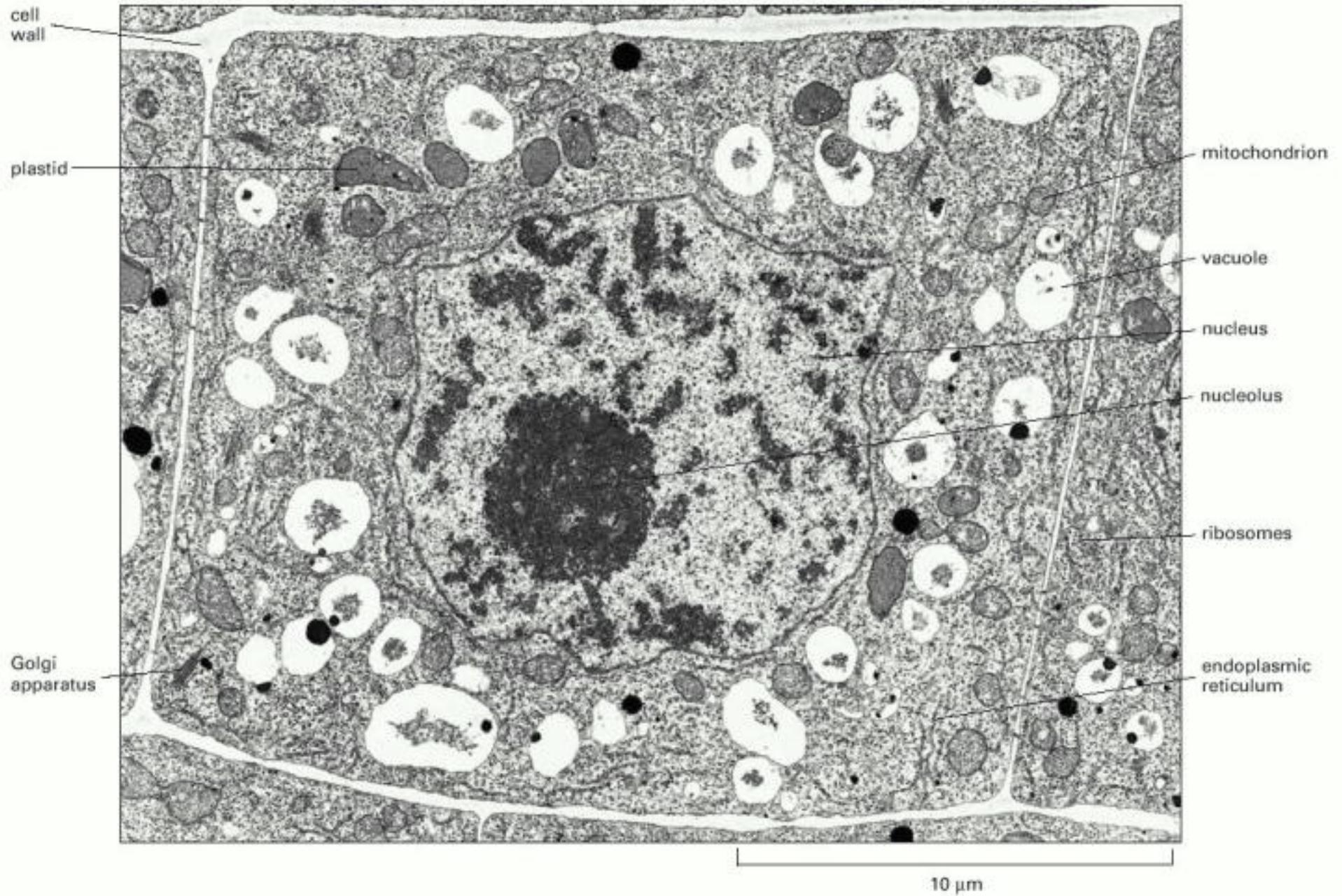
TEM



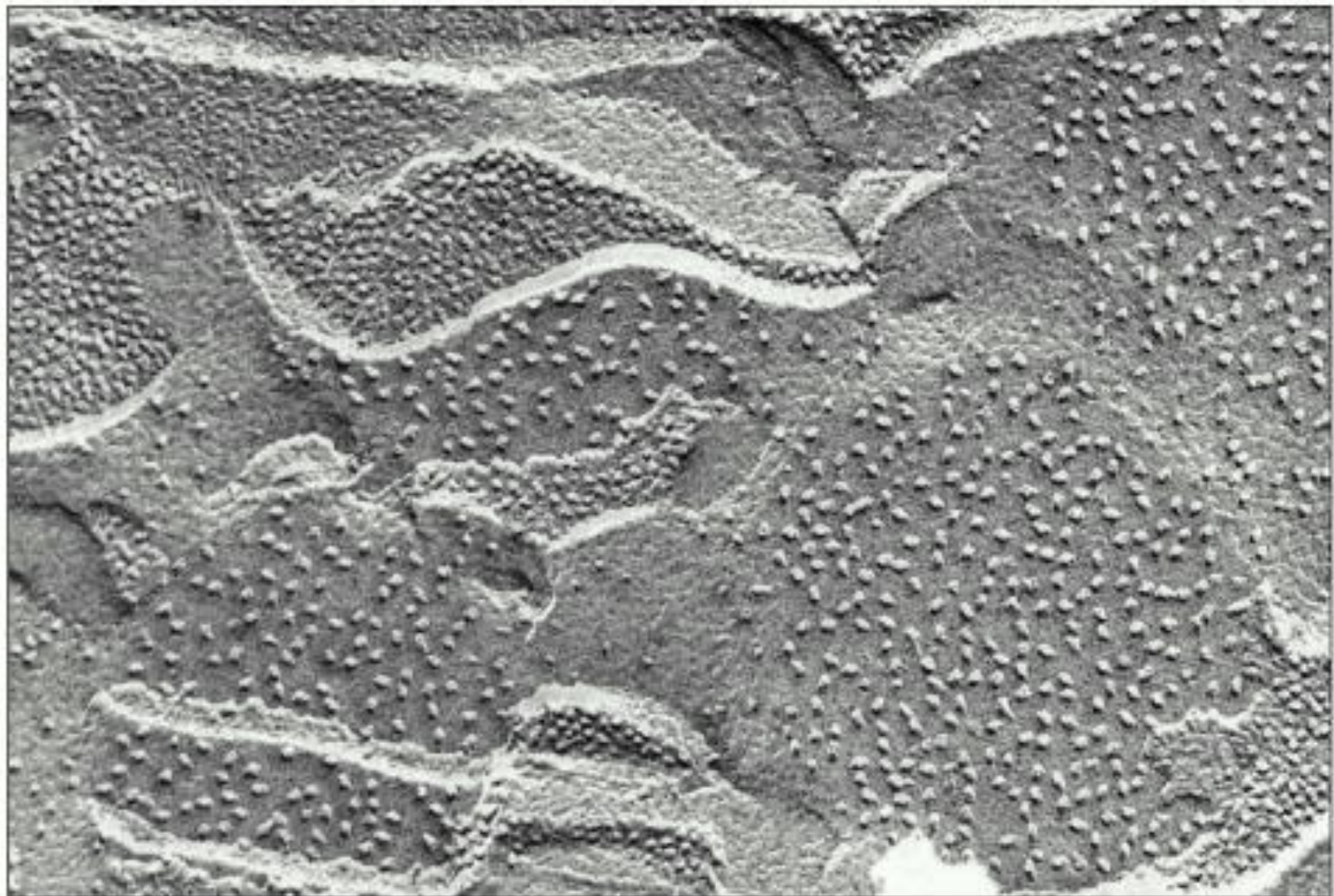
(C)

5 μm

TEM

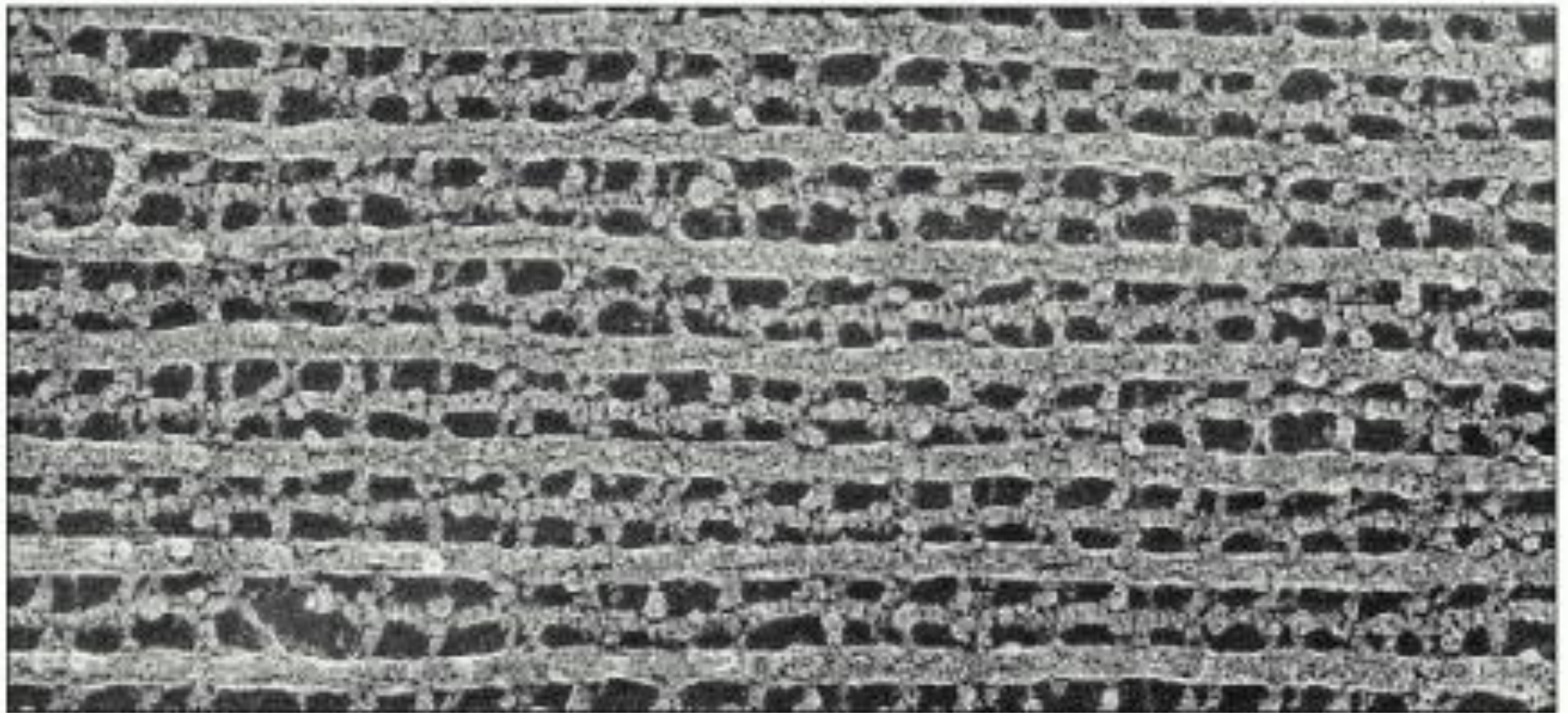


freeze fracture



0.1 μm

freeze etch



0.1 μm

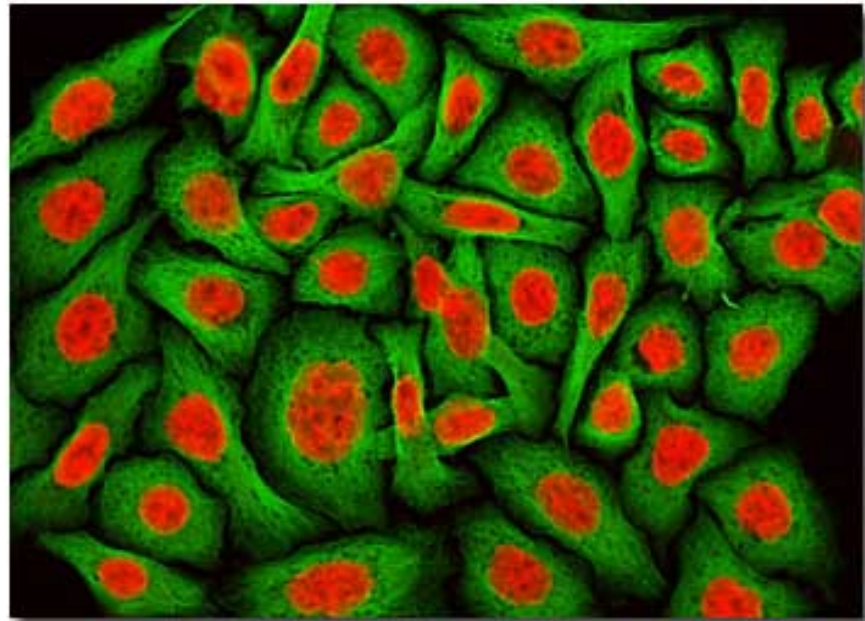
negative stain



100 nm



Henrietta Lacks



HeLa cells



THE
IMMORTAL LIFE
OF
HENRIETTA
LACKS

Doctors took her cells without asking.
Those cells never died.
They launched a medical revolution
and a multimillion-dollar industry.
More than twenty years later, her children found out.
Their lives would never be the same.

REBECCA SKLOOT