

So far:

1. What is a cell?

Replicating, membrane-bound entity, with metabolic functions.

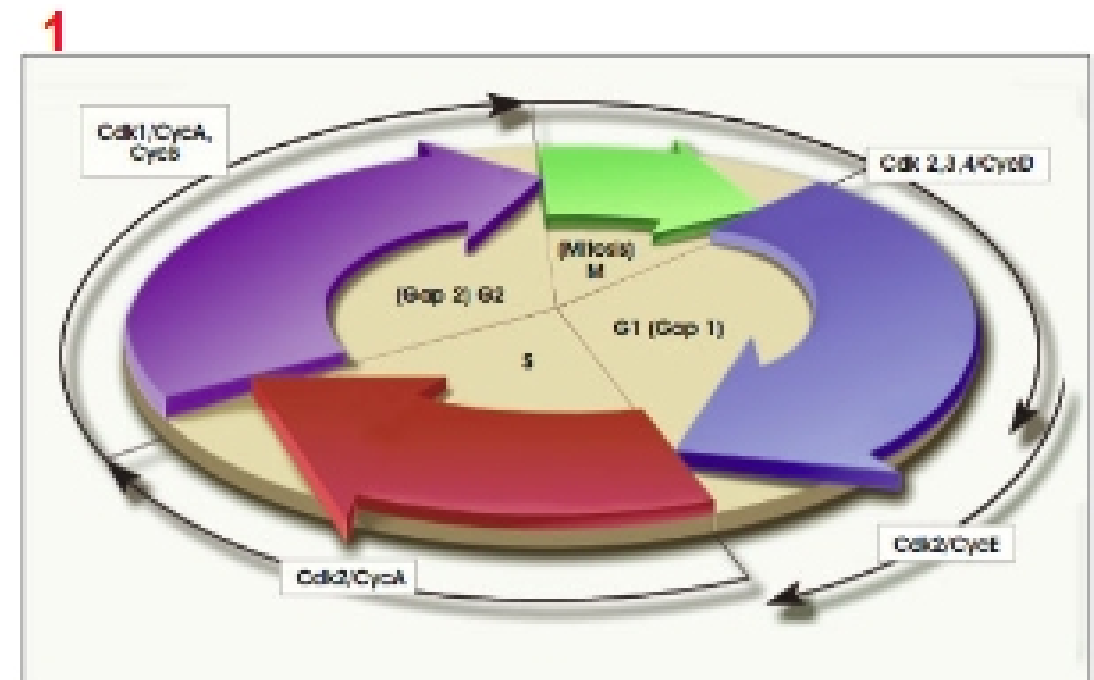
2. What do cells do?

Maintenance metabolism, specific function, division, death, move, change shape.....

7.013  
3.23.07

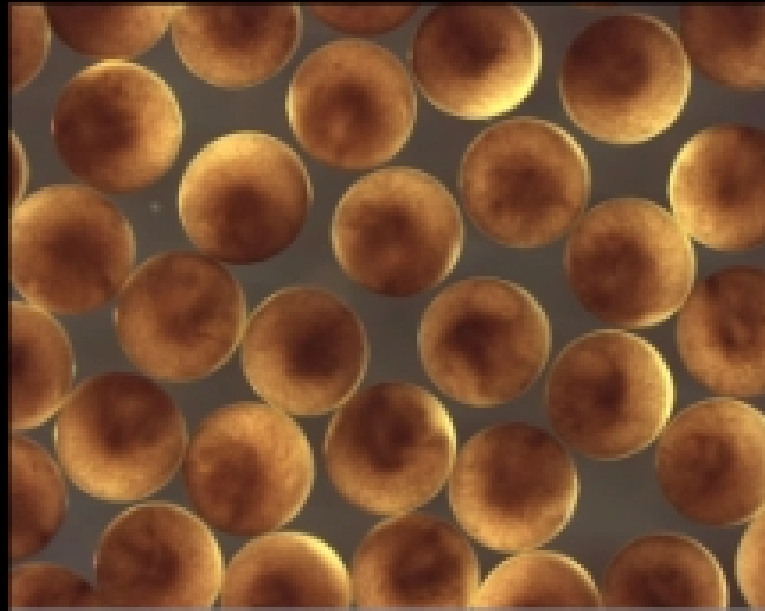
Cell Biology III  
"cellular decisions"

1. Cell division cycle



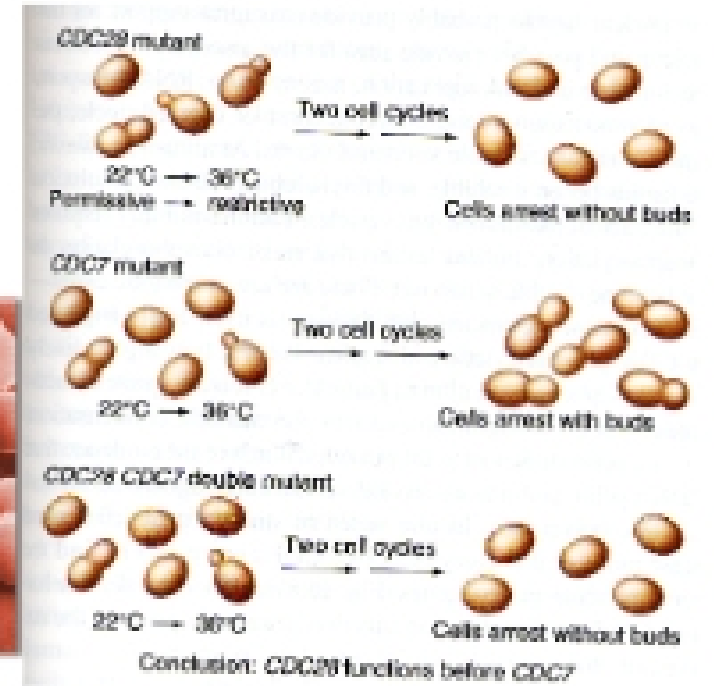
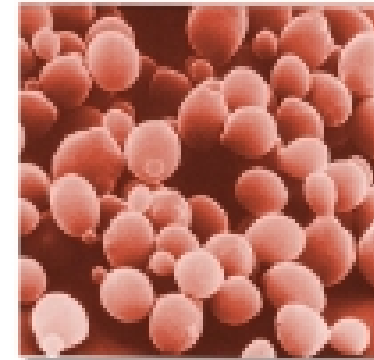
2

See slide #3, lecture 1. This is the same movie!!



Frog cell division:  
0 - 10 hours after fertilization/s

3



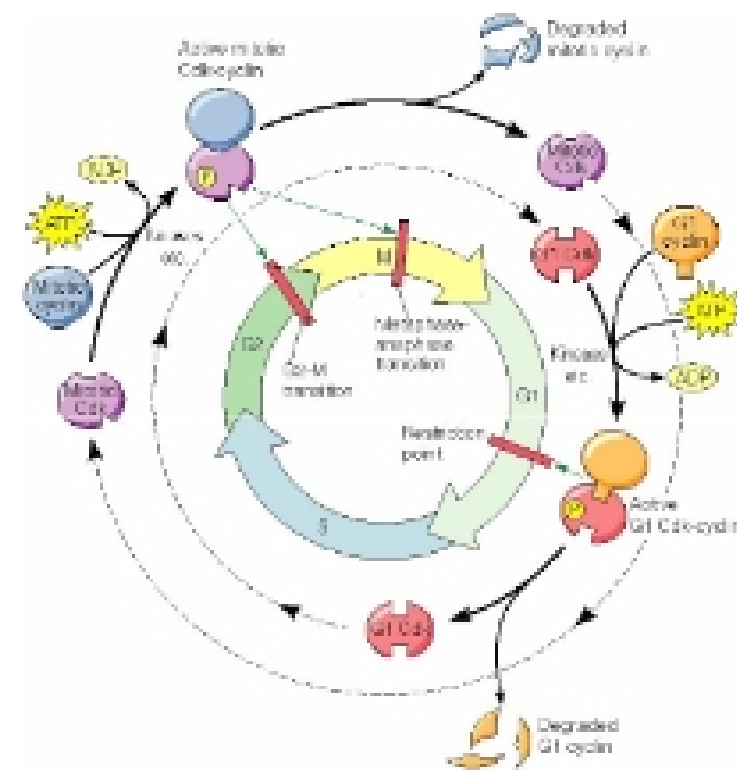
Budding yeast:  
used to isolate cell cycle mutants  
Lee Hartwell, Paul Nurse, Tim Hunt: Nobel Prize 2001

4

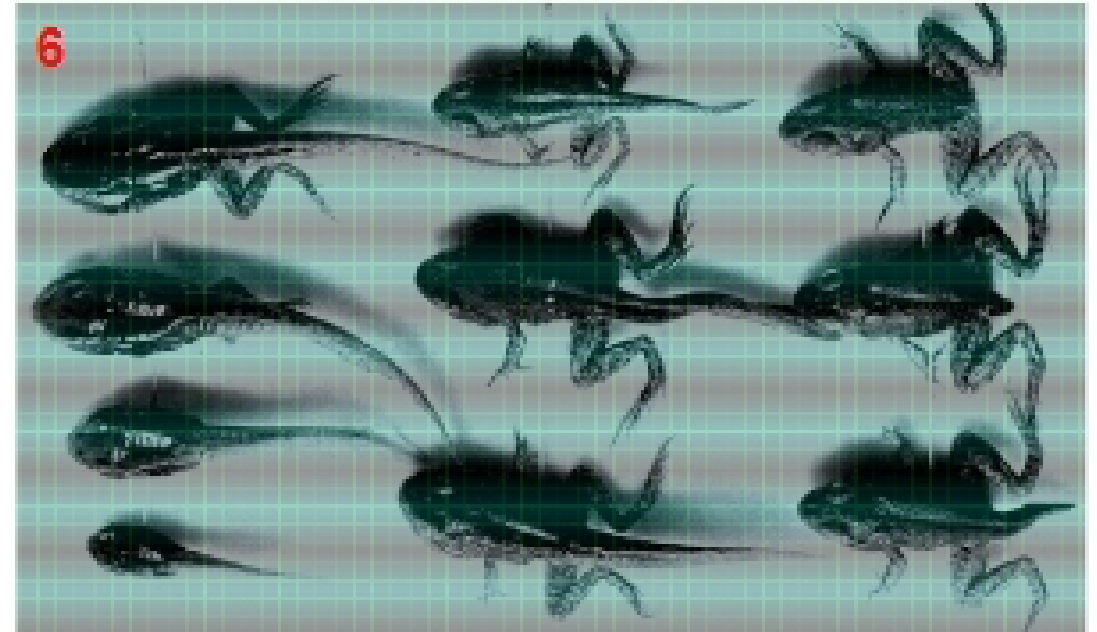


Sea urchin

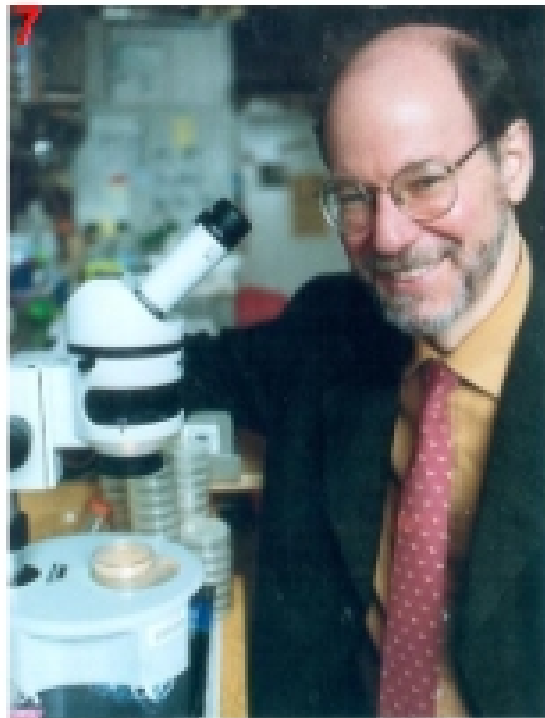
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## 2. Cell death (apoptosis)



Metamorphosis in frogs



Prof. Robert Horvitz  
MIT Biology Dept  
Nobel Prize 2002  
Apoptosis  
("programmed cell death")

