



Creative Bioarray

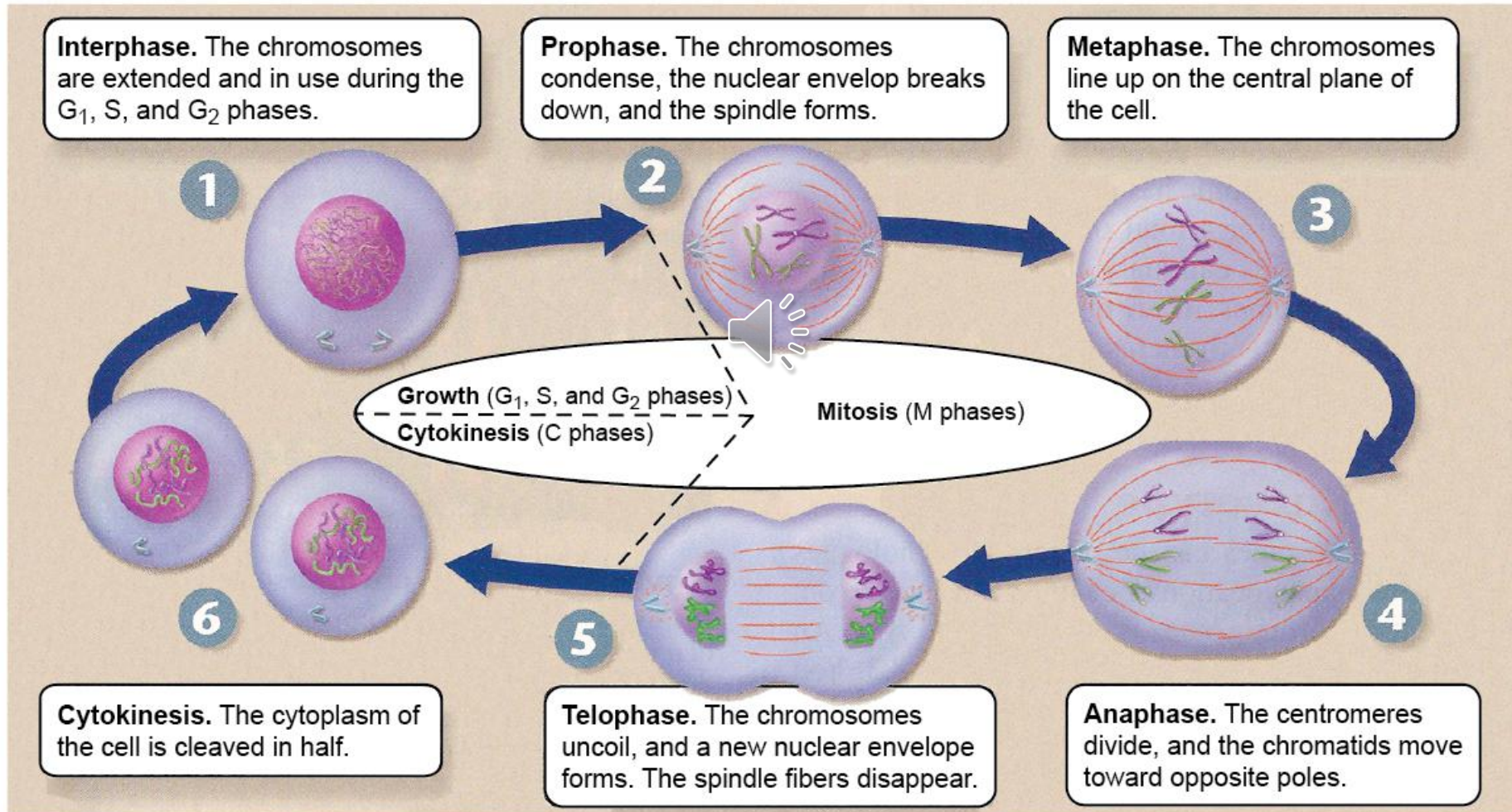
A Division of Creative Dynamics Inc

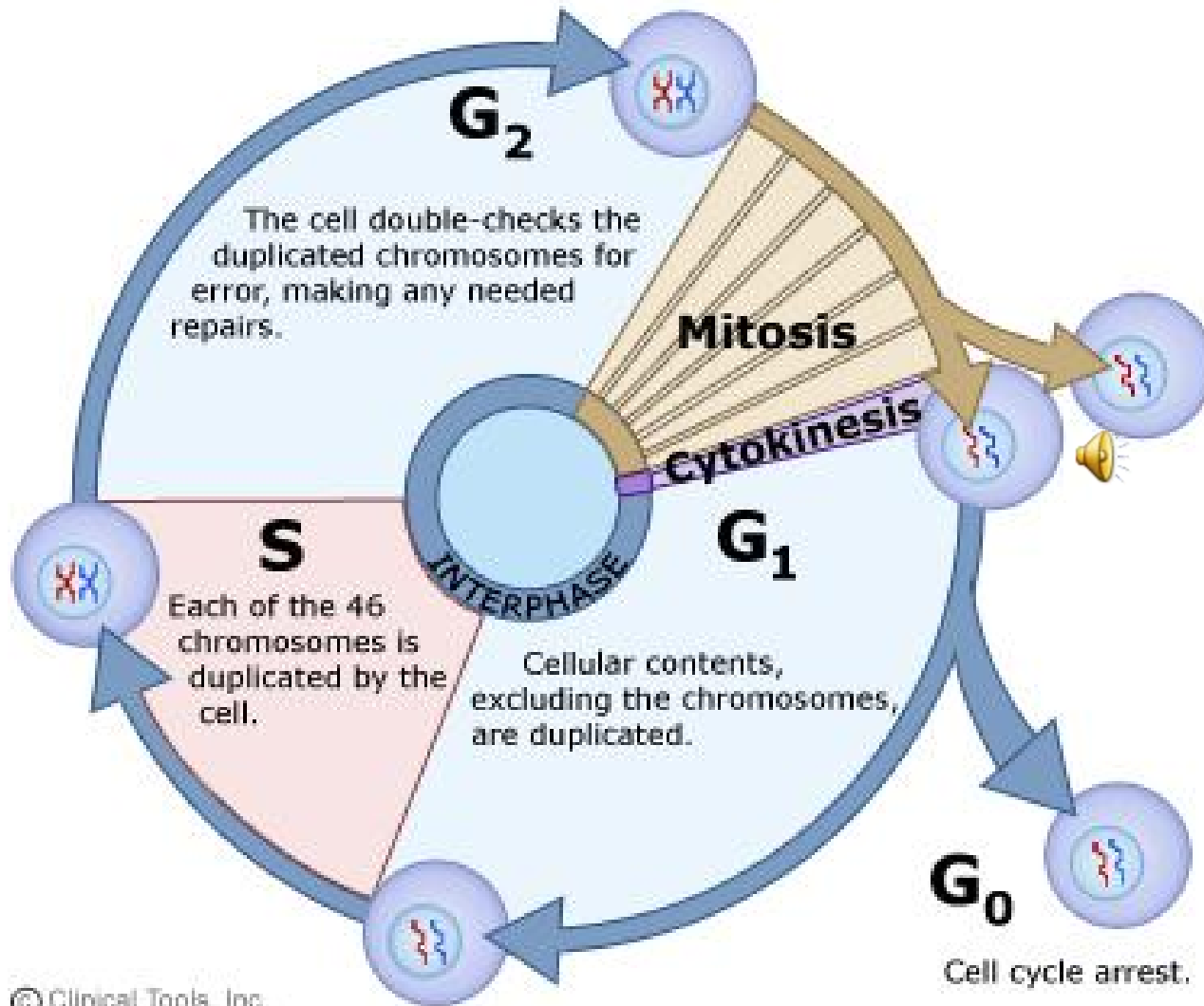


**CELL CYCLE AND
CELL CYCLE ASSAY**



What is cell cycle?





The Cell Cycle:

Interphase

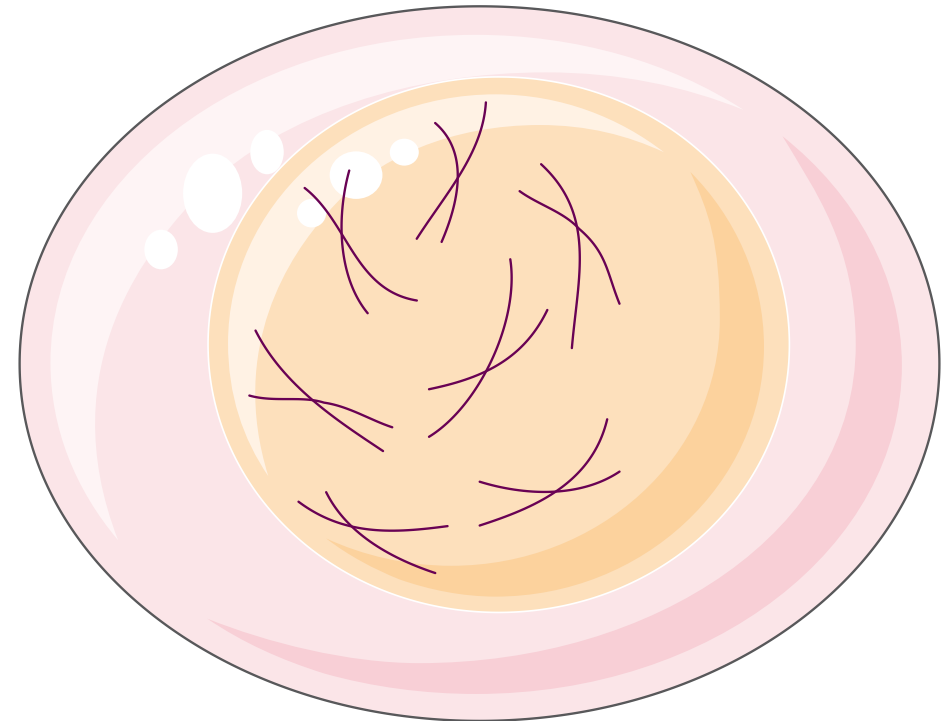


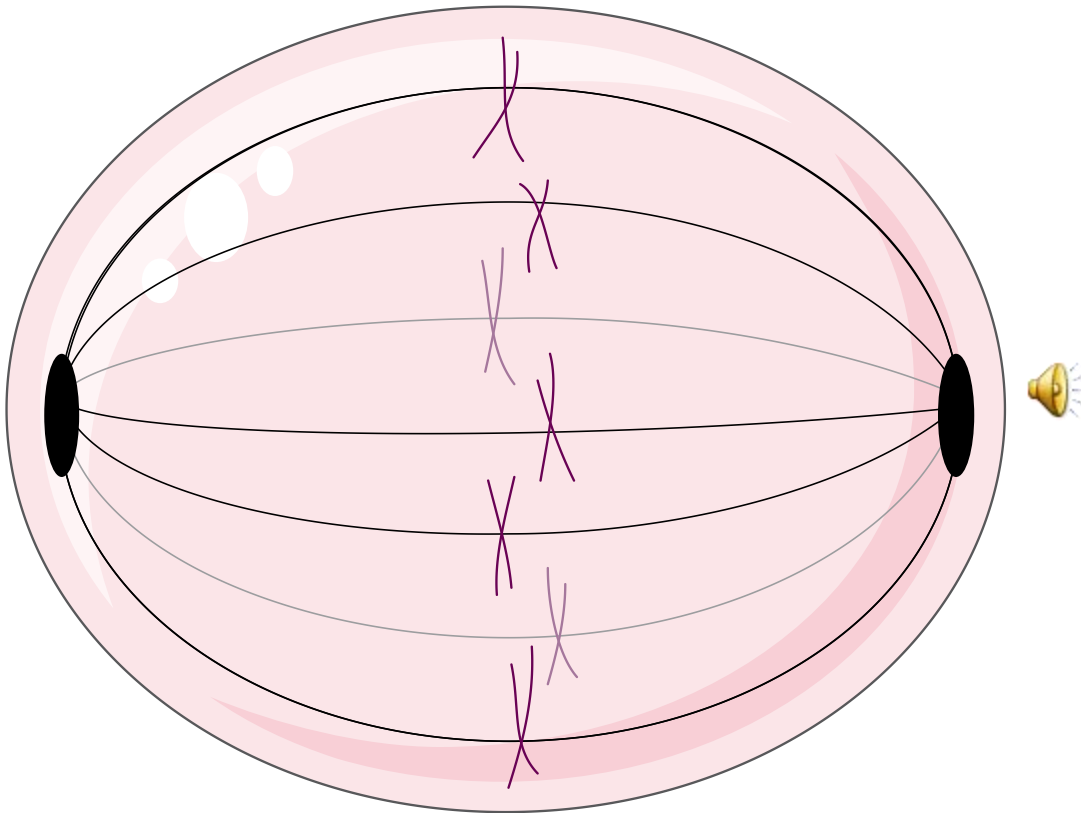
The Cell Cycle:

Mitosis Prophase



The nuclear envelope begins to break down.
DNA further the condenses into chromosomes.





The Cell Cycle:

Mitosis Metaphase

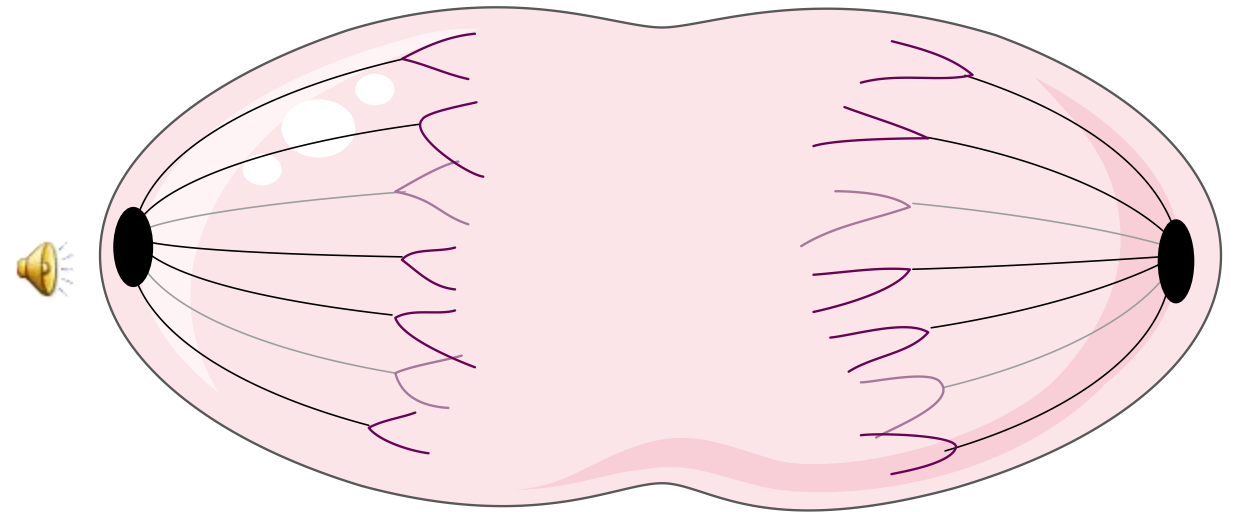
Chromosomes (composed of sister chromatids) move towards the center of the cell.

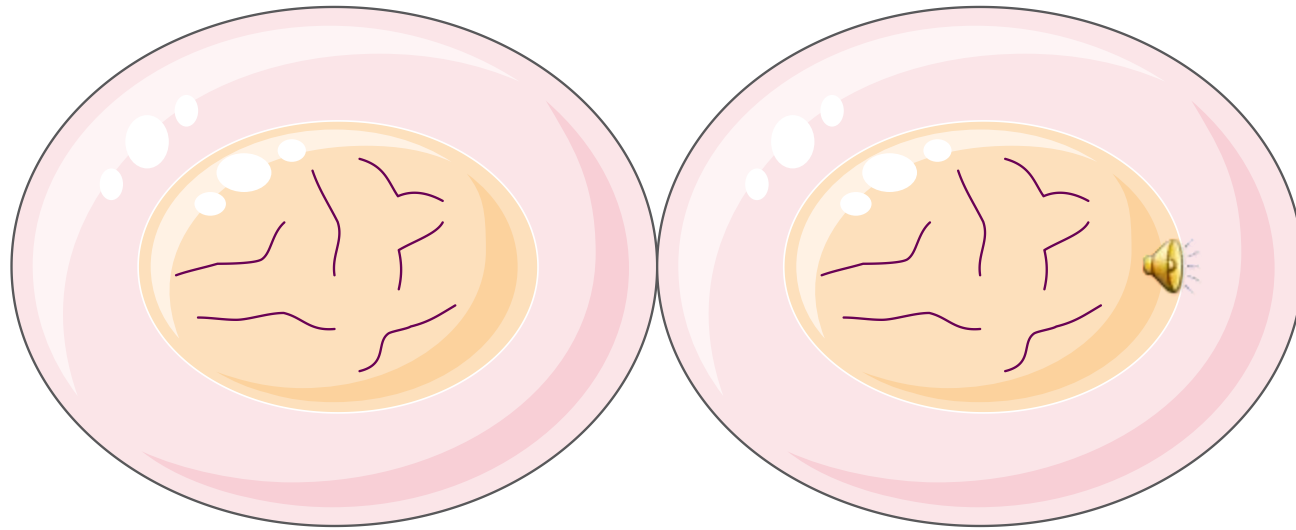


The Cell Cycle:

Mitosis Anaphase

The chromosomes rapidly move away from the middle of the cell as the microtubules shorten, pulling the sister chromatids apart and toward opposite poles.





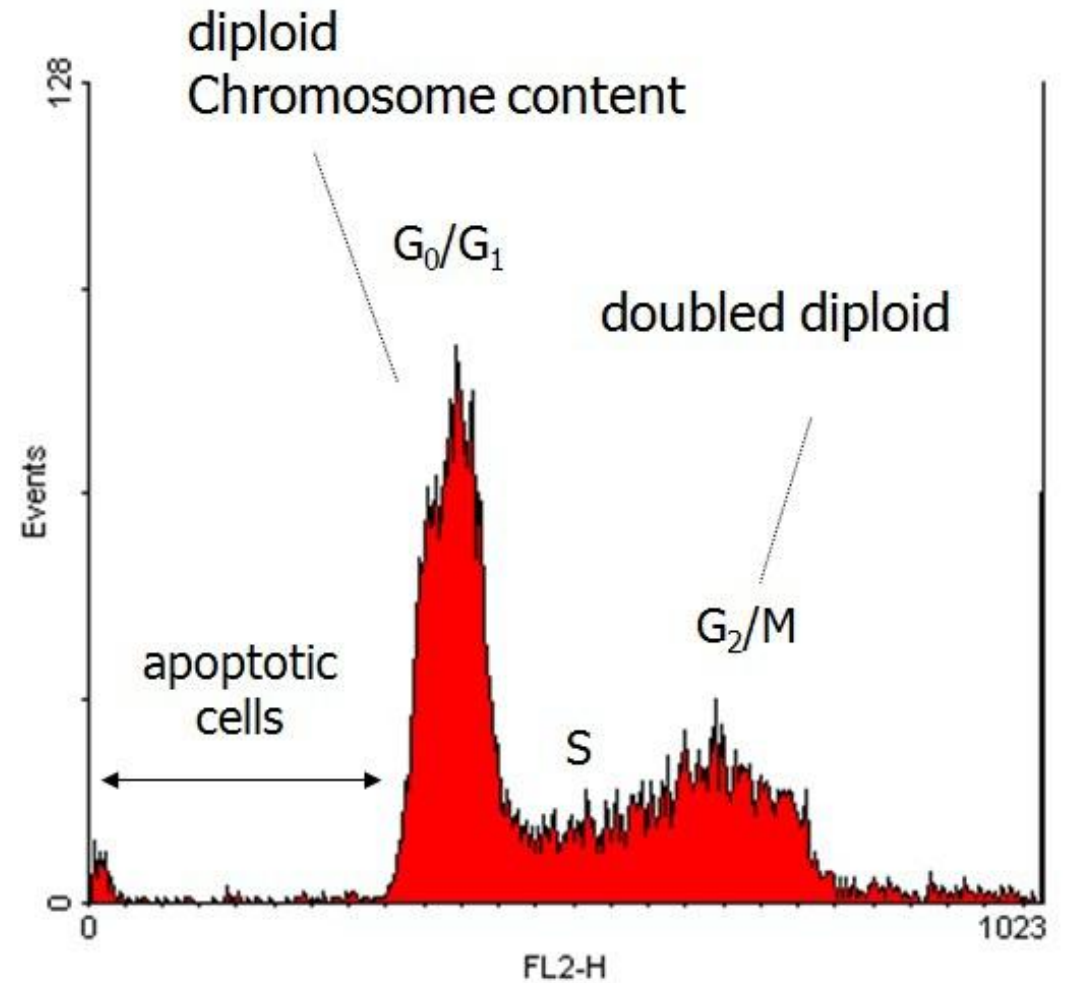
The Cell Cycle:

Mitosis Telophase

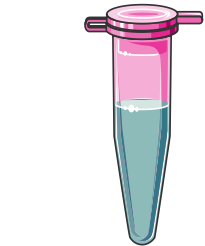
The nuclear membrane begins to reappear around each new set of chromosomes, the chromosomes begin to diffuse again, and the spindle apparatus breaks down.



Cell Cycle Assay Principle



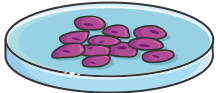
Cell Cycle Assay Workflow



Cell Harvest



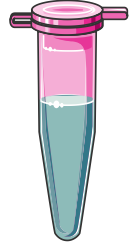
Wash With
PBS



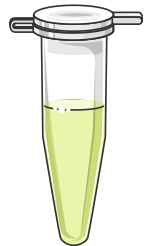
Cell Fixation



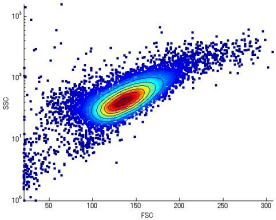
Wash With
PBS



Treat With RNase



Treat With PI/BrdU



Flow Cytometry Analysis



Applications

- By combining genetic manipulations with cell cycle analysis, scientists study roles of specific proteins in cell cycle progression.
- Using cell cycle analysis, scientists can compare progression kinetics.
- Can be used in in vivo cell cycle analysis, BrdU can be injected in rodents and the target cell population can be isolated for cell cycle analysis.

Advantages

- Different type of cell samples we can handle: Fixed, permeabilized, and for live/dead discrimination in intact cells, Live proliferating cells, Treated tissues.



- Fast turnaround time
- Suitable analysis protocol based on different cases
- Reliable results



Thank you!



Creative Bioarray
A Division Of Creative Dynamics Inc

Tel: 631-626-9181

Email: info@creative-bioarray.com