

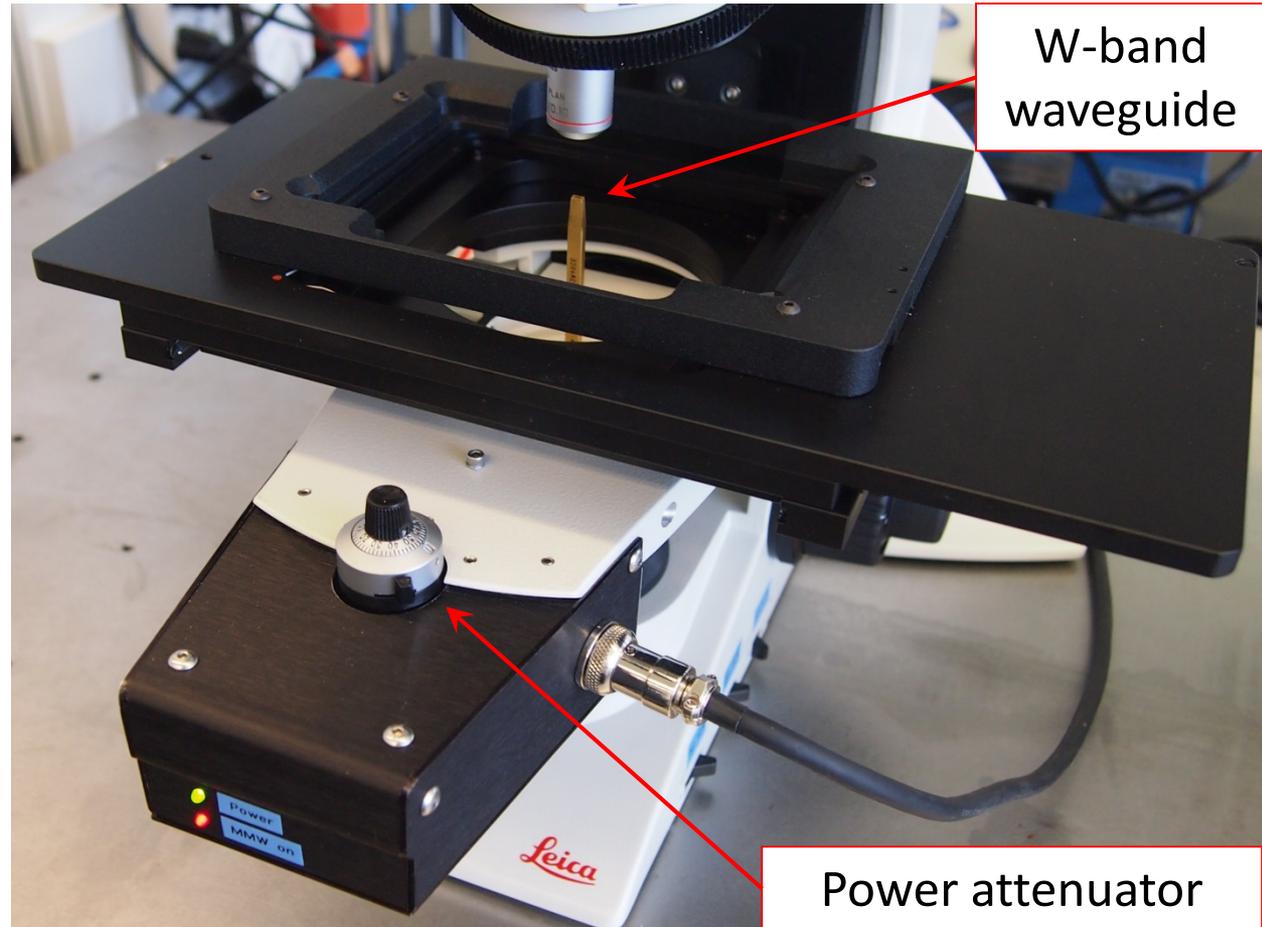
# CellEraser™

- Compact microscope attachment for selective elimination of unwanted cells within adherent cell cultures
- Targets the unwanted cells with millimeter waves (MMW) in order to kill them by overheating
- Rapidly (1-2 s) heats a cell culture area of  $\sim 500 \mu\text{m}$  in diameter using a low-power W-band (94 GHz) MMW source

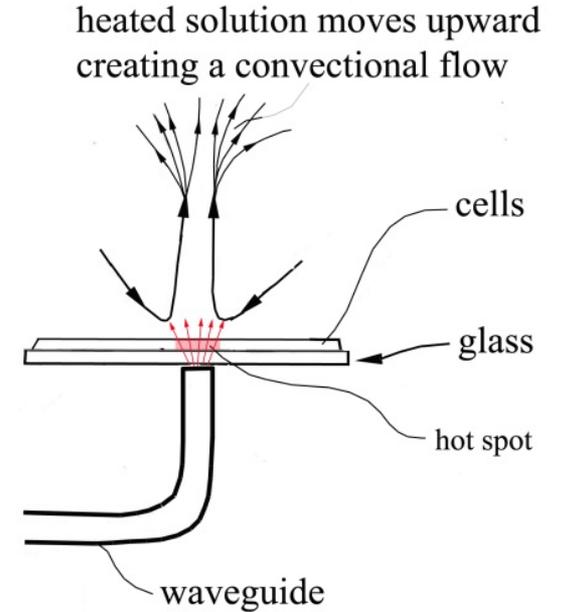
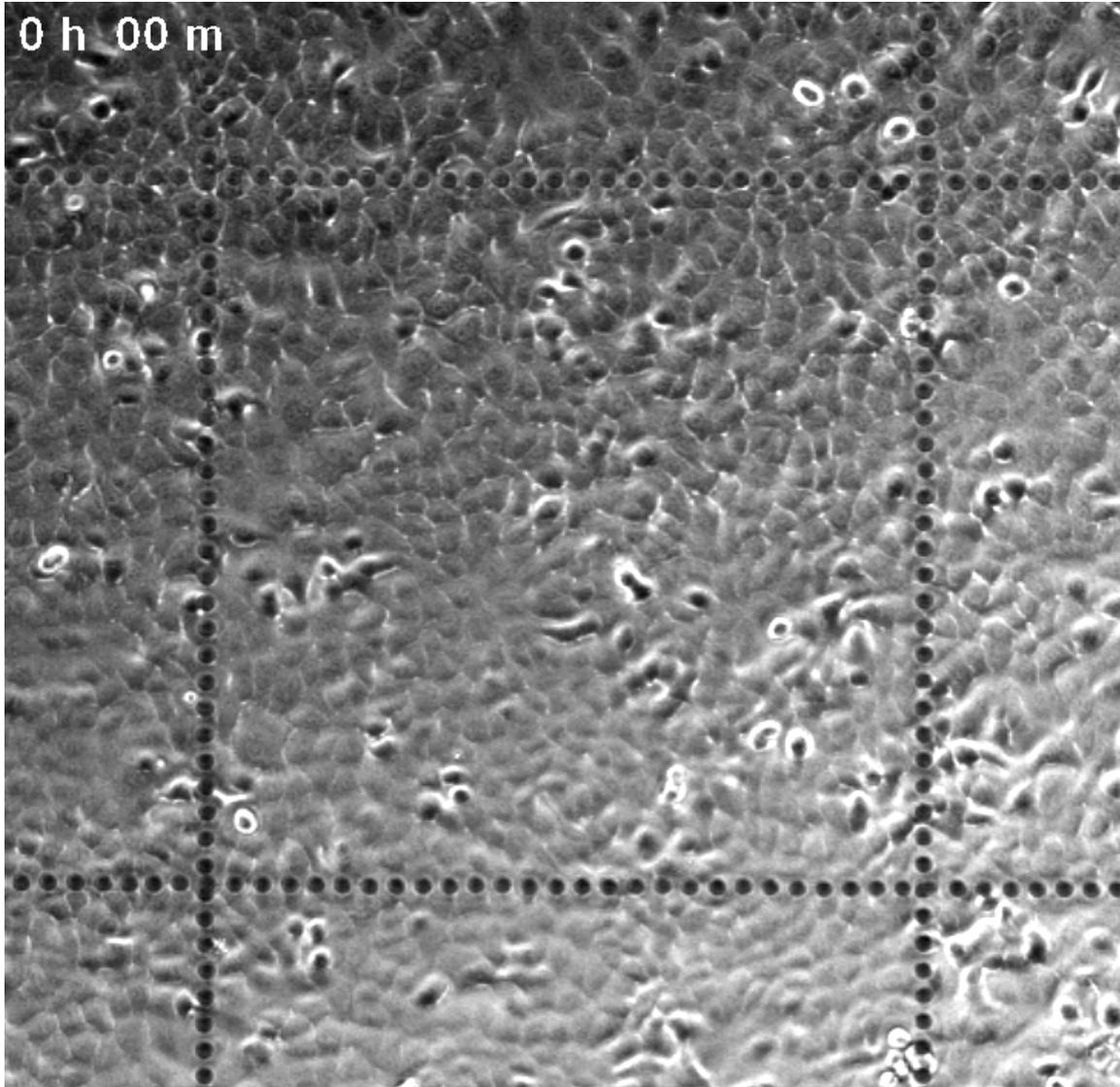


Upright microscope version  
of the instrument on a  
Leica DM2700

Inverted microscope version is also available

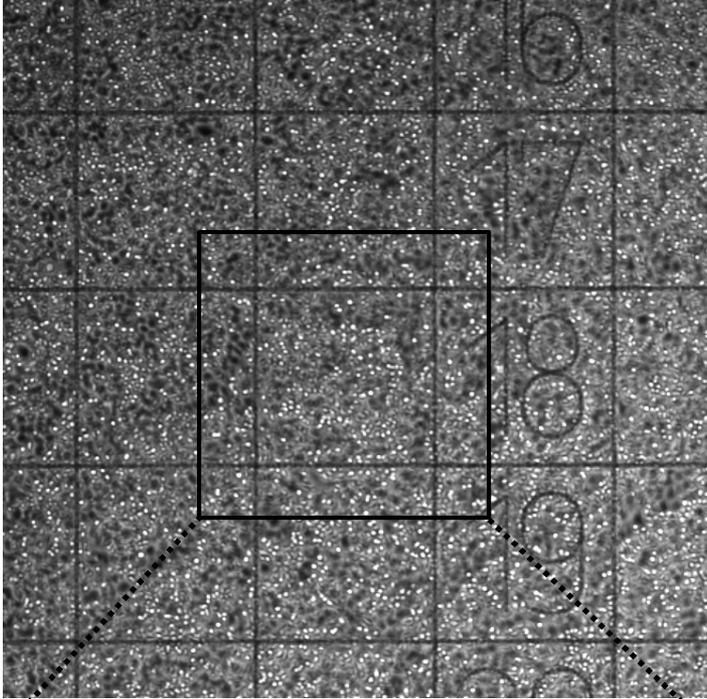


Local MMW heating to 50°C for 2 sec of a confluent A549 cell culture  
with washout 2 hours later  
10x objective, ibidi 8-well slide with 500 μm grid

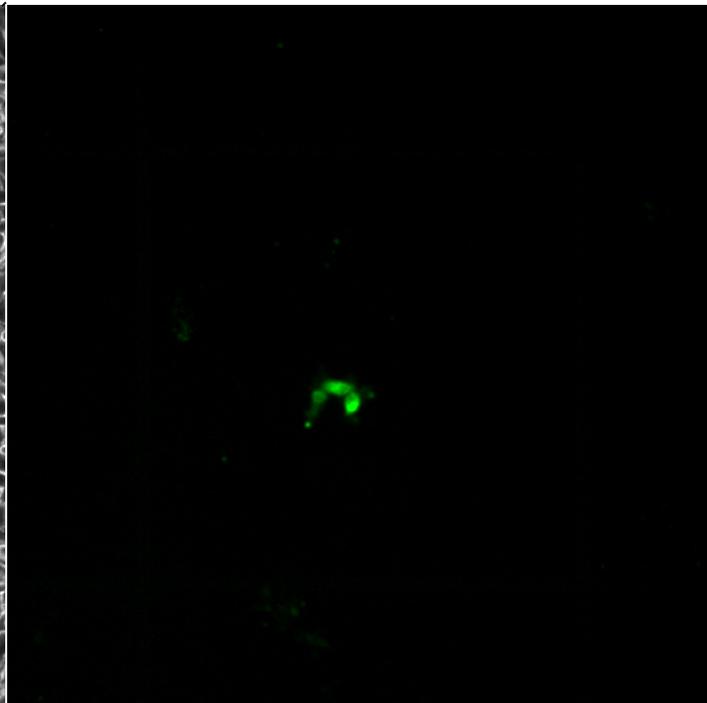
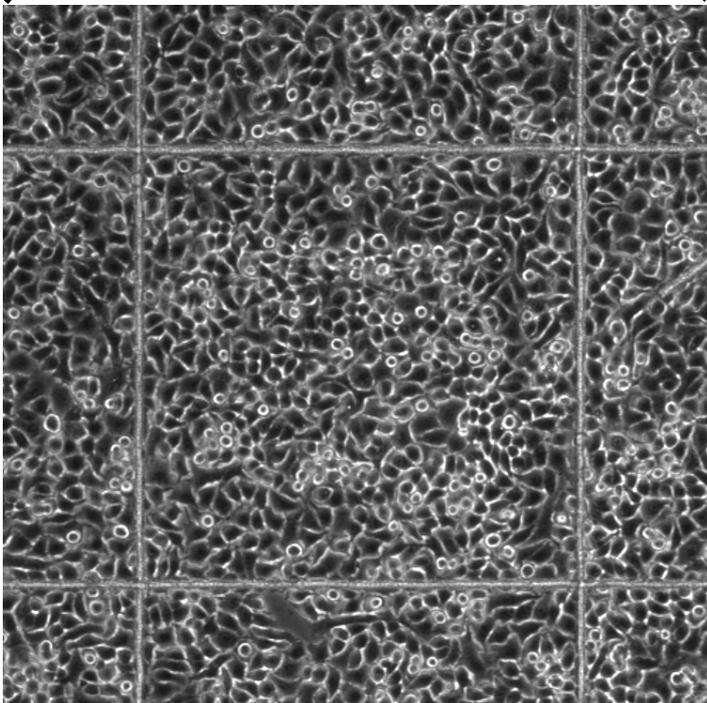


Isolation of GFP-expressing cells (A549):  
before MMW heating

4x

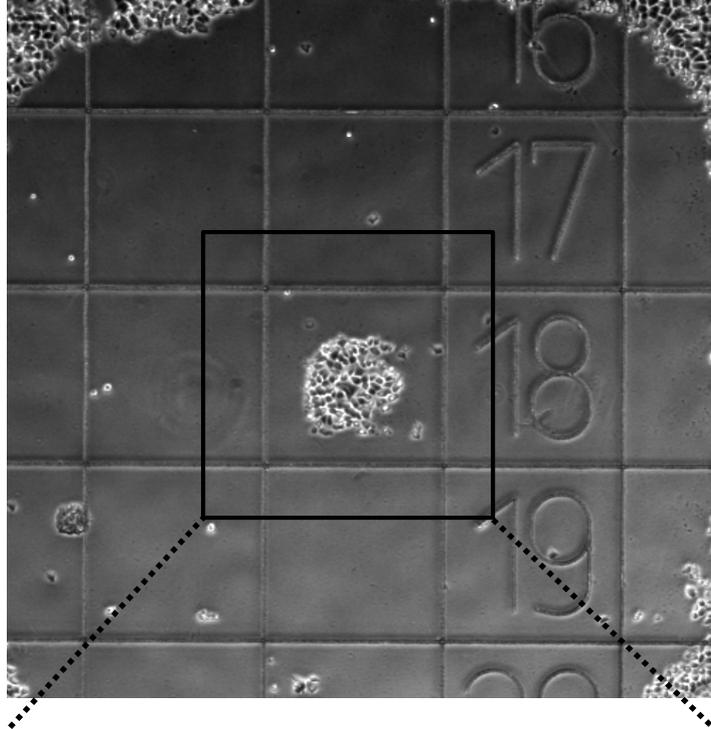


10x

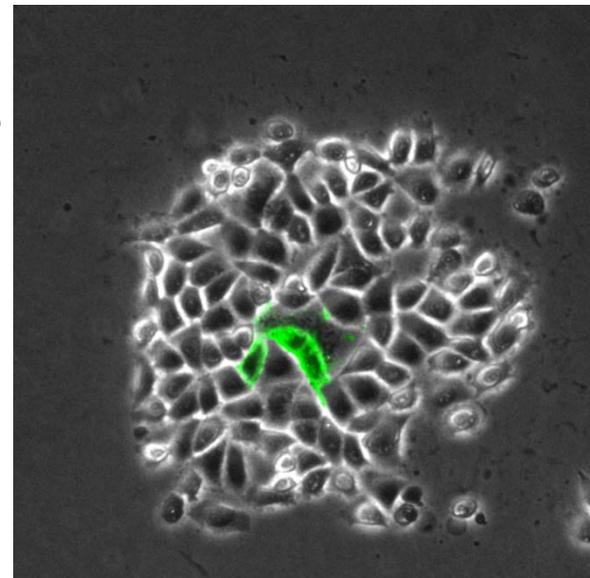


Isolation of GFP-expressing cells (A549):  
after MMW heating and washout 1 hour later

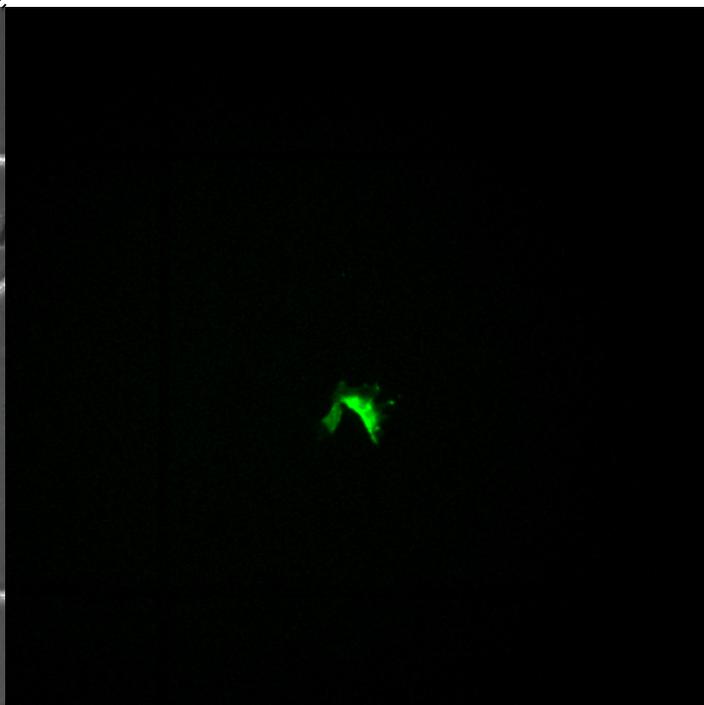
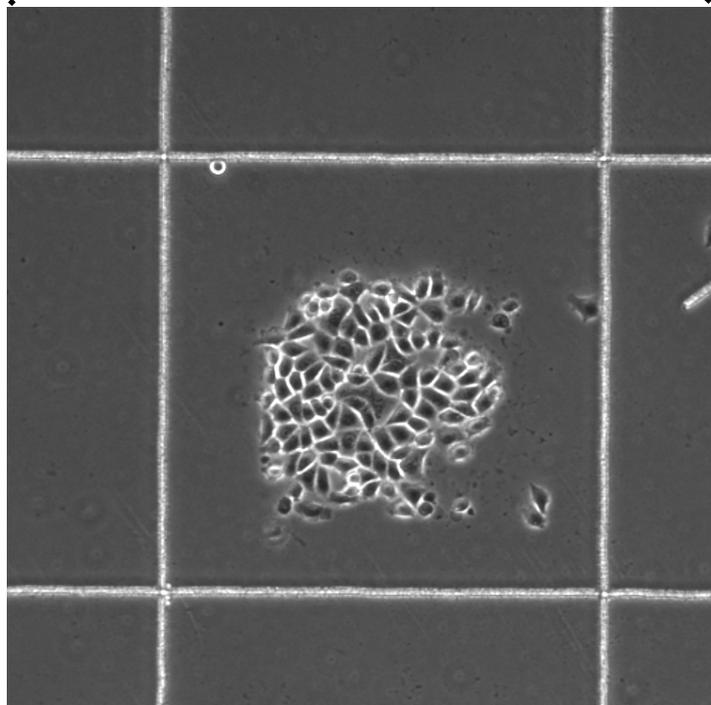
4x



20x overlay

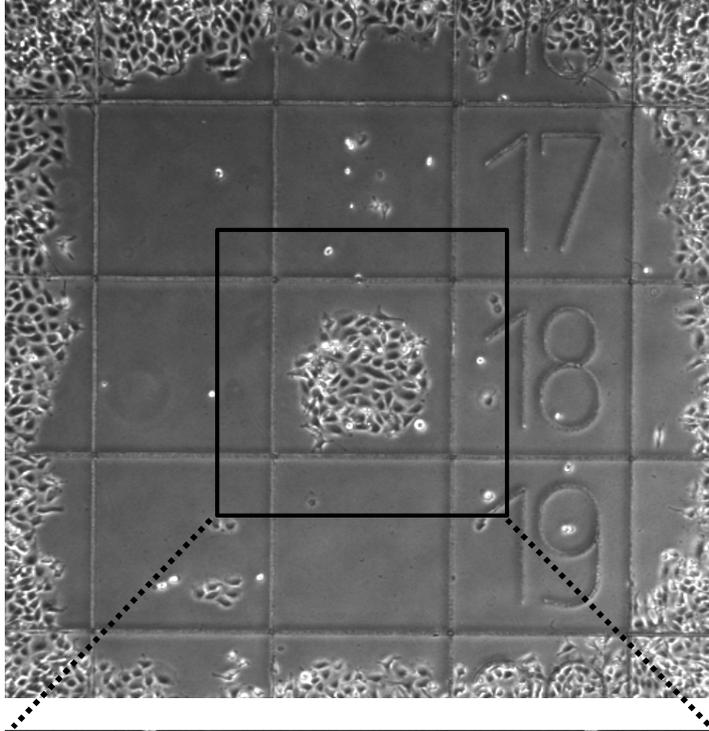


10x

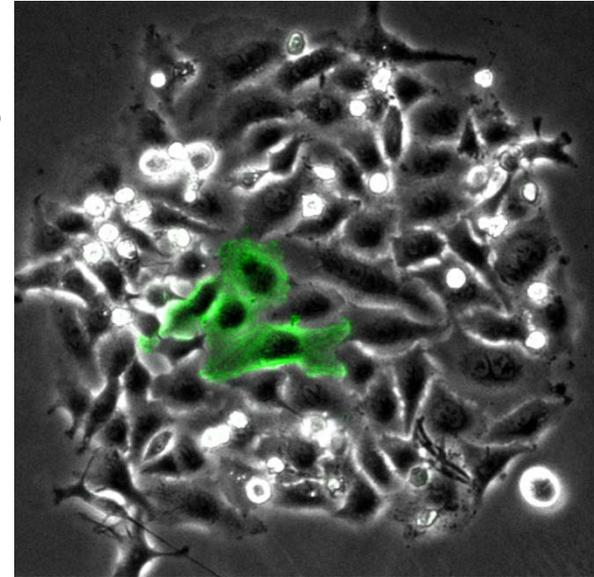


Isolation of GFP-expressing cells (A549):  
**next day** after MMW heating

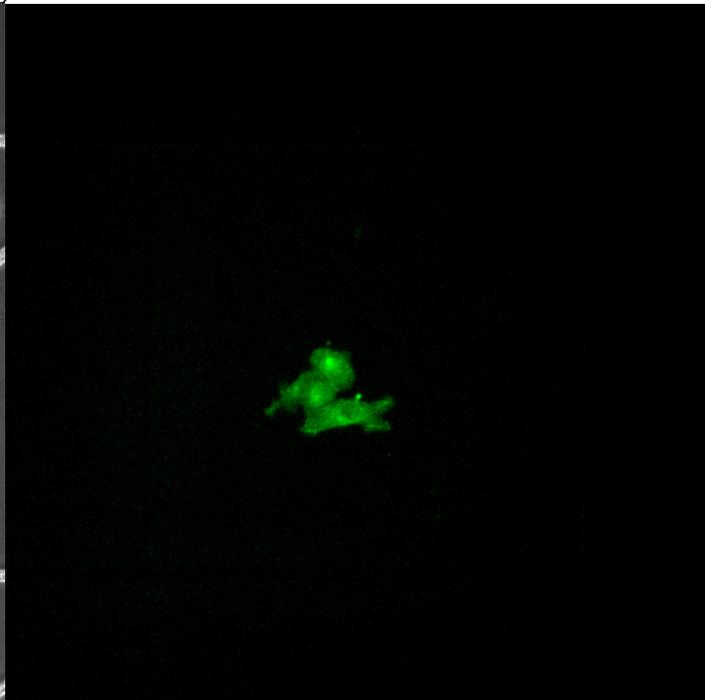
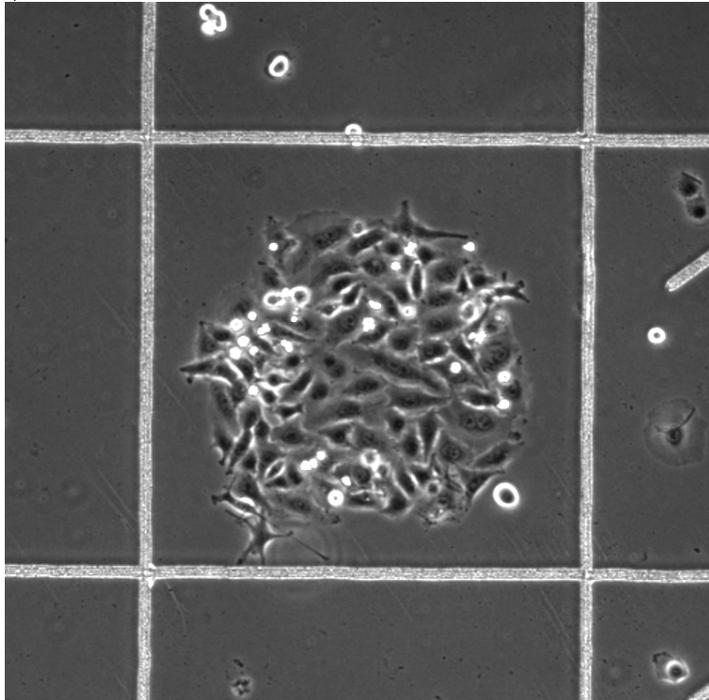
4x



20x overlay



10x



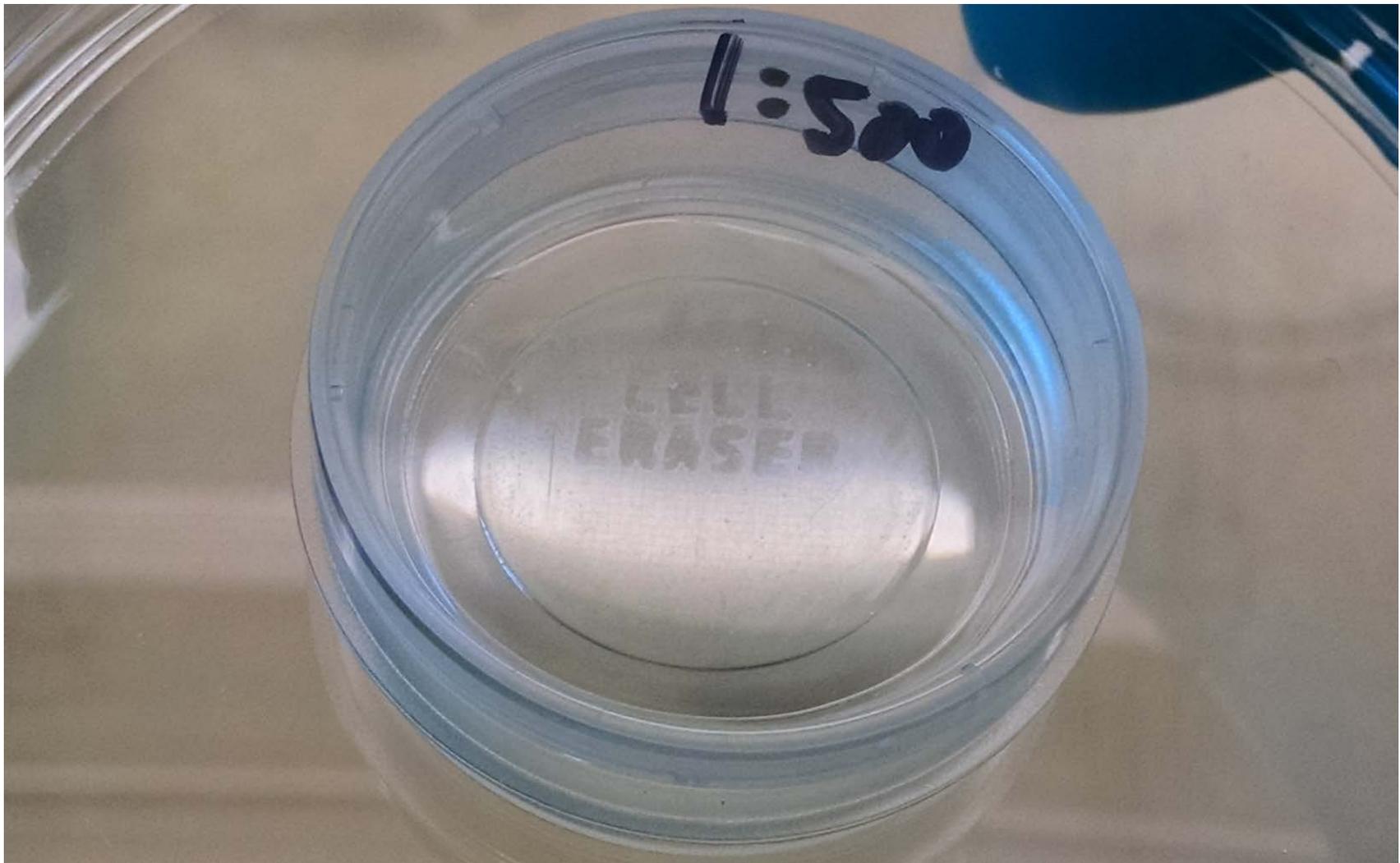
Ready for the  
next round of  
“erasing”

## CellEraser's key features:

- Allows elimination of unwanted cells in the cell culture while it is propagating
- Does not compromise culture sterility
- Does not affect the desired cells (no shear stress, no lysis of the killed cells)
- Controls the temperature and the size of the heated spot (does not heat the bulk culture medium or the cultureware bottom)
- Inexpensive, quick and unique alternative to other cell isolation systems
- Safe for the user

## Possible applications of the instrument:

- Isolation of extremely rare or fragile cells that could not be enriched by flow sorting
- Purification of induced pluripotent stem (iPS) cells and embryonic stem (ES) cells cultures from differentiating cells or isolation of differentiated cells
- Generation of tumor cell cultures originated from cancer patient tumor biopsies by removing the non-cancer cells
- If combined with a high content imager, the instrument could serve as an alternative to flow sorting
- 70C fixation, time stamping



**For more information please visit  
[www.celleraser.com](http://www.celleraser.com)**

**patent allowed**