

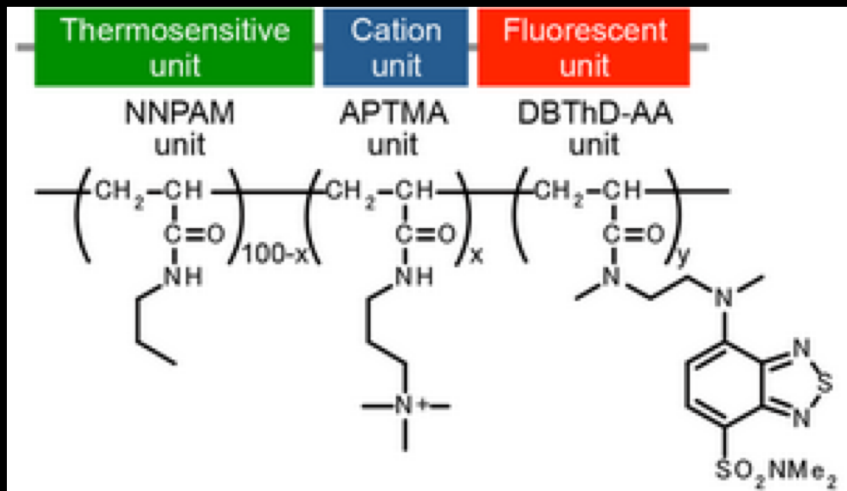
Fluorescence Lifetime Imaging (FLIM) FALCON SP8



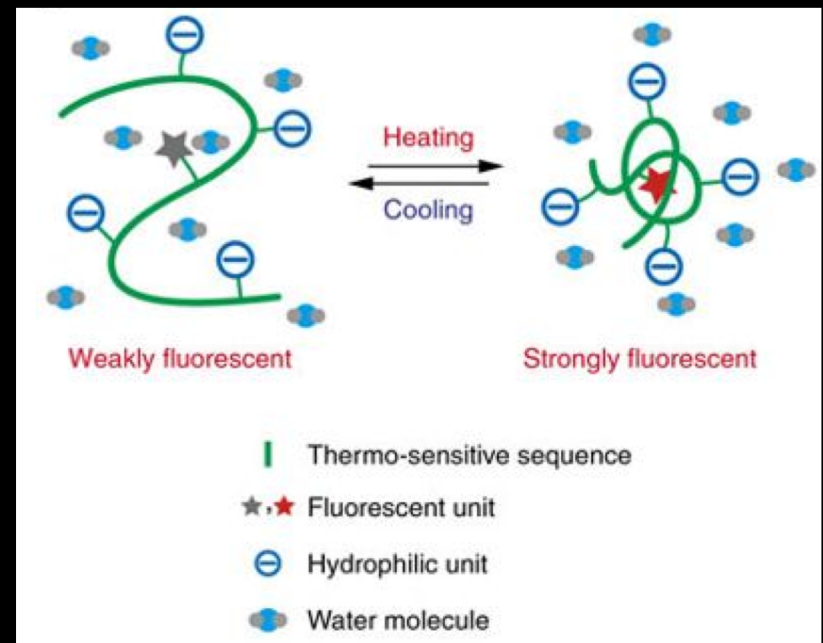
Fluorescent life time gives us more specific image than fluorescent intensity

Fluorescence polymeric thermometer (FPT) for Intracellular temperature mapping

- Temperature distributions inside a living cell reflect the thermodynamics and functions of cellular components
- Cellular pathogenesis of diseases is characterized by extraordinary heat production
- Therefore mapping of temperature in cells is important to better understand cellular events



Chemical structure of the cell-permeable fluorescent polymeric thermometer (FPT)



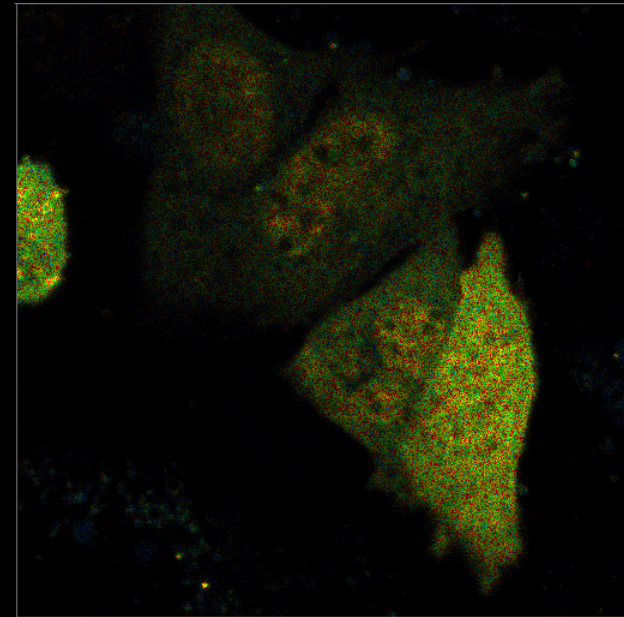
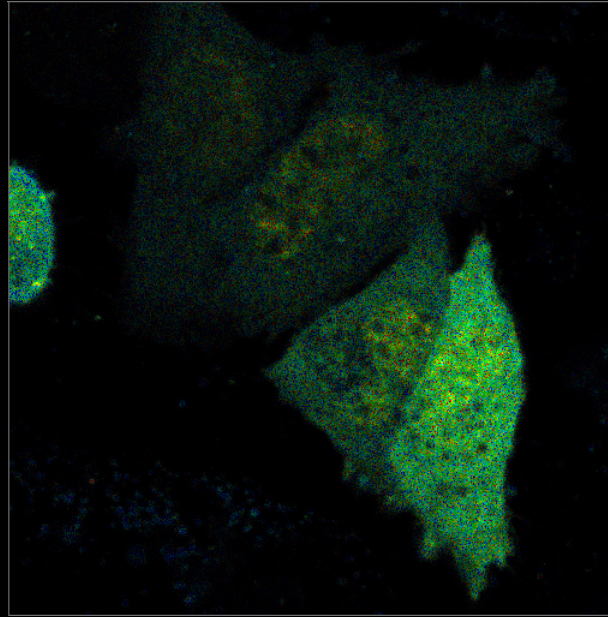
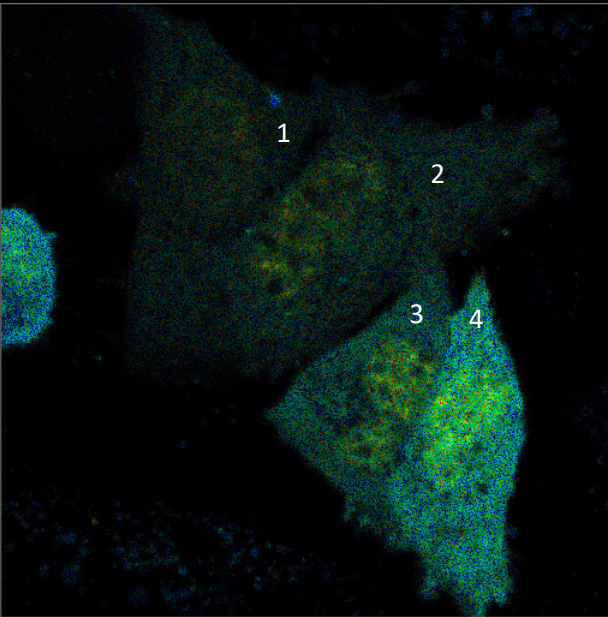
Functional diagram in an aqueous medium

Temperature mapping of living HeLa cells by FLIM with FPT

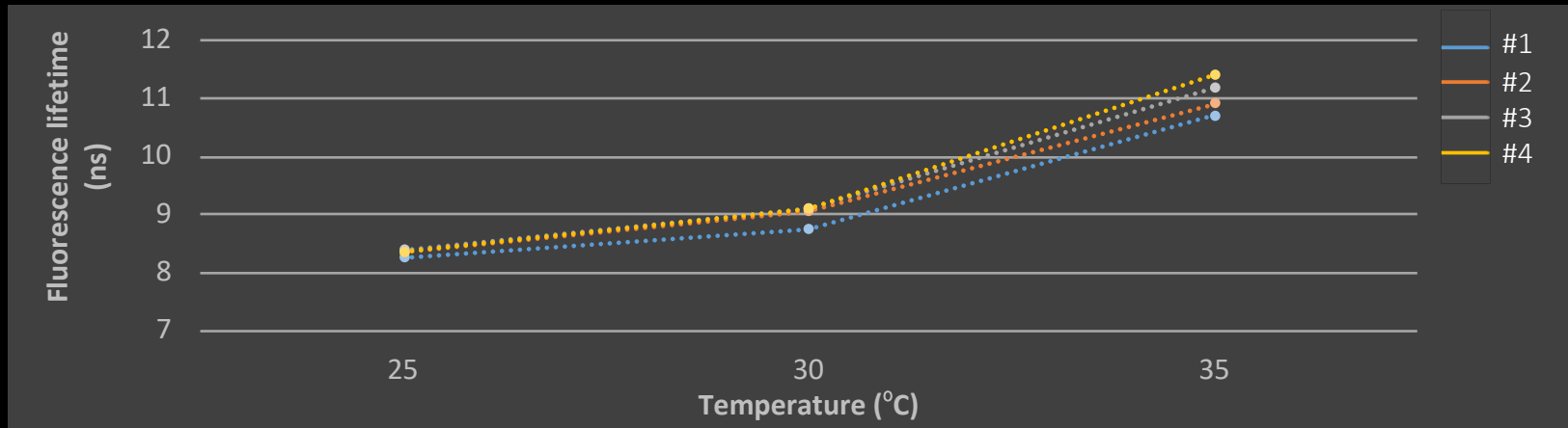
25°C

30°C

35°C



6 Fluorescence lifetime (ns) 13



Local
temperature
differences
in a cell

