Wednesday 20 July
1530-1630

Theoretical and practical demonstration of image cytometry functions on the Chemometec NucleoCounter series
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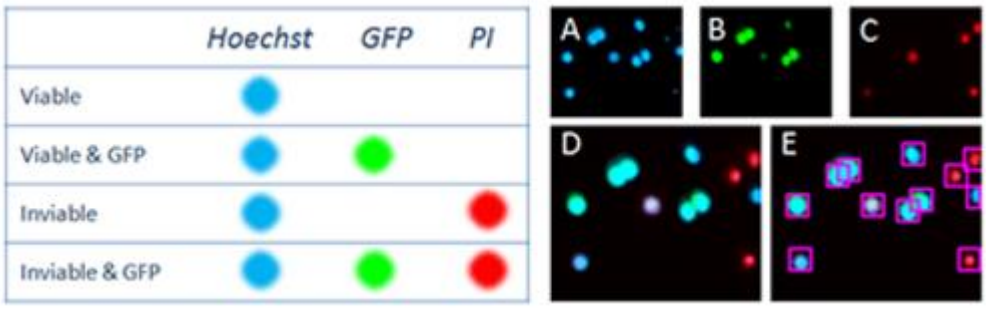
Part I (20 minutes)
Theoretical presentation of our NucleoCounter family of instrument and key applications including our Cell Counting Assays as well as our Fixed Analytical Assays for cell cycle, cell vitality, GFP, and various apoptosis assays.
When counting manually the subjective evaluation of the definition of a cell introduces bias to the result. The NucleoCounter® NC-200™ is designed to limit human interference in counting. With the Via1-Cassette™, all errors introduced during pipetting and staining are avoided. The cassette includes an in-built pipette and the immobilized fluorescent dyes acridine orange and DAPI automatically stain the total and dead cell populations, respectively. The Via1-Cassette™ is volume calibrated ensuring a high precision in determining cell count and viability. In total, this patented one-step viability and cell count takes less than 50 seconds.
We will also cover the other fixed assays and talk in particular about our precise, fast cell cycle assay and our two VitaBright dyes (VB-43 and VB-48) as useful new tools with an interesting place alongside traditional apoptosis assays – particularly the kinetic staining advantage.
And briefly introduce our FlexiCyte® open cytometry platform.

Part II (40 minutes)
Practical demonstration of the Via-1 Cassette technology on the NC-200

Live data analysis session on real experimental data captured from the NC-3000 system
We will look at examples from cell cycle analysis, Vitabright staining, GFP transfection efficiency assays as well as several of our apoptosis related assays including DNA fragmentation, Caspase 3/7 8&9 using FLICA reagents, Annexin V and Mitochondrial potential assay using JC-1 .
One of the key advantages to employing an image based method of capturing the cell fluorescence data is the ability to toggle back and forth between the image and the plot and being able to easily visualize which cells/events are within which population or which gate as applied.



Example above from our GFP fixed assay. All cells are located using the DNA stain Hoechst 33342. GFP-transfected cells have green fluorescense whereas PI-stained dead cells will be red. All channels can be viewed on image individually (A-C) or as overlay (D), and analyzed cells can be shown (E). Detailed data analysis can be performed with the accompanying PlotManager software.