

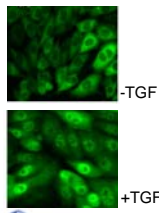
# High-Content Imaging Technology



The MDSystems laboratory has established a semi-automated cellular and subcellular imaging platform. In addition to providing rapid and highly-accurate analysis of fundamental cellular activities such as cell proliferation, the high-content analysis platform at MDSystems has opened new avenues for the exploration of complex cellular events.

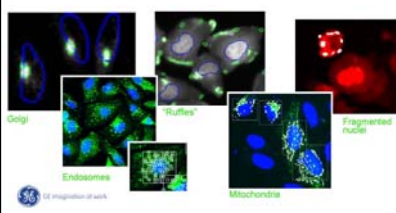
## High-Content Analysis

**Nuclear trafficking**



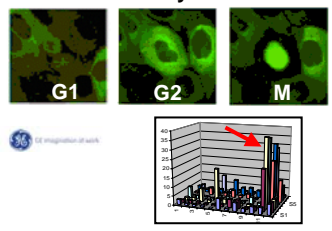
EGFP-SMAD-2 translocation from the cytoplasm to the nucleus

**Custom made analysis protocols**



Software algorithms can be built to draw measurements from diverse subcellular structures

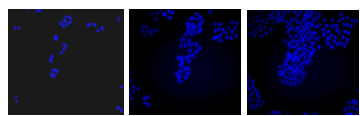
**Cell Cycle**



Measurement of cell cycle progression and mitotic arrest by quantitation of cyclinB-GFP signal

## High-Throughput Screening

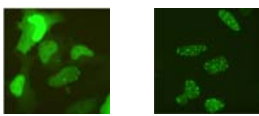
**Proliferation**



0 hours      24 hours      48 hours

A live-cell nuclear marker allows precise quantitation of cell proliferation.

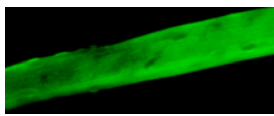
**UPS inhibition**



Untreated      MG132 treated

A fluorescent cell marker of the Ubiquitin Proteasome System (UPS) allows quantitation of proteasome inhibition.

**Induction of target expression**



Mouse FBD fibre

Software algorithms permit high-throughput screening for induction of protein expression in live tissues.

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