

# IN Cell Investigator

Intuitive. Adaptive. Powerful.

## Expanding the limits of image analysis

The accurate, precise, and reliable analysis of images is at the core of microscopy and scientific discovery. IN Cell Investigator offers a flexible and comprehensive solution for automated high-content image analysis.

- Designed by biologists for biologists to ensure an easy to use and logical workflow
- Configured for a range of skills and experience; choose from preconfigured, guided, or completely flexible analysis routines
- Contains the tools to tackle both simple and complex challenges
- Suitable for a broad range of assay types including analysis of live – or fixed-cell assays, tissues, and small organisms

## An adaptable combination of tools and options

IN Cell Investigator is a highly adaptable image analysis software tool that requires no specialist programming knowledge, with flexibility linked not only to the analysis, but also to the experience of the user. In combination with Spotfire™ DecisionSite™ analytics software, IN Cell Investigator contains a comprehensive set of tools for analyzing and visualizing data from high-content assays, including a vast array of predefined and user-definable parameters, calculations, measures, and output formats in a single-user license. When used in conjunction with IN Cell Miner data management software, IN Cell Investigator offers an integrated solution for analysis, management, and visualization.



Fig 1. IN Cell Investigator software is designed to match your skill level and assay needs.



## IN Cell Investigator image analysis components

IN Cell Investigator offers a comprehensive set of tools for analyzing and visualizing data from high-content assays.

### Preconfigured Analysis

**Level 1 analysis:**  
A selection of ready-to-use analysis

protocols, suitable for a wide range of assay types. These enable the user to obtain reliable results without the need to create protocols, with little or no experience. They are ideal for those new to image analysis, for situations where consistency is a key requirement, or where standard analysis protocols are required.

### Flexible Analysis

**Level 2 analysis:**  
This flexible tool is designed for the analysis of cell-based assays where multiparametric classification of cells into subpopulations is required – including cell viability, cell cycle monitoring, apoptosis, and cell signaling. Highly flexible with over 100 predefined cell measures, it can be applied to almost any assay that examines cellular processes, and gives the user more flexibility in analysis approach and design than the preconfigured analysis routines.

### Guided Analysis

**Level 3 analysis:**  
This analysis toolbox is designed for specialized applications where ready-to-use image analysis modules are not suitable. The controlled, fully supported but totally flexible environment helps users build tailored custom routines, enabling them to quickly analyze and interpret results of complex and unique assays. A selection of advanced tools provides full control over each step of the analysis sequence.

## Visualization using Spotfire DecisionSite

Spotfire DecisionSite is a powerful tool for data analysis – the interactive data visualization makes it easier to interpret results from high-content assays. Embedded in IN Cell Investigator, Spotfire DecisionSite can be accessed at the click of a button and is ideal for:

- Rapid interactive visual data analysis
- Filtering and sorting of high-content data
- Leading users step-by-step through an analysis with IN Cell Analyzer-specific guides
- Helping experienced users interpret complex multiparameter cellular assays
- Providing a direct link between cellular data points and corresponding image objects

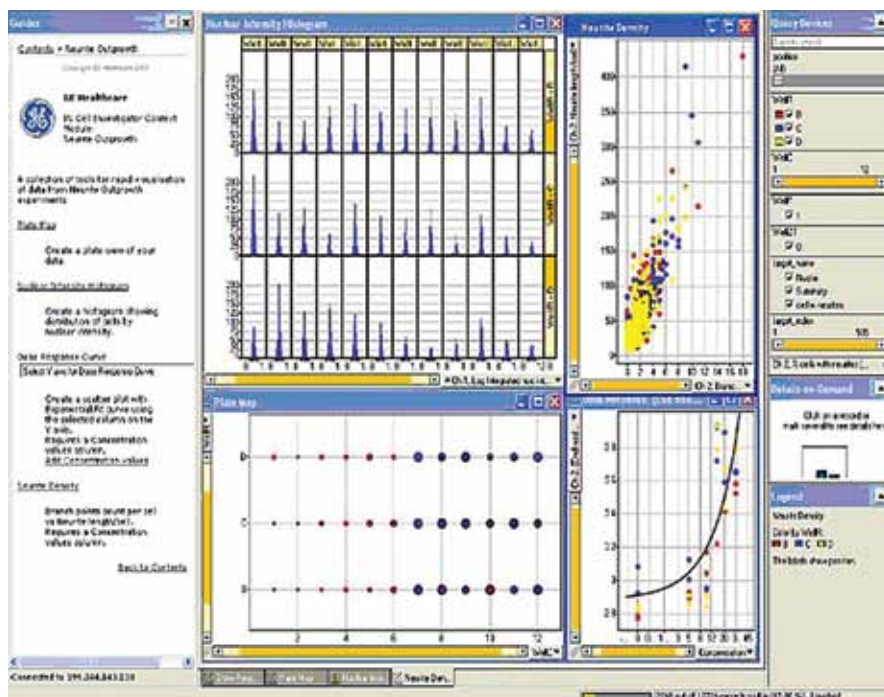
## IN Cell Miner data management system

*Locate. Correlate. Communicate.*

### Critical information at your fingertips

Data is your greatest asset and high-content analysis creates a wealth of data to advance your research. IN Cell Miner is a relational database management system to securely store and organize your data from projects to plates to wells to cells. Immediately locate specific images for publication; or search and retrieve all assays and associated data using, for example, a particular drug compound. Based on the established EMC™ Documentum™ content management platform, this easy-to-use data management tool is fully scalable across your organization.

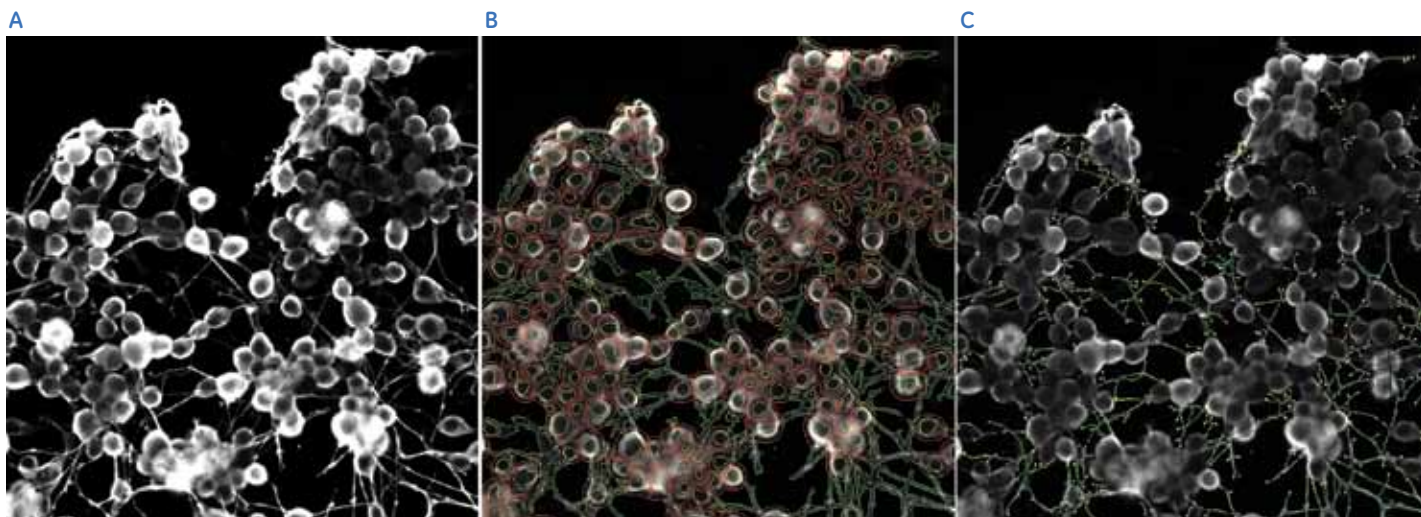
For more information on IN Cell Miner, please visit [www.gelifesciences.com/incell](http://www.gelifesciences.com/incell)



**Fig 2.** Neurite outgrowth guide within Spotfire DecisionSite with easy to follow instructions for creation of nuclear intensity histograms, neurite density plots, color coded plate maps and dose response plots.

## Enhanced features of IN Cell Investigator v 1.6

- Preprocessing operations
  - Flat Field Correction automatically corrects for images with uneven illumination/background
- New context modules:
  - Neurite Outgrowth – designed for analysis of neurites in images with fluorescently stained neuronal cells
  - Early Endosomal Markers – designed to monitor redistribution of proteins from early endosomes to cytosol, using fluorescent sensors
- New segmentation:
  - DT (Distance Transfer) Watershed to segment confluent images
- Improved data workflow:
  - Access IN Cell Translator directly from IN Cell Investigator
  - Export/import data smoothly between IN Cell Investigator and IN Cell Miner



**Fig 3.** IN Cell Investigator context modules enable creation of an automated analysis protocol without any prior image analysis experience. Here, the neurite outgrowth context module has been used to create an analysis procedure. **(A)** Image of neuronal cells indirectly stained for NF200 using an FITC-conjugated secondary antibody. **(B)** Colored overlays show the results of the automated analysis, detecting nuclei (yellow), cells (red), and neurites (green). **(C)** Colored overlays show regions of morphometric analysis (for example, to detect branch points).

## Optional plug-ins

### *Zebrafish Analysis Plug-In*

Optimized for use with IN Cell Analyzer 2000, the IN Cell Investigator Zebrafish Analysis Plug-In enables rapid whole-well imaging and automated organ based analysis of live Zebrafish without the time consuming need to stitch multiple fields of view.

### *Label-Free Plug-In*

Transmitted light imaging provides a label-free and non-toxic alternative to the use of fluorescent stains for monitoring live-cell differentiation over several hours or days. Brightfield images are acquired using IN Cell Analyzer 2000, and generation of both phase contrast and differential interference contrast (DIC) images can be optimized during acquisition or alternatively through the analysis software.

## Software licensing

IN Cell Investigator is sold in a seat license format, each seat enabling a single user to access all elements of the standard analysis suite.

A single seat license is held on a specific PC, and additional seats may be purchased at any time. Seats may be purchased as, or upgraded to, a network seat, which enables a user to access the analysis software from a number of networked PCs.

A five seat network is a cost-effective purchase plan for five user licenses, which are held on a computer network for convenient access. Five different users may use the software at any one time.

For more information, or for a demonstration of IN Cell Investigator, please call your local office or visit the IN Cell Analyzer Web site at [www.gelifesciences.com/incell](http://www.gelifesciences.com/incell)

## Ordering information

Product	Product code
<b>IN Cell Investigator basic product</b>	
IN Cell Investigator v1.6, 1 seat Web download	28-4089-71
IN Cell Investigator v1.6, 5 seat network Web download	28-4089-72
IN Cell Investigator v1.6, 1 additional seat Web download	28-4089-75
IN Cell Investigator v1.6, 1 seat network Web download	28-4089-73

### Optional plug-in modules

IN Cell Investigator Zebrafish Analysis Plug-In, Web download	28-9826-95
IN Cell Investigator Label-Free e-License	28-9779-73

### IN Cell Investigator and IN Cell Miner packages

IN Cell Investigator and IN Cell Miner, 1 seat academic use (includes IN Cell Investigator, 1 seat Web download and IN Cell Miner, 1 seat)	28-9781-41
IN Cell Investigator and IN Cell Miner, 1 seat commercial use (includes IN Cell Investigator, 1 seat Web download and IN Cell Miner, 1 seat Miner, 1 seat)	28-9781-42

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