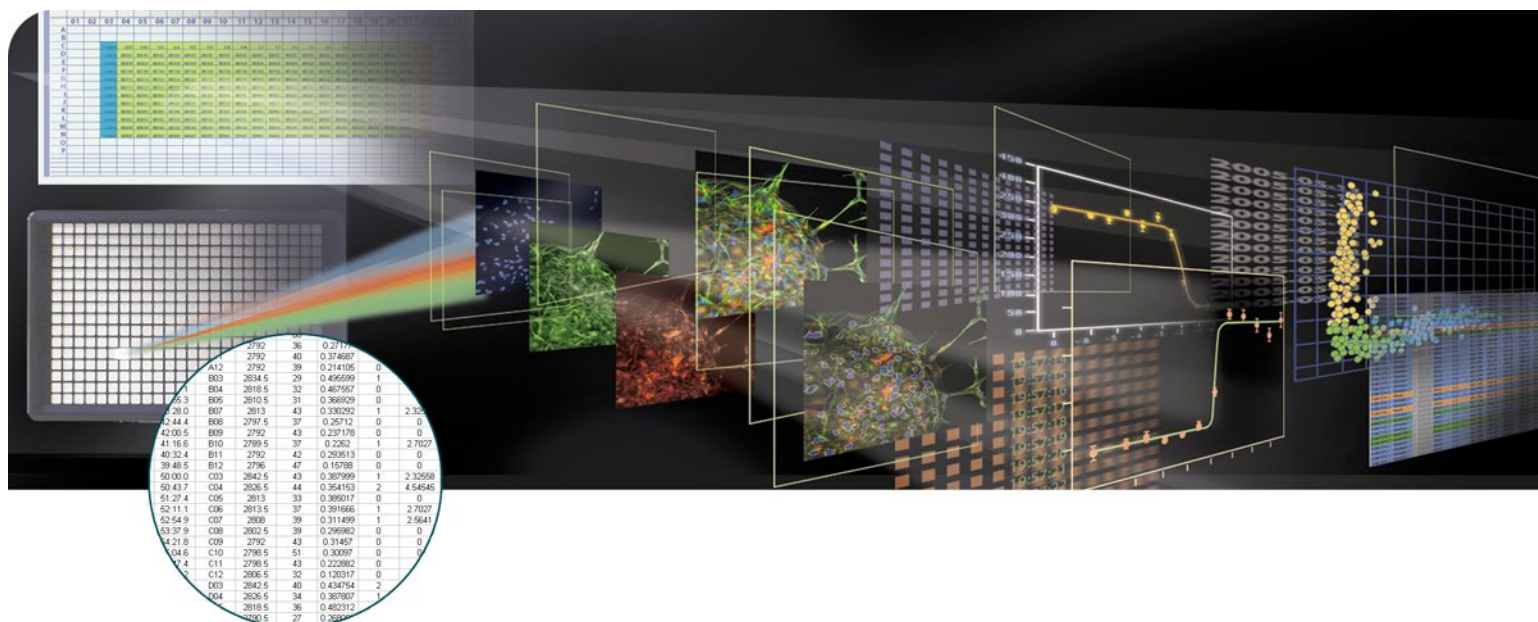


MetaXpress Software High-Throughput Application Modules

ANALYSIS SOFTWARE DROP-IN FOR METAPRESS SOFTWARE



→ **TRANSFLUOR® HT**

→ **CELL PROLIFERATION HT**

→ **NUCLEAR TRANSLOCATION HT**

→ **ADAPTIVE BACKGROUND CORRECTION FOR IMPROVED SEGMENTATION**

→ **FAST AND ROBUST ALGORITHMS**

Three high throughput (HT) modules for MetaXpress® Software from Molecular Devices accelerate the image-based screening process: Transfluor HT, Cell Proliferation HT and Nuclear Translocation HT. These modules are optimized for the automated analysis of large compound libraries. HT modules use proprietary algorithms capable of processing image data at the speed of acquisition. The HT modules are optimized for screening, and can be used in conjunction with the corresponding research modules for cell-by-cell data mining.

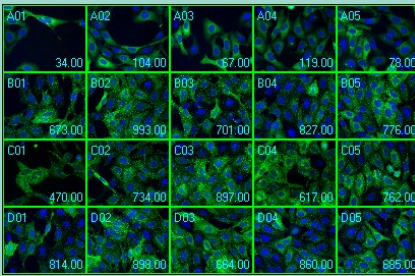
The Transfluor® HT Application Module is designed to facilitate the analysis of receptor internalization specifically for the Transfluor assay from Molecular Devices. Transfluor is a cell-based fluorescence assay used to screen for ligands and other potential drugs that regulate G-protein-coupled receptors (GPCRs).

The Cell Proliferation HT Application Module is ideal for counting cells across large data sets.

The Nuclear Translocation HT Application Module provides quantitative measurements of correlation between fluorescent probes and nuclei. Translocation is the movement of molecules from one intracellular location to another, usually as part of the secondary messenger system.

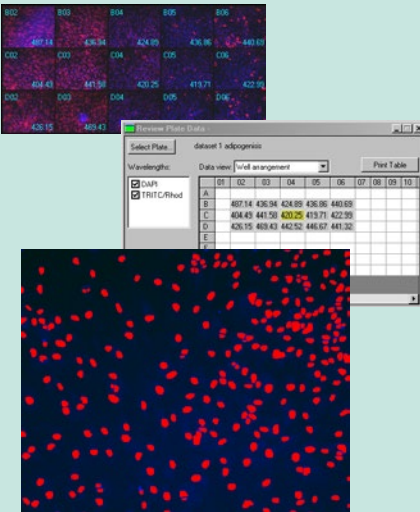
The modules use Adaptive Background Correction (ABC) to provide more robust segmentation and assay repeatability. ABC automatically adjusts cell detection for uneven backgrounds throughout the image by adapting to local content.

Run Analysis Across Entire Data Sets



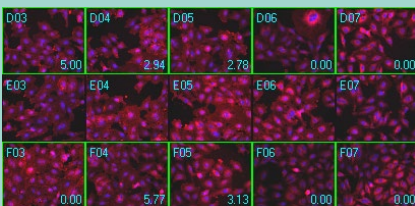
The Transflur HT Application Module is run across an entire plate. Total count can be displayed right on the image thumbnails.

Measurements Logged to Database



The Cell Proliferation HT module is run across the entire data set. Well-by-well measurements are saved to the MDCStore™ Database and the data can then be further analyzed with AcuityXpress™ Cellular Informatics Software from Molecular Devices. Segmentation is shown as a graphic overlay in red on the original image.

Flexible and Customizable



The flexibility of MetaXpress Software also enables users to run analysis on selected wells. Configured settings can be saved for later use and modified. Here, the Nuclear Translocation HT Application Module is run on selections only.

CONFIGURATION FOR ANALYSIS

To configure Transflur HT:

- Step 1. Select the granule image of interest.
- Step 2. Specify the size range of granules.
- Step 3. Set the intensity above local background for granules.
- Step 4. Optionally set the size range of nucleus in the nuclear stain image.
- Step 5. Optionally set the intensity above local background for the nuclear stain.

To configure Cell Proliferation HT:

- Step 1. Select the image of interest.
- Step 2. Specify the cell size range.
- Step 3. Set the intensity above local background.

To configure Nuclear Translocation HT:

- Step 1. Select the nuclei and translocation probe images.
- Step 2. Set the approximate nuclear width.
- Step 3. Determine the intensity above local background.
- Step 4. Specify the correlation coefficient cut-off for positive classification.

CUSTOMIZATION THROUGH MACROS

MetaXpress is seamlessly integrated with the power and flexibility of MetaMorph® and its sophisticated and powerful macros that record and perform a series of tasks without the need for a programming language.

VALIDATED DATA

Development of application modules includes research and testing with a library of in-house and third-party data sets.

POWERFUL DATA EXPORT CAPABILITIES

All measurements can be directly exported to ORACLE®, Microsoft® SQL, a text file or Microsoft® Excel®.

MULTI-PARAMETER ANALYSIS

Transflur HT measurements include:

- Total granules per well
- Mean granules per cell
- Total and mean granule and nuclear area
- Nuclei total count

Cell Proliferation HT is designed for an accelerated count of nuclei across large data sets.

Nuclear Translocation HT parameters include:

- Correlation coefficient
- Integrated and average inner and outer intensity
- Number and percentage of classified positives

ORDERING INFORMATION

Transflur® HT for MetaXpress:

Part Number: 9500-0043

Cell Proliferation HT for MetaXpress:

Part Number: 9500-0042

Nuclear Translocation HT for MetaXpress:

Part Number: 9500-0041

FOR MORE INFORMATION

Check our web site

www.moleculardevices.com/mx

SALES OFFICES

- USA & Canada +1-800-635-5577
- Brazil +55-11-3616-6607
- China (Beijing) +86-10-6410-8669
- China (Shanghai) +86-21-6887-8820
- Germany 00800 665 32860
- Japan (Osaka) +81-6-7174-8831
- Japan (Tokyo) +81-3-6360-5260
- South Korea +82-2-3471-9531
- United Kingdom +44-118-944-8000

Check our web site for a current listing of our worldwide distributors.

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