



Applied Spectral Imaging
Bringing Details to Light

GenASIs™ Cytogenetics Suite



The Complete Platform

The GenASIs™ Cytogenetics Suite is the most complete and effective solution available today for karyotype and FISH analysis.

By integrating the GenASIs solution within the existing workflow, your lab will benefit from a platform tailored to its needs and capacity. Regardless of lab size, the GenASIs solution provides accurate results, effectively and cost-efficiently – while still being robust enough to grow with your lab by integrating new tests and more advanced, automated hardware as the lab evolves.

Always at the forefront of innovation, Applied Spectral Imaging has nearly two decades of experience delivering advanced imaging solutions to cytogenetic laboratories across the globe.

The GenASIs Cytogenetics Suite



GenASIs Capture & Analysis



GenASIs Scan & Analysis



High Throughput Scanning



GenASIs Analysis & Review



GenASIs HyperSpectral

GenASIs Anywhere - Review & Data Sharing

The GenASIs Anywhere Platform offers labs and reference labs a solution for cloud-based viewing, analysis and case sign-out. Any number of labs can securely access the central database, perform analyses and generate reports from any location.

This solution also allows you to benefit from a convenient Professional/Technical split for workflow and billing purposes. The flexibility and ease of use provided with GenASIs Anywhere translates into quicker turnaround time and cost savings, while significantly reducing maintenance and management costs.



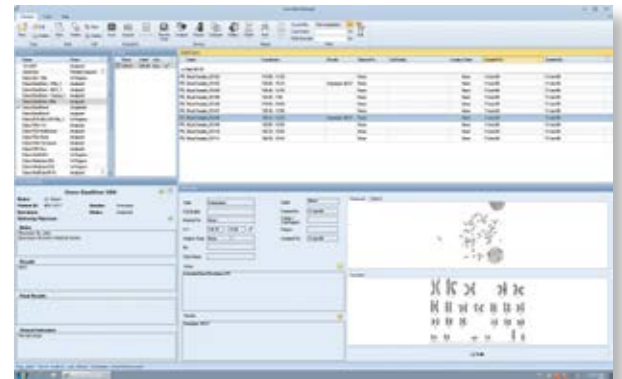
The Complete Digital Workflow



GenASIs Case Data Manager (CDM) is the central portal and database for the entire GenASIs suite, designed to support the modern paperless laboratory. An integrated multi-application microscopy imaging database with advanced search and reporting capabilities, it offers statistical analysis and cross-case comparison. CDM features simple, multi-site data management with real-time case summary and the ability to produce detailed reports for the most comprehensive cases.

The Central Portal

All GenASIs applications are run through the CDM, a central portal that communicates freely with the image capture and review workstations along with the lab's LIS. CDM supports cytogenetic labs by displaying case information with its corresponding slides and cells images. CDM further supports the paperless lab by integrating the imaging database and worktables with simultaneous case sharing and off-site review and analysis.



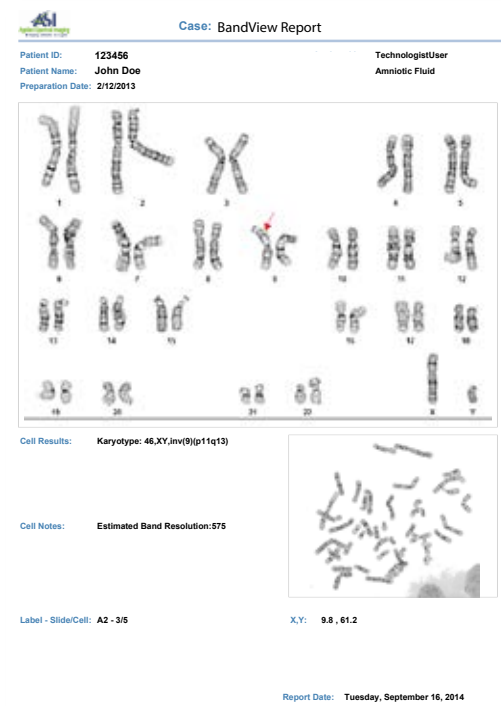
Case Data Manager

Data Integrity

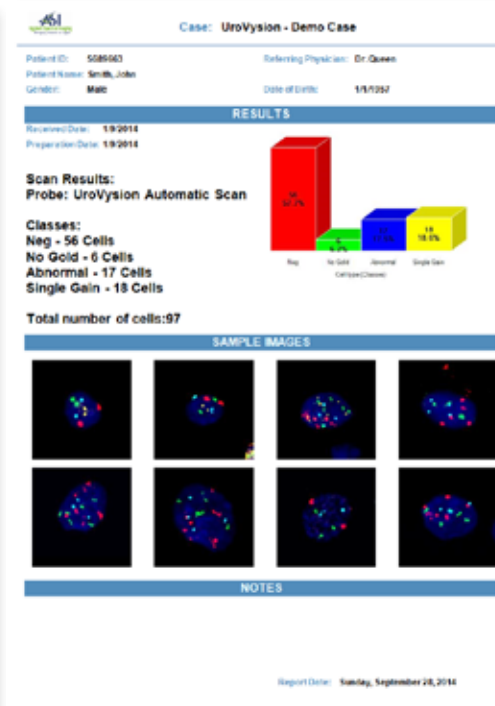
Data integrity is preserved by archiving all clinical and workflow processes and providing an audit trail of work performed. Lab administrators can set access rights for each user and lab.

Reports

Multiple report types and templates are available within CDM. Labs can easily customize their reports, or set up multiple templates to meet their needs.



Karyotyping Report



FISH Report

GenASIs Karyotyping Solutions

The GenASIs Karyotyping Solutions improve the workflow and clinical relevance of karyotyping. Labs can automatically scan and capture metaphases and perform remote review and analysis. Entire cases can be reviewed by comparing all chromosomes within their cells or in reference to other samples.

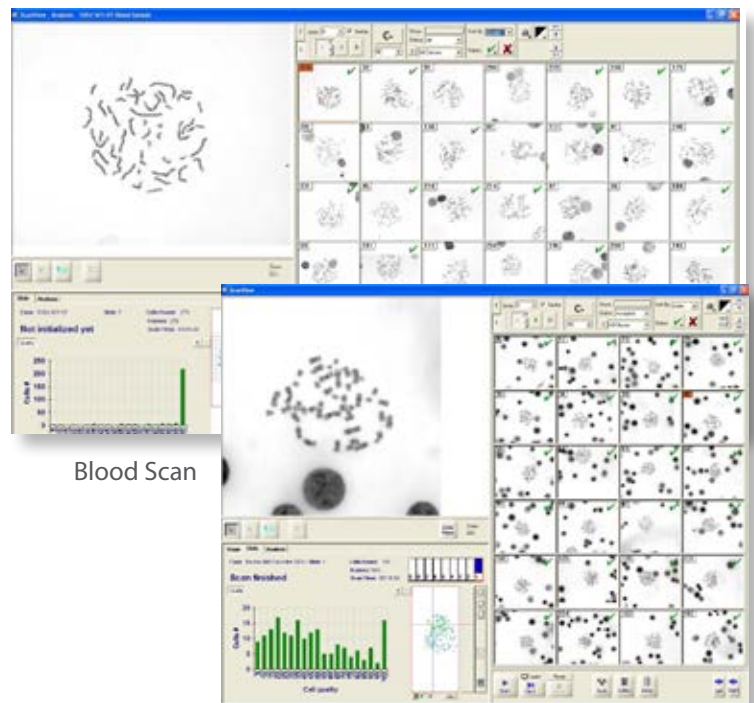
- GenASIs MetScan - Automatic metaphase finder of various sample types
- GenASIs Bandview - Advanced karyotyping application

GenASIs MetScan

GenASIs MetScan* improves lab efficiency and profitability by automatically locating the best metaphases for analysis. Capable of working when the lab is closed, the advanced application detects cover slip regions and colonies, scans to identify metaphases, automatically dispenses oil and instantly relocates to the region with the selected metaphases for high magnification capture.

Whether analysis is being performed in the next room, or across the globe, GenASIs MetScan allows you to begin review and analysis using the GenASIs BandView application via remote systems while scanning is still taking place.

* Compatible with either a 9-slide single tray or an 81-slide robotic tray loader for even greater capacity.



Blood Scan

Bone Marrow Scan

Tray Loader

The Tray Loader's convenient desktop design features a front-loading transparent cover for viewing tray status and for replacing trays even while scanning is running, allowing non-stop scanning well over the base capacity of 81 slides. Swift, automatic barcode reading during loading simplifies case and sample identification.



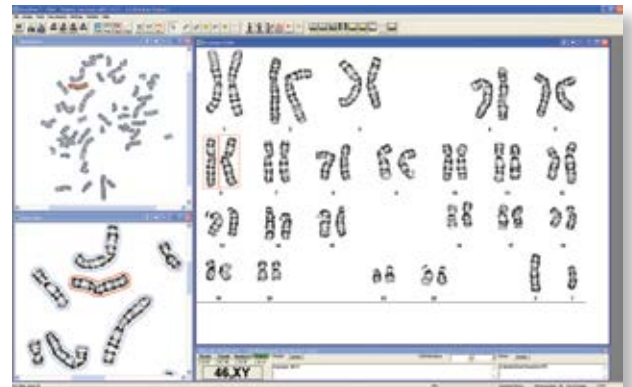
High - Throughput Scanning



GenASIs BandView®

GenASIs BandView®, ASI's karyotyping application, is designed to save time without compromising results in a true paperless environment.

Automation is what makes GenASIs BandView unique, offering automatic segmentation of touching chromosomes, optimized image enhancement and cell cropping. The unique, all-in-one Magic Tool streamlines the karyotyping process by eliminating the need for switching between tools, saving hundreds of mouse clicks per karyotype.

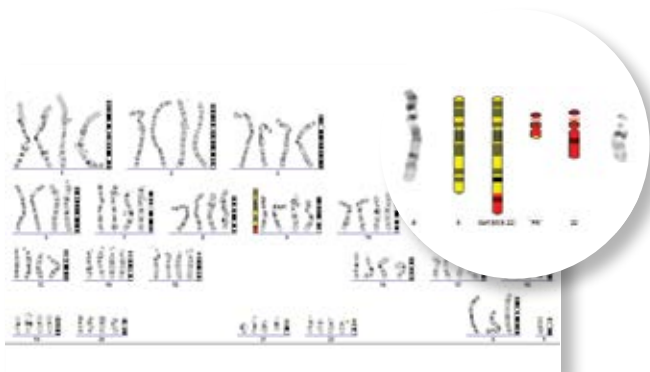


GenASIs BandView

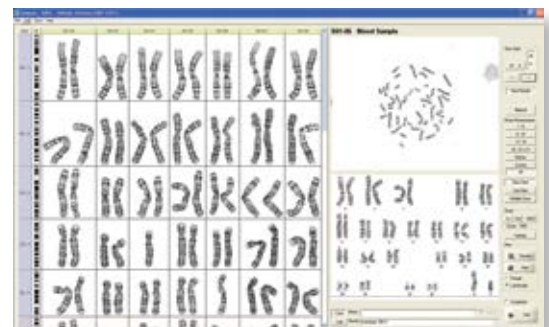
Advantages

- Superb image quality
- Compatible with virtually any type of scope
- Tools for improved user experience (Magic Tool)
- Work from off-site with remote access software
- Freedom to view all sample images and chromosomes within a single case
- Full audit trail
- Controlled user access and sign- out privileges
- Customizable workspace to provide maximum case information at a glance
- Multiple species - add-on module, supporting animal and plant karyotypes

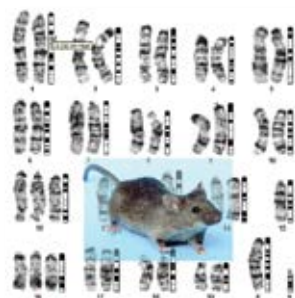
Advanced utilities and management tools provide full support for supervised case review, special case reporting (wizard), and case follow-up.



Multi-Patient Karyotype and
General Report



Chromosome Compare



Karyotype for Multi-Species

GenASIs FISH Applications

For All FISH Applications

GenASIs FISH allows labs to work more quickly, more efficiently and with greater comfort by automating key processes of the workflow and providing all the necessary tools for easy analysis, reporting and documentation for FISH samples.

GenASIs FISH provides wide coverage of applications, from interactive to fully automatic workflows. Improved throughput is achieved without compromising on the reliability and high quality of the sample analysis.

- GenASIs FISHView - Interactive capture and enhancement
- GenASIs SpotScan - Automated FISH scanning and analysis

GenASIs FISHView

GenASIs FISHView is an interactive capture and enhancement application with full karyotyping support and analytical capabilities, covering both clinical and advanced research needs.

GenASIs FISHView allows the user to manually enhance signal color and image quality, make annotations and measure cells in multiple metrics.

- Automated or interactive Z-stack
- Color karyotyping support
- Cell/signal analytical data
- mCounter - integrated wireless counting pad

GenASIs HiSKY[®]

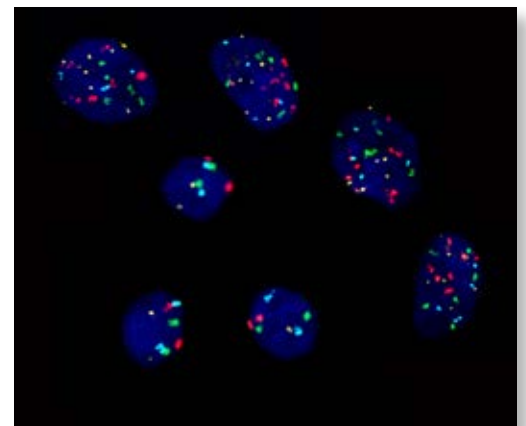
GenASIs HiSKY[®], running on the GenASIs HyperSpectral platform, simplifies the process of identifying small translocations, insertions, markers and other subtle chromosomal aberrations. This makes it the gold standard of multicolor FISH analysis.

GenASIs HiSKY is known for its precise and robust accuracy. Multiple advanced verification capabilities are included to guarantee perfect results.

The ASI HiSKY kit contains a full set of chromosome paints in one vial for simultaneous detection of chromosomal aberrations in one hybridization with the GenASIs HiSKY system.

Whole Chromosome Paint (WCP) Probes

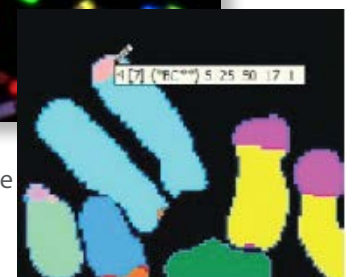
ASI offers a comprehensive range of painting probes for use with any fluorescent microscope (equipped with the appropriate filters). The paints are available in red, green and aqua for human, mouse and rat applications, to detect chromosomal re-arrangements.



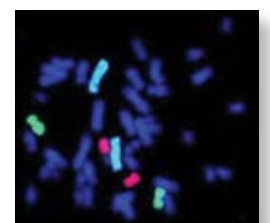
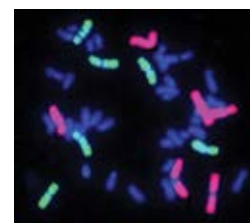
5 - Color Enumeration Probe



Abnormal SKY Metaphase



Tool Tip Displaying Classification Results on Specific Pixels



Two and Three - Color Chromosome Paint



GenASIs SpotScan

GenASIs SpotScan offers automated FISH scanning and analysis, detecting cells and classifying them based on their signal pattern. GenASIs SpotScan covers a wide range of FISH sample types in genetics, hematology, pathology and research applications.

The software is based on a multi-level user interaction concept. Depending on the specific sample and staining protocol, the user defines the desired level of automation in the scanning process. This ranges from a fully automated walk-away flow to a user-controlled process for defining regions and cells suitable for analysis.



Automated Slide Scanning & Analysis

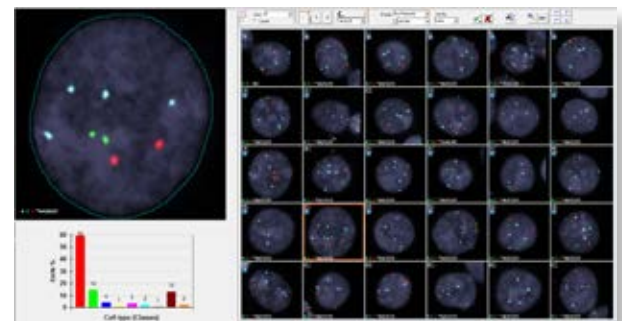
Highlights

- Detect, segment and classify touching nuclei accurately under extreme staining conditions
- Z-stack with 3D review and 2D composite images of multiple filters
- Sensitive camera and smart enhancement schemes to reveal the faintest signals
- Advanced telomeric analysis capability
- Exact cell relocation for successive staining protocols
- Unique scanning flows for various CTC samples and setups
- Compatible with 9 or 81-slide system configuration

Automatic SpotCount

Fully Automatic Workflow for Automatic Microscopes

- Dual phase scanning schemes for fast cell localization, followed by accurate multi-color imaging
- Reliable and fast scanning due to identification of all scorable cells
- Fast review of problematic cells with instant, side-by-side, enhanced display of all colors.

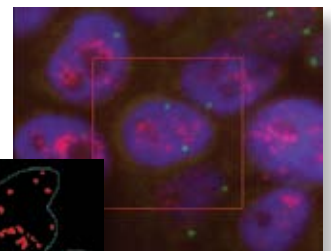


Automatic Spotcounting

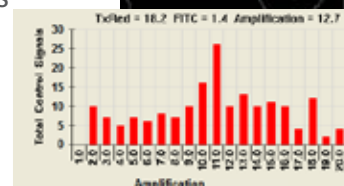
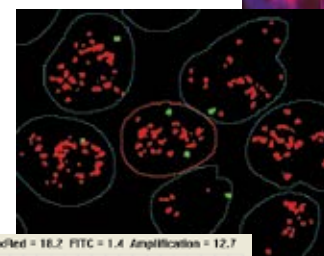
Semi-Automatic SpotCount

Semi-Automatic Workflow for Tissue and Dense Samples

- Supported with manual or automated microscopes
- Special algorithms to address DMs and HSR signal clusters
- Covering any enumeration, fusion or amplification probes
- Pre-defined classifiers for HER2, ALK, PTEN, Melanoma and other probes



Semi-Automatic Spotcounting – HER2-FISH



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FDA cleared for the following GenASIs applications:
IHC Family for HER2, ER, PR and Ki67, and BandView, FISHView, CEP XY, UroVysion, ALK , HER2/neu FISH

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