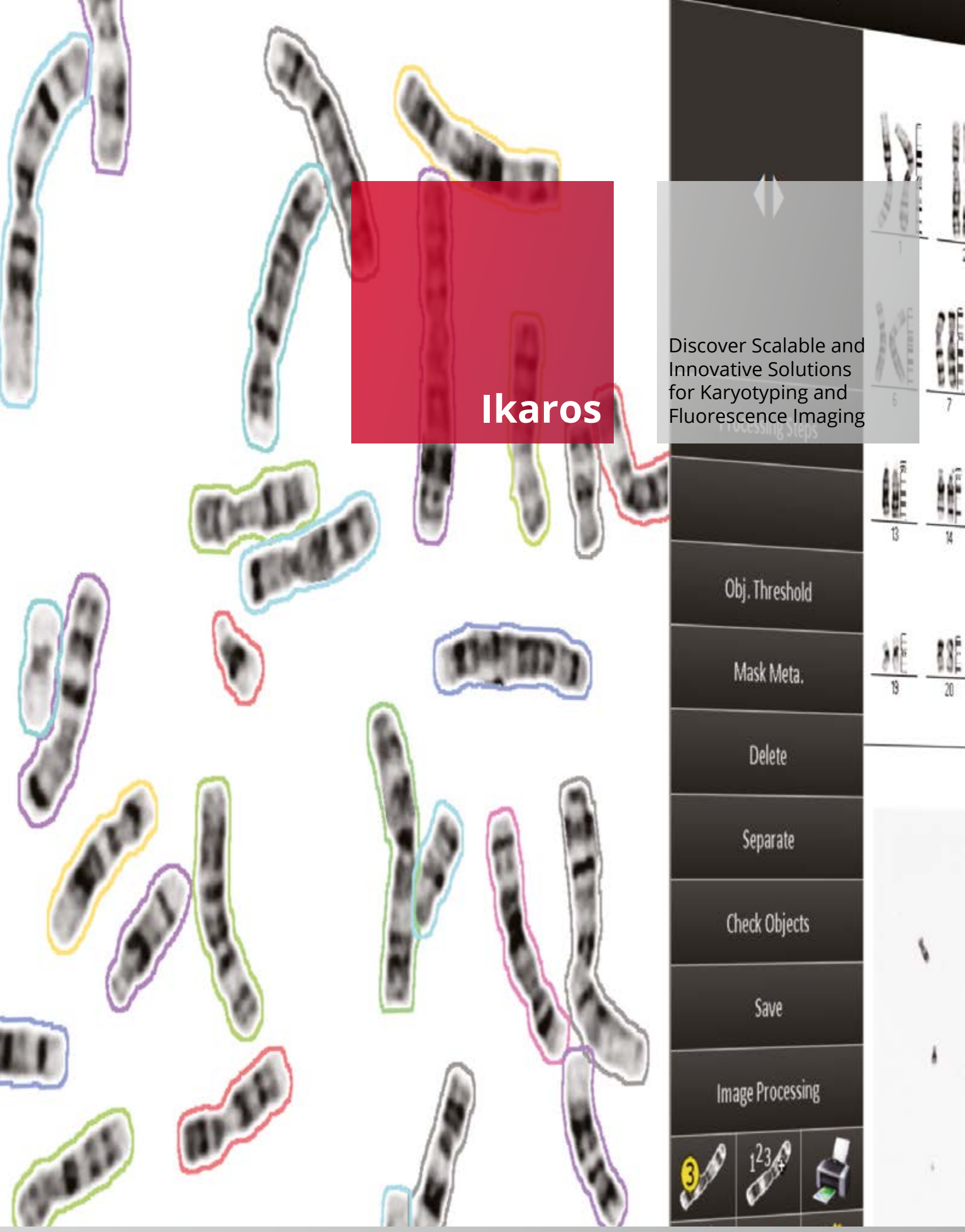
Ikaros

Discover Scalable and Innovative Solutions for Karyotyping and Fluorescence Imaging

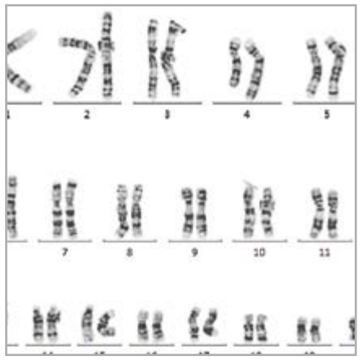


MetaSystems

Karyotyping

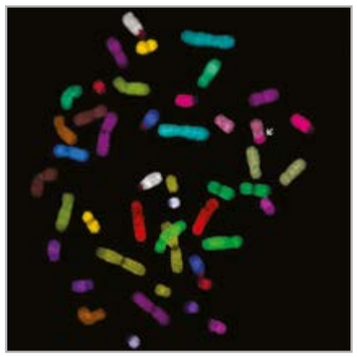
The Ikaros software integrates an intuitive graphical user interface with a range of potent processing tools, delivering the necessary flexibility in the karyotyping process. Engineered to reduce the number of interactions, Ikaros holds the potential to decrease the time needed for both analysis and result review compared to manual karyotyping.

Ikaros offers tools to assist cytogeneticists in evaluating metaphases prepared using various prevalent chromosome banding methods (such as G-Banding and Q-Banding). It also supports diverse specimen types, including peripheral blood, bone marrow, amniotic fluid, and chorionic villi.



Color Imaging

Moreover, Ikaros introduces a color fluorescence mode, displacing traditional photography and eliminating the time-consuming and laborious processing steps typically performed in a darkroom. Color images are produced by sequentially capturing monochrome images of the distinct color components and then automatically combining them to form a cohesive color image. The automated integration time control guarantees accurate exposures from the initial shot, eliminating the need for cumbersome test exposures or guesswork in determining the correct integration time. This not only reduces hands-on time but also extends the lifespan of the specimen. Even faint fluorescent signals against a strong counterstain result in clear and sharp images.



Lab-Wide Solutions

While Ikaros can be utilized as a standalone installation, its optimal performance is demonstrated in an environment where multiple workstations collaborate to create an integrated imaging solution. Consequently, Ikaros can be seamlessly integrated into various setups, including karyotyping stations (Ikaros Karyo M), fluorescence imaging stations (Ikaros BASE C and Ikaros Karyo C), data management stations, or review stations (Ikaros Review). With MetaSystems solutions, the scalable multiuser network can be expanded at any time to accommodate growing demands.

Metafer

When paired with the Metafer software for image acquisition and the detection, classification, and counting of cells, collaborative workspaces can be established, blending performance with high user convenience and robust data security.

Neon

Installed with every workstation running Ikaros, Neon is a convenient interface for organizing case and image data. Interfaces for data exchange with external databases can be easily adapted.

MetaSystems

KARYOTYPING

Highlights

- Accommodate a wide range of banding techniques currently in use.
- Utilize diverse specimens, such as amniotic fluid, peripheral blood, chorionic villus, bone marrow, and tissue, without limitations based on specific diseases, for banding analysis.
- Incorporate multiple features to enhance the interpretation of metaphases and streamline the karyotyping process.
- Maintain a continuous log of processing steps and enjoy unrestricted access to the original images.
- Facilitate seamless transitions between different capture settings, allowing for easy shifts from brightfield to fluorescence and vice versa.
- Opt for manual image acquisition with one-click capture, automatic contrast enhancement, and the selection of the optimal focus plane.

Ikaros is intended to be used for karyotyping with real-time microscope images from cultured and stained cell specimens in their metaphase. By transferring images of chromosome spreads from the microscope to a computer the labor intensive manual processing of photographs is eliminated. Karyotypes are assembled by the operator with the support of image processing software. The results are documented in hardcopy and archived for later review.

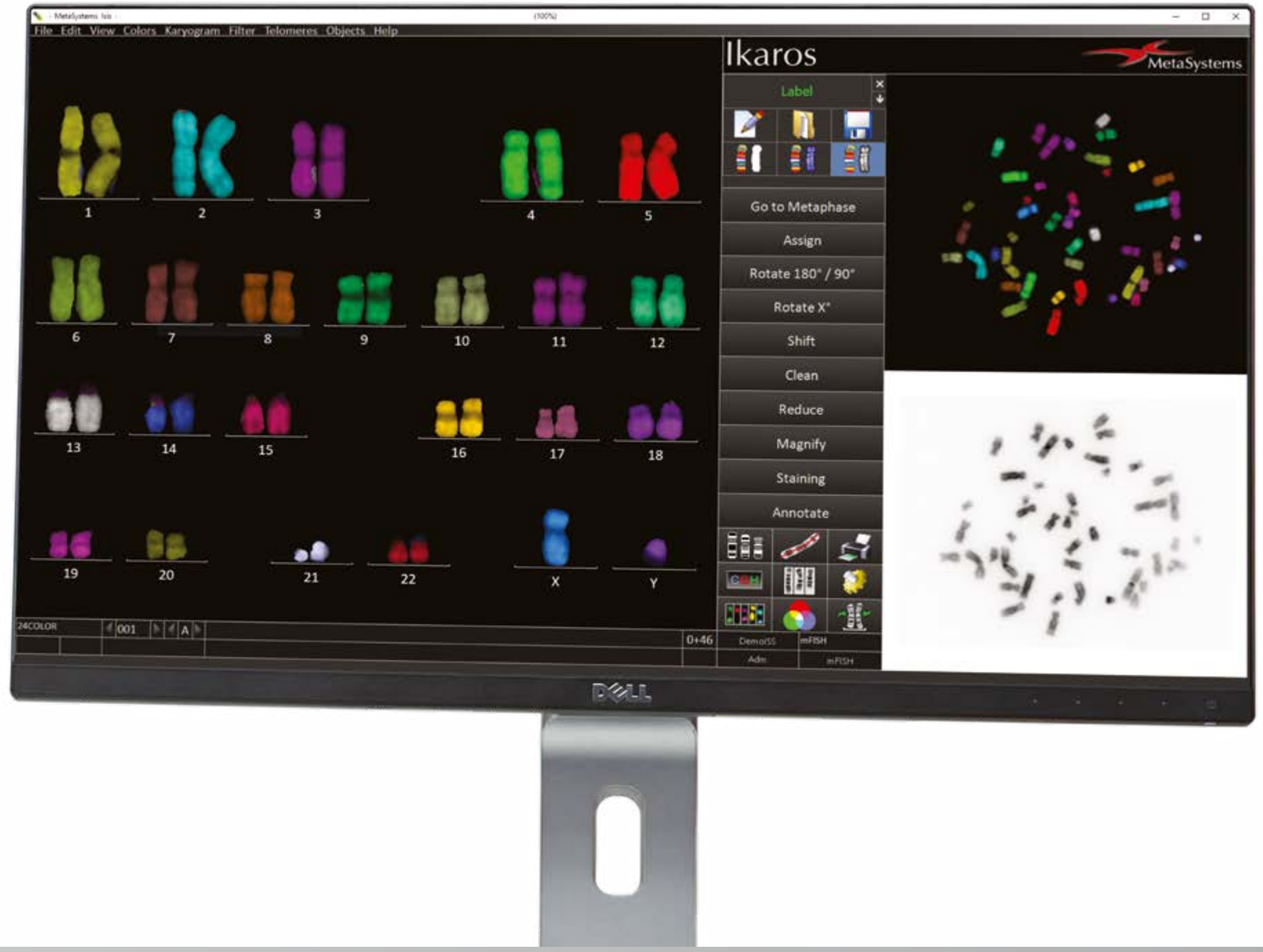
MetaSystems

COLOR IMAGING

Highlights

- Effortlessly capture images with a single click, utilizing up to 12 color channels.
- Get correct exposures at the first shot, thanks to automatic integration time.
- Eliminate the need for time-consuming processing in a dark room.
- Acquire, refine, and edit specific color channels or even individual areas within the image with selective editing capabilities.
- View individual color separations and explore various pseudo-color visualizations.
- Maintain a continuous log of processing steps and enjoy unrestricted access to the original images.
- Opt for optional upgrades to enable support for color karyotyping, Multicolor FISH (mFISH) and the exclusive Multicolor Chromosome Banding (mBAND) method.

The color fluorescence mode allows fast and easy acquisition, processing, archiving, and documentation of microscopic fluorescent images. All the steps from image acquisition to color printouts can be performed in just a few minutes. Images can easily be exported directly to other graphics and presentation software, which adds flexibility and convenience.



MetaSystems

WORLDWIDE OFFICES

AMERICAS

USA, Medford
info@metasystems.org

Argentina, Buenos Aires
info@metasystems-latam.com

EUROPE

Germany, Altlussheim
info@metasystems-international.com

Italy, Milan
info@metasystems-italy.com

ASIA

China, Hong Kong
info@metasystems-asia.com

China, Taizhou
info@metasystems-china.com

India, Bangalore
info@metasystems-india.com

CE IVD Metafer 4.3 and Ikaros 6.3 are classified as in vitro diagnostic medical devices (IVD) in the European Union in accordance with In Vitro Diagnostics Regulation (EU) 2017/746 or In Vitro Diagnostic Medical Device Directive 98/79/EC, respectively, and carry the CE label unless otherwise indicated. Use all MetaSystems IVD products only within the scope of their intended purpose.

Neon serves as general data management software.

MetaSystems products are used in many countries worldwide. Depending on the regulations of the respective country or region, some products may not be used for clinical diagnostics.

Some hardware components supplied by other manufacturers are not included in MetaSystems IVD products and are therefore not IVD medical devices.

CONTACT US

OR YOUR LOCAL
MetaSystems
REPRESENTATIVE

metasystems-international.com

MetaSystems Hard & Software GmbH
Robert-Bosch-Str. 6
68804 Altlussheim | Germany

Document No. BRO-MS-Ikaros-EN-2024-01-01

MetaSystems

info@metasystems-international.com
www.metasystems-international.com