IIFT automation
for small and medium laboratories
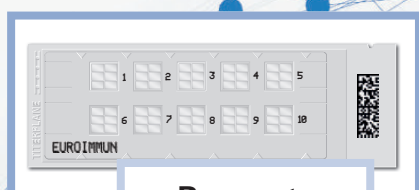
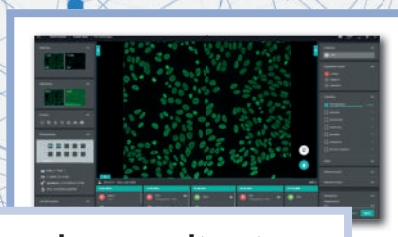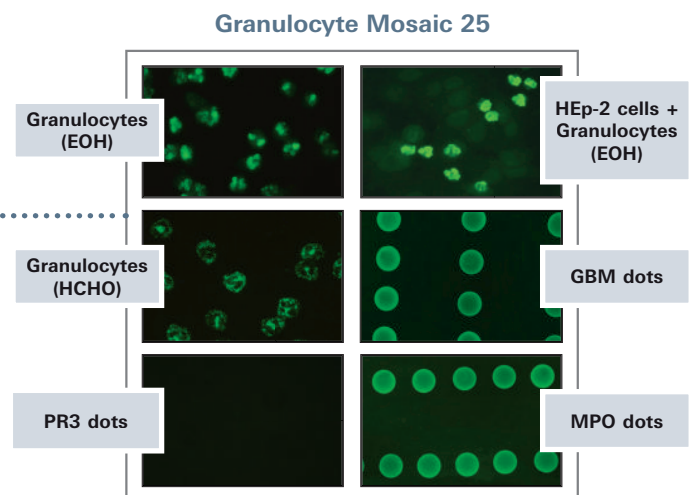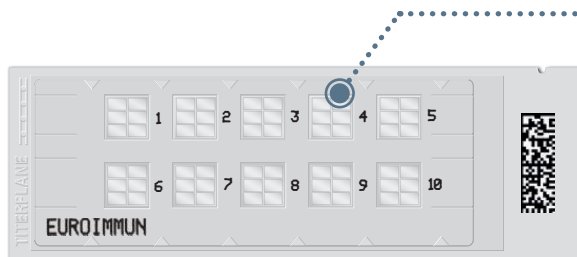## EUROIMMUN reagents – quality meets functionality

- BIOCHIP technology allows:
  - Multiparameter analysis: different substances combined as a mosaic in one test field
  - Monospecific confirmation of results with antigen dots (EUROPLUS)
  - High lot consistency
- Slides are equipped with a matrix code for maximum reliability and traceability
- Comprehensive product range for the following parameters:
  - ANA (HEp-20-10 cells: > 150 mitoses per BIOCHIP for optimal interpretability)
  - ANCA (combination of ethanol (EOH)- and formalin (HCHO)-fixed granulocytes for differentiation of vasculitis from chronic inflammatory bowel diseases (CIBD)
  - Neural autoantibodies (unique parameter spectrum)
  - EmA (distinct pattern on primate liver)
  - AMA/ASMA (VSM47 cells for F-actin)
  - Crithidia & Crithidia sensitive for screening
  - Organ-specific autoantibodies
  - Infection parameters

Granulocyte Mosaic 25

Granulocytes (EOH)

HEp-2 cells + Granulocytes (EOH)

Granulocytes (HCHO)

GBM dots

PR3 dots

MPO dots

IF Sprinter – fully automated processing

- Fully automated processing of immunofluorescence tests, from the dilution and dispensing of samples to the incubation and washing of microscope slides
  - Up to 96 samples and 15 slides per run
  - Automated sample registration with the integrated barcode reader during insertion of the rack into the device
  - Secure slide identification due to optionally available DataMatrix code reader
  - Up to 12 controls and 8 reagents in racks customised for EUROIMMUN reagents
  - Simple operation for short hands-on times
 - Online connection to EUROLabOffice 4.0 or LIS
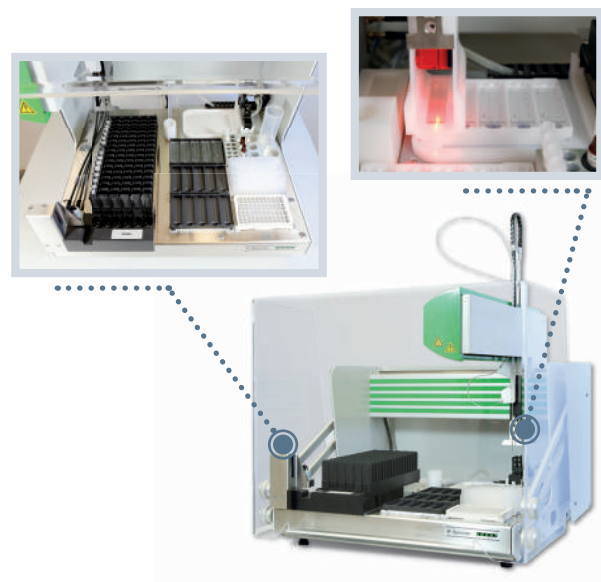
EUROStar III Plus – reliable immunofluorescence microscopy

- Secure and reproducible results due to constant light intensity

- Economical: LED with a useful life of more than 50,000 hours, low current consumption

- Environmentally friendly: no mercury, no UV radiation

- User-friendly: The LED is on full power directly after switch-on.

- Support for quality management: EUROIMMUN regularly checks the light output of installed EUROStar III Plus microscopes and provides a certificate.

- Reliability: Worldwide there are more than 1000 EUROStar microscopes in use.

EUROPattern Microscope Live – Top-speed microscopyeit
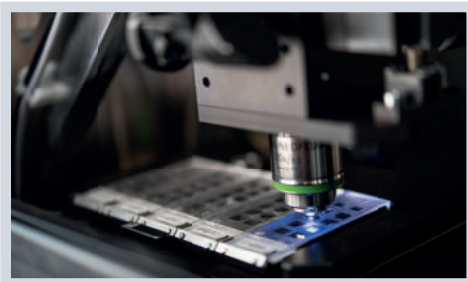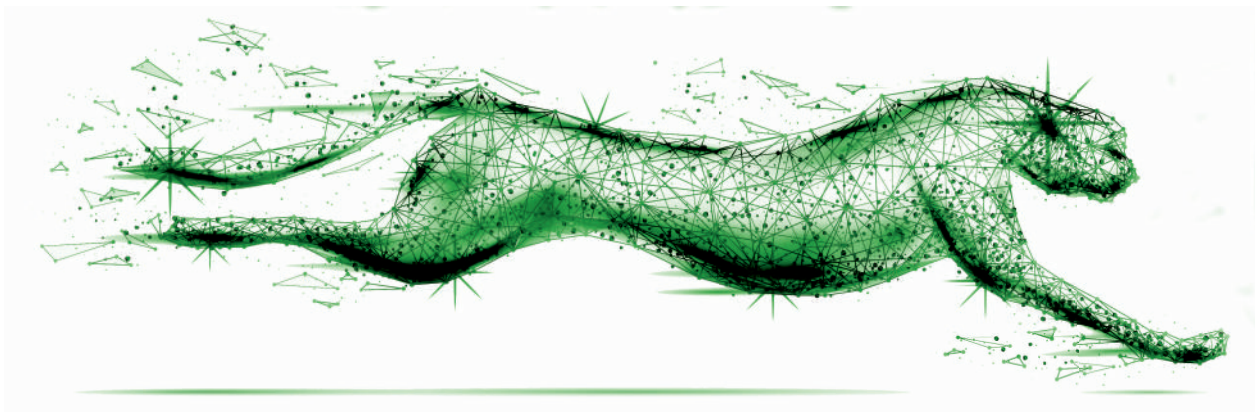
- Fully automated image recording and state-of-the-art result evaluation on the screen – the end of the dark chamber

- Recording of high-quality images in only two seconds –
  a new dimension of fluorescence microscopy

- Security and traceability thanks to automated identification of slides by means of matrix codes

- Constant and standardised fluorescence signals for all devices due to an integrated fluorescence standard

- Unique automated calibration of the microscope for comparability between results from different devices

- Intuitive live microscopy with multi-touch navigation and zooming directly on the computer screen

- Bidirectional data exchange with the laboratory information system (LIS) for paperless working and secure information flows

EUROLabOffice 4.0 – the control centre for your laboratory

- Integrity of data and results due to an entirely paperless work process (quick, simple and reliable)

- Automated data processing and communication without transmission errors

- Automatic creation of electronic worklists

- Reporting support: day's results for a patient, patient history, search function, documentation and archiving

- Optimisation of existing laboratory processes, various expansion modules available

- Interface to laboratory management system (LIS) for bidirectional data exchange and optimal connection to EUROIMMUN devices

EUROPattern Classifier – computer-aided IIFT evaluation

Pattern recognition based on deep convolutional neural networks

EUROPattern Classifier automatically generates result suggestions, including titer calculations, for a continually increasing number of substrates. This initially involves classification of the detected fluorescence patterns by means of deep convolutional neural networks, a deep-learning method. Finally, all the individual findings obtained with the substrates and dilutions are consolidated into a final result for each patient.

ANA diagnostics

- **HEp-2/HEp-20-10 cells:** Automatically generated pattern and titer suggestions with confidence values for nine fluorescence patterns according to ICAP* (homogeneous, speckled, dense fine-speckled, nucleolar, nuclear dots, centromeres, nuclear membrane, AMA and cytoplasmic) and any combinations thereof

  *International Consensus on Antinuclear Antibody (ANA) Pattern

- **Crithidia luciliae:** Automated positive–negative classification and titer suggestions based on the specific kinetoplast fluorescence for the detection of anti-dsDNA antibodies

ANCA diagnostics

- **Granulocytes:** Automatically generated pattern and titer suggestions with confidence values for the fluorescence patterns pANCA, cANCA and atypical ANCA

Diagnostics of autoimmune liver diseases

- **Liver (rat):** Automated positive–negative classification for relevant ANA and identification of anti-LKM-like patterns ("LKM-like", is given as "anti-LKM" pattern after a confirmatory result on kidney tissue) to support the diagnosis of autoimmune hepatitis types 1 and 2

- **Kidney (rat):** Automated positive–negative classification for AMA, specific for primary biliary cholangitis, and identification of anti-LKM-like patterns ("LKM-like", is given as "anti-LKM" pattern after a confirmatory result on liver tissue; suspected autoimmune hepatitis type 2)

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