



EUROIMMUN system solutions for full IIFT automation



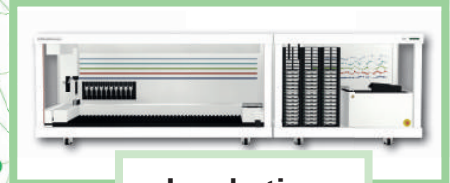
Reagents



Laboratory management



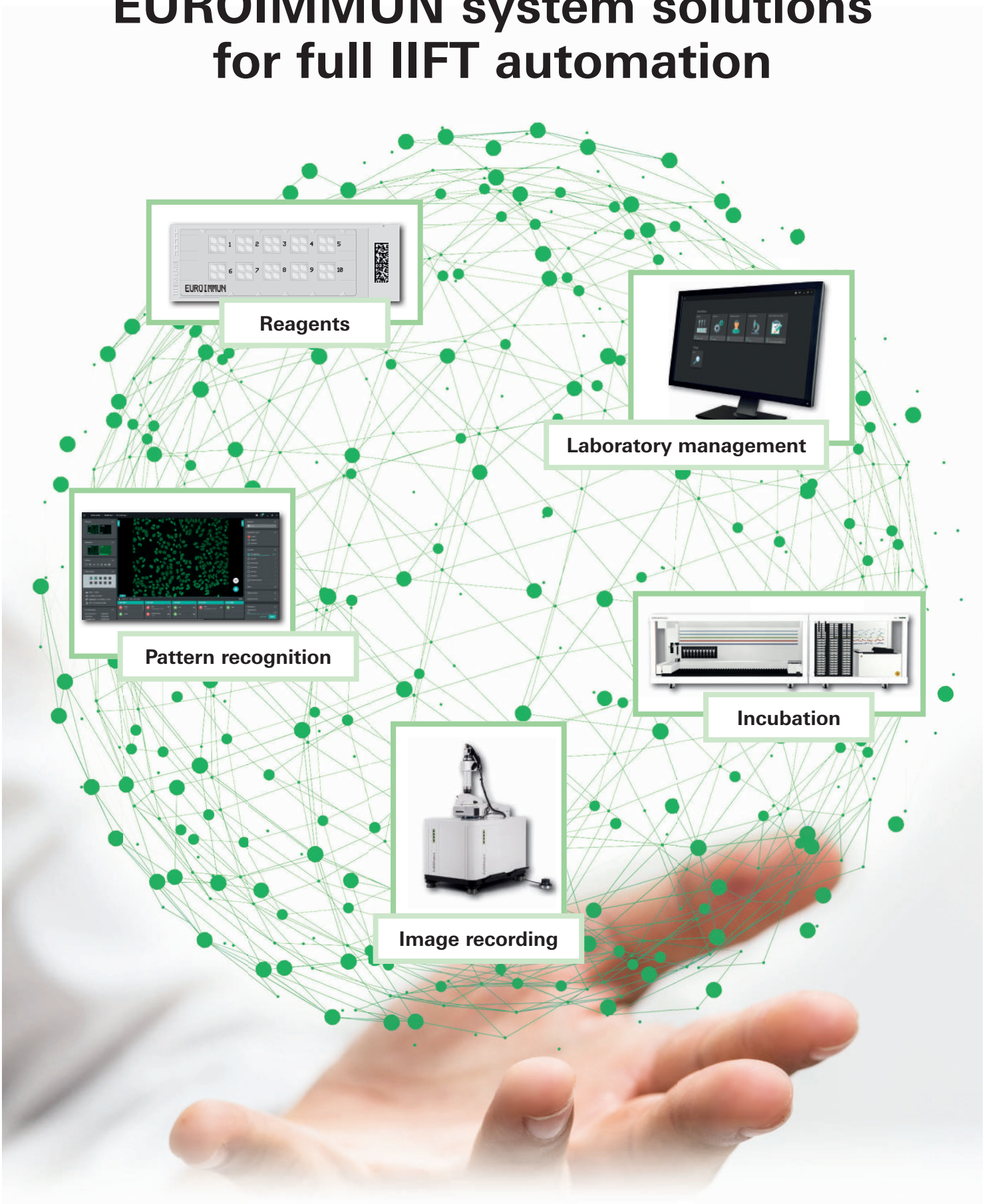
Pattern recognition



Incubation



Image recording





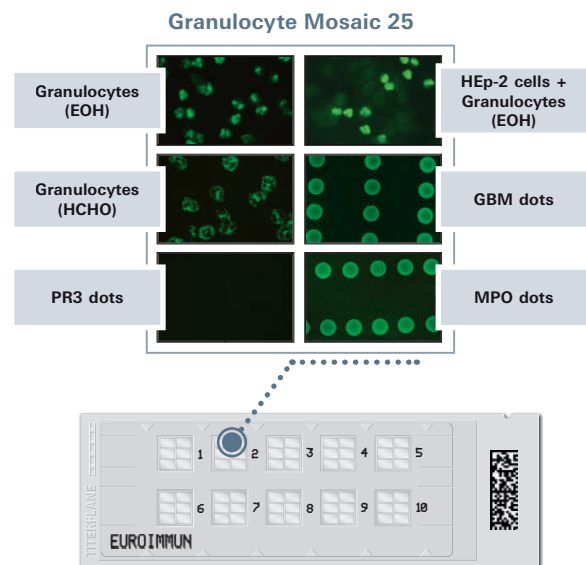
EUROIMMUN reagents – quality meets functionality

- More than 30 years of competence in the development and production of medical laboratory diagnostic devices
- Innovative and state-of-the-art technologies for an unequalled test quality on the highest scientific level
- All-in-one service: test systems, automated systems and excellent support



Multiparameter analyses in IIFT

- The BIOCHIP technology enables the combination of different substrates in BIOCHIP Mosaics for parallel analyses in only one test field
- Matrix-coded slides with up to 50 test fields for maximum security and traceability in laboratory diagnostics
- Example “Granulocyte Mosaic 25”: the perfect combination for your ANCA diagnostics
 - Ethanol (EOH)- and formalin (HCHO)-fixed granulocytes for differentiation of vasculitis from chronic inflammatory bowel diseases (CIBD)
 - Combination of HEp-2 cells and granulocytes on one BIOCHIP allows differentiation between ANA and ANCA
 - Monospecific confirmation of results by means of PR3-MPO antigen dots (EUROPLUS) and detection of anti-GBM antibodies by means of GBM antigen dots (EUROPLUS)



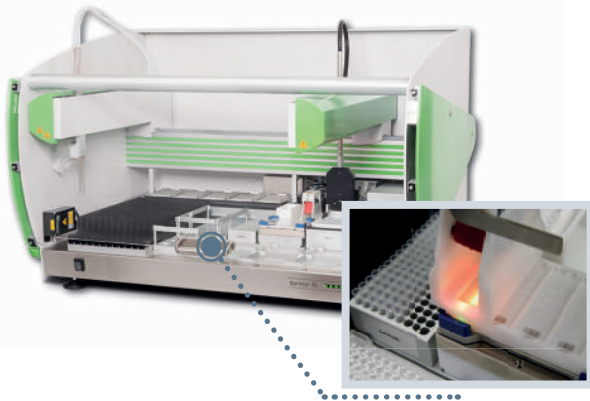
EUROLabOffice 4.0 – the control centre for your laboratory



- 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



Fully automated incubation for medium to high throughput



Sprinter XL

- Up to 240 samples and 30 slides per run
- Matrix code identification of samples and slides
- Simultaneous washing of all reaction fields by flooding of the slides
- Four washable needles
- Processing IFT and ELISA on one instrument

Fully automated incubation for high throughput



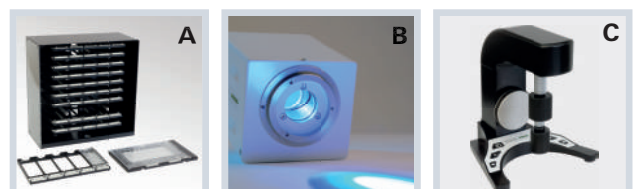
EUROLabWorkstation IFA

- Over 700 samples and 750 reaction fields per run
- Barcode and matrix code identification of samples, reagents, labware and slides
- High throughput of over 200 analyses per hour
- Standardised washing of 50 reaction fields by means of the novel MERGITE! washing technology
- 10 washable needles
- Automatic mounting

Fully automated microscopy

EUROPattern Microscope

- Fully automated image recording for on-screen diagnostics for a variety of substrates
- Extremely fast system: up to 500 reaction fields in less than 2 hours (13 seconds per image)
- Magazine for 500 fields (A) with automatic supply of slides allows long walk-away periods
- Automated registration of slides by DataMatrix codes for error-free traceability
- cLED (B) for fluorescence microscopy with constant light intensity and documented quality control
- Comparable IIFT images on all EUROPattern Microscopes due to unique calibration with the integrated fluorescence normal
- Different autofocus objectives (20x; optional 10x, 40x) for optimal image recording characteristics
- Optional RealDrive hand control (C) for manual microscopy, as convenient as with a normal microscope
- Eye-pieces available on request





Computer-aided evaluation of IIFT results using EUROPattern Classifier

Pattern recognition based on deep convolutional neural networks

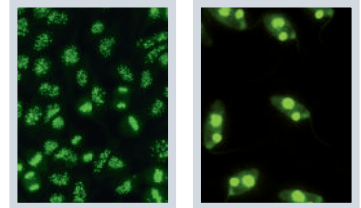
EUROPattern Classifier automatically generates result suggestions, including titer calculations, for a continually increasing number of substrates. This initially involves classification of the detected fluorescence patterns by means of deep convolutional neural networks, a deep-learning method. Finally, 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

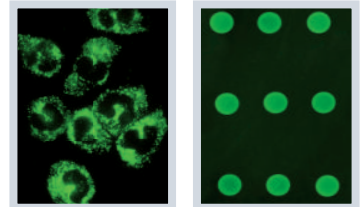
* International Consensus on Antinuclear Antibody (ANA) Pattern

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



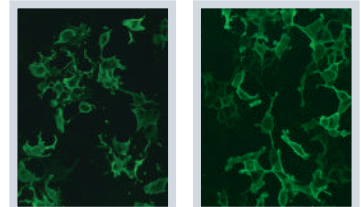
ANCA diagnostics

- **Granulocytes:** Automatically generated pattern and titer suggestions with confidence values for the fluorescence patterns pANCA, cANCA and atypical ANCA
- **EUROPLUS antigen dots:** Automated positive–negative classification of the mono-specific antigen fluorescence for confirmation and for differentiation from other diseases



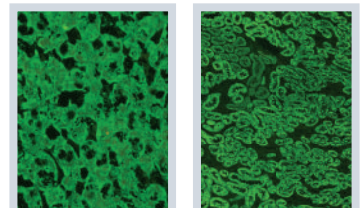
Diagnostics based on antigen-expressing cells

- **Neurology:** Automated positive–negative classification and titer suggestions with confidence values for different antigens, e.g. AMPA 1/2, NMDAR, GABAR B1/B2, LGI1, CASPR2, DPPX, aquaporin-4 and MOG
- **Nephrology:** Automated positive–negative classification and titer suggestions with confidence values for the antigen PLA2R
- **Infection diagnostics:** Automated positive–negative classification and titer suggestions with confidence values for the antigens EBV-CA, EBV-EA and EBNA-1



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)



EUROLabPolaris – intelligently connected IIFT diagnostics worldwide

- Digital connection of your laboratory sites and IIFT specialists on a local to global scale
- Secure and flexible access to your IIFT data quickly and clearly presented via web browser
- Maximal standardisation of the entire evaluation process thanks to centralised classification and evaluation of IIFT results
- Significant reduction in sample logistics and reporting times

