Microdissection from Carl Zeiss

PURITY NEWS

Information Service for Customers
Carl Zeiss MicroImaging, Location Munich

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PALM MicroBeam

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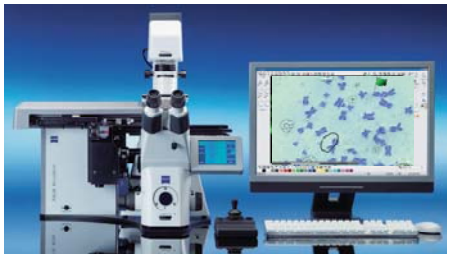
A powerful link between cytogenetics and molecular analysis



Molecular cytogenetics encompasses all aspects of chromosomes of human, animal, plant and microbe genomes. Conventional cytogenetics has a limited capability for complex chromosome rearrangements. This limitation has been complemented by PALM MicroBeam to proceed rapidly from cytogenetic to molecular observation. Actually numerous scenarios in clinical diagnostics, tumor genetics, phylogenomic studies, plant and animal research are investigated with the LCM (Laser Capture Microdissection) technology from Carl Zeiss. In human cytogenetics LCM mediated isolation of derivative chromosomes offers an effective tool to generate specific templates for mapping studies [1]. Furthermore microdissection allows the application of interphase FISH and subsequent CGH *on the same cell* and facilitates the diagnostic analysis of cells carrying chromosomal imbalances [2]. In animal genetics the preparation of a complete set of whole-chromosome painting probes by LCM revolutionized the understanding of phylogenetics [3]. The microdissection of p or q arms of plant sex chromosomes enabled the mapping of all target genes and resulted in a new model of chromosome evolution [4].

[1] Gotter A et al.: Genome Res, 2007, 174: 470-481
[2] Langer S et al.: Lab Invest, 2005, 85,4: 582-592
[3] Rubes J et al.: Chromosome Res, 2008, 16,7: 935-947
[4] Hobza R et al.: Chromosome Res, 2004, 12,3: 245-250

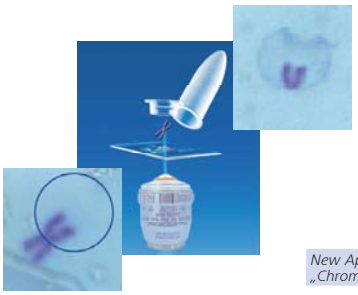
Cytogenetic solutions from Carl Zeiss

- *Plan-APOCHROMAT 150x/1.35 Glyc Corr DIC M27.*
- *Excellent link between MetaSystems and LCM with direct coordinate transfer.*
- *Colibri with high-performance LEDs. Each individual LED delivers a precisely defined spectral range.*
- *AxioCam MRm (monochrome camera) for maximum resolution without color interpolation.*
- *Multichannel Fluorescence (MCF).*
- *Extended depth of focus.*
- *Different MembraneSlides for specialized applications.*
- *Prevention of fluorescence bleaching effects due to the RoboSoftware tool "Freeze Mode".*

For more details please visit http://www.zeiss.de/microdissection

Accessories for chromosome work

Plan-APOCHROMAT 150x/1.35 Glyc Corr DIC M27
With the best color correction and highest numerical apertures, Plan-APOCHROMAT objectives deliver brilliant images in brightfield, DIC and fluorescence techniques. High resolution and excellent image sharpness make even the finest details and color nuances visible. Plan-APOCHROMAT provides optimal cutting performance and perfect image quality.
Ideal for chromosome microdissection.



New Application Info: „Chromosome Microdissection"

Detailed information available:

- Microdissection from Carl Zeiss: Chromosome microdissection
- Product-Info: MembraneSlides
- Brochure: Objectives from Carl Zeiss

We would like to invite you to our ***next workshop*** *in Munich, Kistlerhofstraße 75, on November 19th and 20th, 2009.*

www.zeiss.de/micro-workshops

ZEISS

We make it visible.