

## Final Program:

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**Thursday October 17. 2002**

**Introduction 14<sup>00</sup> - 14<sup>10</sup>**

<b>14.10 - 16.10</b>	<b>SESSION I: <i>Novel imaging techniques and applications</i></b> CHAIR: HAUSMANN - LANGBEIN ( HEIDELBERG )
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| <b>14.10 - 14.40</b> | 1. <b>Classical and new roles of microscopy in modern cell biology:<br/>New cell-cell junctions (opening lecture)</b><br>Werner W. Franke (Heidelberg)                             |
| <b>14.40 - 15.10</b> | 2. <b>High resolution far-field microscopy</b><br>Cristoph Cremer (Heidelberg)   |
| <b>15.10 - 15.40</b> | 3. <b>Scanning near-field optical microscopy (SNOM) and its biological application</b><br>Frank de Lange (Nijmegen)  |
| <b>15.40 - 16.10</b> | 4. <b>Living cells in depth: analysing cellular processes by ultrafast 4D recording of two fluorescent tagged proteins and high throughput deconvolution</b><br>Jan de Mey (Orsay) |

**16.10 – 16.30**

**\*\*\*\* coffee break \*\*\*\***

<b>16.30 - 18.10</b>	<b>SESSION II: <i>Cell sorting and array technologies</i></b> CHAIR: RADBRUCH - SCHEFFOLD ( BERLIN )
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| <b>16 30 - 16.50</b> | 1. <b>Strategies for array based expression profiling</b><br>Andreas Bosio (Köln)  |
| <b>16.50 - 17.10</b> | 2. <b>Cell sorting as a straight forward strategy for lifting the veil of obscure tissue array data</b><br>Andreas Grützkau (Berlin)   |
| <b>17.10 - 17.20</b> | 3. <b>Gene expression profiling of normal and malignant cell populations: from cell isolation to data analysis</b><br>Ulf Klein (New York)   |
| <b>17.20 - 17.50</b> | 4. <b>Pure sample preparation with laser pressure catapulting:<br/>A prerequisite for high quality molecular analyses: Preparation of single cells, cell areas or chromosomes in a non-contact way</b><br>Renate Burgemeister (Bernried) |
| <b>17.50 – 18.10</b> | 5. <b>Analysis of the influence of recombinant mistletoe lectin 1 on peripheral mononuclear blood cells from different donors using cDNA arrays</b><br>Barbara Schaffrath (Köln)   |

<b>18.15 - 19.00</b>	<b>SESSION III: <i>Annual general meeting of the DGfZ</i></b> CHAIR: KNÜCHEL - CLARKE ( PRESIDENT, REGENSBURG )
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<b>19.00 - 20.00</b>	<b>SESSION IV: <i>Poster session</i></b> CHAIR: MOUSTAFA, VIERGUTZ ( MAINZ, ROSTOCK )
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| 1. <b>Selective fluorescent dyes used in histological staining and their applications in confocal laser scanning microscopy</b><br>TB Branquinho, M Pelajo-Machado, LG Caputa, BS Vale, AL Amorim, E Ballassiano, PAM Martinez, HL Lenzi (Rio de Janeiro, Brazil) |
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2. **Flow cytometric studies of DNA-binding characteristics of an inorganic layered double hydroxide (LDH)**  
Simone Brethauer, Arne Burzlaff, Cornelia Kasper, Björn-Oliver Jackisch, Thomas Scheper (Hannover)
3. **Correlation of DNA ploidy assessment method with immunocytochemical analysis in primary breast carcinoma**  
A.Czuba, D.Lange, A.Smok, E.Chmielik, K.Woloszynska, E.Wojciechowska,, J.Liszka (Gliwice, Poland)
4. **Quantitative phase optical characterization of heat stressed cells using light microscopical data**  
Cathrin Dressler, Olaf Minet, Jürgen Beuthan, Gerhard Müller (Berlin)
5. **TSA has a complex effect on cell cycle progression**  
K. Fejes Tóth, T. A. Knoch, M.& M. Stöhr, G. Müller, K. Rippe (Heidelberg)
6. **Diagnostic imaging of histologic sections of melanocytic skin tumors using tissue counter analysis**  
Armin Gerger and Josef Smolle (Graz, Austria)
7. **Rapid evaluation of cell nuclear morphology in tumors by image cytometry**  
Sergey Gloushen, Igor Melnikov, Inna Merkulova, and Vadim Pasukov (Minsk, Russia)
8. **Role of extracellular matrix in human osteosarcoma proliferation**  
Revekka Harisi, József Dudás, Gábor Pogány, Ferenc Timár, József Bocsi, Miklós Szendroi, and András Jeney  
(Budapest, Hungary)
9. **Phagocytosis of lymphocytes in HIV infection**  
Kayßer P, Müller MC, Brust J, Schuster D and Nebe CT (Mannheim)
10. **Confocal scanning microscopy for high sensitivity fluorescence detection in cells and tissue sections**  
Benedikt Krämer, Jörg Neukammer, Rainer Macdonald, Martin Roos, Kerstin Büchner, Richard Kroczeck (Berlin)
11. **Flow cytometry an Bakterien – eine Herausforderung. Messungen mit MoFlo und MicroFlow 6.1**  
Andreas Lösche und Giovanni Salerno (Leipzig, Freiburg)
12. **How does the fluorescence of DNA specific dyes depend on base composition and base sequence? Comparison of the sequenced species *Oryza Sativa* and *Arabidopsis Thaliana***  
Armin Meister (Gatersleben)
13. **Mechanical deformation of cells with optical tweezers**  
B. Perner, L. Wollweber, S. Monajembashi, A.Rapp, K.O. Greulich (Jena)
14. **Digital image analysis and immunophenotyping of lymphocytes in normal and pathological conditions**  
M.Robinson, V.Trufakin, I.Belan (Novosibirsk, Russia)
15. **Reaction-diffusion-dynamics in cardiac calcium management: parameter estimation from experimental studies**  
Eberhard Schmitt and Götz Pilarczyk (Jena, Berlin)
16. **Analysis of cell cycle and differentiation in the haploid moss *Physcomitrella patens***  
Gabriele Schween, Gilbert Gorr and Ralf Reski (Freiburg)
17. **Tissue microarray: Rapid linking of molecular changes to clinical endpoints of head and neck squamous cell carcinoma**  
Sticht C., Joos S., Freier K., Hofele C. (Heidelberg)
18. **Analysis of P-glycoprotein (P-gp) activity in childhood acute leukemia (ALL) by laser scanning cytometry (LSC): Correlation of rhodamine 123 efflux rate with ploidy and morphology**  
Tomasz Urasiński, Marek Masiuk, Elbieta Urasińska (Szczecin, Poland)

## Friday October 18 2002

9.00 – 11.00

**SESSION V: Novel imaging techniques and applications**

**CHAIR: HAUSMANN - LANGBEIN (HEIDELBERG)**

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| 9.00 - 9.30   | 1. <b>Renaissance of fluorescence resonance energy transfer in mapping the cell surface</b><br>Janos Szöllösi (Debrecen) |
| 9.30 - 10.00  | 2. <b>Novel fluorescence labelling techniques</b><br>Markus Sauer (Heidelberg)   |
| 10.00 - 10.30 | 3. <b>Novel applications of immunohistochemistry in diagnostic histopathology</b><br>R.Moll (Marburg)                    |
| 10.30 - 11.00 | 4. <b>Clinical application of spectral karyotyping in cancer cytogenetics</b><br>Luba Trakhtenbrot (Tel-Hashomer)        |

11.00 – 11.15

\*\*\*\* coffee break \*\*\*\*

**11.15 – 12.00 SESSION VI: Cellular differentiation (part 1: Telomeres)**

CHAIR: JAUCH, KUNZ-SCHUGHART ( HEIDELBERG, REGENSBURG )

- 11.15 - 11.45 1. **Telomeres and telomerase in cancer and aging: an overview**  
Petra Boukamp (Heidelberg)
- 11.45 - 12.00 2. **The role of hTERT expression in normal human fibroblasts**  
Karin Greulich-Bode ( Heidelberg )
- 12.00 - 12.15 3. **Telomeres and nuclear reorganization during meiosis**  
Harry Scherthan (Berlin)

12.15 – 13.00

\*\*\*\* lunch \*\*\*\*

**13.00 – 14.00 SESSION VII: Klaus Goerttler Prize winners, 2001 + 2002  
and lecture on honorary membership of DGfZ**

CHAIR: MEMBERS OF THE PROGRAM COMMITTEE

- 13.00 - 13.20 1. **Prize Winner 2001**
- 13.20 - 13.40 2. **Prize Winner 2002**
- 13.40 - 14.00 3. **Alternatives – A Personal View on 30 Years of Flow Cytometry**  
Michael Nüsse (Neuherberg)

14.00 – 14.15

\*\*\*\* coffee break \*\*\*\*

**14.15 – 16.15 SESSION XIII: Cellular differentiation ( part2 )**

CHAIR: VALET, NEBE ( MARTINSRIED, MANNHEIM)

- 14.15 - 14.30 1. **Tumor-derived fibroblasts differentially affect cell cycle distribution of various breast cancer cells in 3-D culture**  
F. Heissenhuber, G. Brockhoff, R. Knuechel, L.A. Kunz-Schughart  
( Regensburg )
- 14.30 - 14.45 2. **Digital image analysis and immunophenotyping of lymphocytes in normal and pathological conditions**  
M.Robinson, V.Trufakin, I.Belan ( Novosibirsk, 630117, Russia )
- 14.45 - 15.00 3. **Irradiated lymphoid tumour cells undergo DNA repair and are protected from apoptosis in the endoreduplication-reduction cycle**  
M. Cragg, A. Ivanov, Je. Erenpreisa, T. Illidge  
(Southampton, Wessex, UK; Latvia )
- 15.00 - 15.15 4. **Identification of deficient mitochondrial apoptosis signaling in leukemia cells by a novel flowcytometric method for detection of mitochondrial cytochrome C release.**  
Karsten Stahnke, Andrea Mohr, Jiahao Liu, Klaus-Michael Debatin (Ulm)
- 15.15 - 15.30 5. **CD203c is a novel marker for basophils and glandular epithelial cells in endometrium**  
Hans-Jörg Bühring, Christina Giesert, Ulrike Kämmerer, Kimihiko Sano, Peter Valent  
( Tübingen, Würzburg, Germany; Kobe, Japan; Vienna, Austria )
- 15.30 - 15.45 6. **CDCP1 is a novel marker for hematopoietic stem cells**  
Tim Conze, Reiner Lammers, Hans-Jörg Bühring (Tübingen)
- 15.45 - 16.00 7. **Antibody secreting cell lines as model systems for affinity matrix secretion assay based cell sorting**  
E. Böhm, R. Voglauer, R. Kunert, J. Grillari, S. Gross, B. Ferko, H. Katinger and N. Borth ( Vienna, Austria )
- 16.15 - 16.30 8. **Increased genetic damage with age detected with SCSA and comet**  
Schmid, T.E. Bollwein, H. Baumgartner, A. Adler, I.-D. , Anderson, D. Brinkworth, M.H. ( Bradford, UK; Munich, Neuherberg, Germany )

16.30 – 16.45

\*\*\*\* coffee break \*\*\*\*

<b>16.45 – 18.15</b>	<b>SESSION IX: <i>Biomonitoring</i></b> CHAIR: BLEY, MÜLLER (DRESDEN, LEIPZIG)
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| <b>16.45 - 17.15</b> | 1. <b>Combined flow cytometric and phylogenetic analysis of marine bacterio-plankton communities: From dilution culture to the open ocean</b><br>Bernhard M. Fuchs, Mikhail V. Zubkov, Peter Burkill, Rudolf Amann<br>( Bremen, Germany; Plymouth, UK ) |
| <b>17.15 - 17.30</b> | 2. <b>Fast fluorochroming of cellular substances to monitor bioprocesses</b><br>Brendler, A. Bühner, J. Herrmann; C. Stöber, H. Göhde, W. Bley, Th.<br>(Görlitz, Dresden, Heilbad Heiligenstadt )   |
| <b>17.30 - 17.45</b> | 3. <b>Characterization of a binary culture of Lactobacteriaceae using flow cytometry</b><br>Ullrich, S. Lösche, A. Müller, S. ( Leipzig )   |
| <b>17.45 - 18.00</b> | 4. <b>Degradation of a xenobiotic using a binary culture and multi-parametric flow cytometry</b><br>H. Sträuber, S. Müller, A. Lösche, W. Babel ( Leipzig-Halle )   |
| <b>18.00 - 18.15</b> | 5. <b>On-line observation of cell-growth with in-situ microscopy</b><br>Thomas Brückerhoff, Jan-Gerd Frerichs, Thomas Scheper ( Hannover )  |

<b>18.30 – End</b>	<b>TUTORIALS: PART I</b> <i>Multi fluorescence imaging ** Functional genomics</i> CHAIR: HAUSMANN, MÜLLER-LUTZ ATZBERGER
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## Saturday October 19 2002

<b>8.00 – 9.30</b>	<b>TUTORIALS: Part II</b> <i>Proliferation and death ** BRDU- techniques</i> CHAIR: NÜSSE, VIERGUTZ GOLLER
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<b>9.30 – 10.45</b>	<b>SESSION X: <i>Clinical Applications</i></b> CHAIR: ROTHE, TÁRNOK (REGENSBURG, LEIPZIG)
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| <b>9.30 - 9.45</b>   | 1. <b>Future perspectives of clinical DNA content measurements by flow cytometry</b><br>Willem E. Corver and Cees J. Cornelisse (Leiden, Netherlands)  |
| <b>9.45 - 10.00</b>  | 2. <b>Individualized pretherapeutic risk assessment for acute myeloid leukemia (AML) patients</b><br>Valet G. Repp R. Link H. Ehninger A. Gramatzki M. and SHG-AML'96<br>group ( Martinsried, Erlangen, Kaiserslautern, Dresden )    |
| <b>10.00 - 10.15</b> | 3. <b>Good early treatment response in childhood ALL is associated with bax nuclear accumulation and PARP cleavage as measured by laser scanning cytometry</b><br>Tomasz Urański, Jerzy Grabarek, Elbieta Urańska (Szczecin, Poland) |
| <b>10.15 - 10.30</b> | 4. <b>Apoptosis in B- and T-cells in patients with Lupus Erythematosus</b><br>Ingrid Boehm ( Bonn )  |
| <b>10.30 - 10.45</b> | 5. <b>Individualized risk assessment for diffuse large-B-cell lymphoma patients prior to chemotherapy</b><br>Valet G. Höffkes HG. ( Martinsried, Fulda )   |
| <b>10.45 - 11.00</b> | <b>Quantification of eosinophilia in nasal polyps by FITC binding</b><br>Manuela Gutsche, Frank Emmrich, Attila Tárnok, Friedrich Bootz, Andreas Gerstner<br>(Leipzig)   |

<b>11.00 – 11.15</b>	**** coffee break and breakfast ****
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<b>11.15 – 13.00</b>	<b>SESSION XI: <i>Novel instruments and applications</i></b> CHAIR: BEISKER, CREMER (NEUHERBERG, HEIDELBERG)
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- 11.15 - 11.30 1. **Use of phase-sensitive flow cytometry to measure DNA and RNA based on fluorescence lifetime differences of a single probe when bound to nucleic acids**  
Harry A. Crissman, H. Helen Cui, Joseph G. Valdez,  
and John A. Steinkamp ( Los Alamos, USA )
- 11.30 - 11.45 2. **The sperm chromatin structure assay<sup>®</sup> and its relationship to morphology, fertility and DNA integrity for bulls and stallions**  
W Beisker, I Fuchs, M Krienke, P Dirscherl, F Weber, TE Schmid,  
H Sieme, W Grundler, and H Bollwein  
( Bradford ( UK), Neuherberg, ,Munich, Celle )
- 11.45 - 12.00 3. **Six and more color immunophenotyping on the slide by slide based cytometry**  
Attila Tárnok, Wiebke Laffers, Dominik Lenz Friedrich Bootz, and Andreas O. H.  
Gerstner ( Leipzig )
- 12.00 - 12.15 4. **Flow cytometric detection of malaria pigment-containing neutrophils by wavelength dependent depolarized light scatter**  
Jörg Neukammer, Benedikt Krämer, Martin P. Grobusch,  
Muna Abu Sin, and Norbert Suttorp (Berlin, Tübingen )
- 12.15 - 12.30 5. **CellTracks : A multifunctional cell analysis instrument**  
Arjan G.J. Tibbe, Alexander van der Kooi , Jan Greve, Leon W.W.M Terstappen  
( Enschede, Netherlands; Huntingdon Valley, USA )
- 12.30 - 12.45 6. **The new BD LSR II flow cytometer: 4 lasers, 10 colors, fiber optics, digital electronics**  
Joachim Brenner (BD Biosciences, Europe)
- 12.45 - 13.00 7. **ProteinChip<sup>®</sup> technology for protein expression profiling and biomarker discovery**  
Petra Westerteicher ( CIPHERGEN, Europe)

13.00 – 13.15

\*\*\*\* coffee break and breakfast \*\*\*\*

**13.15 – 14.30 SESSION XII: *Approaching the future in microscopic imaging***

CHAIR: NÜSSE, SZÖLLÖZI ( NEUHERBERG, DEBRECEN )

- 13.15 - 13.30 1. **Representation and approximation of distance distributions of indepently distributed points in cell-like objects**  
Eberhard Schmitt and Michael Hausmann ( Jena, Heidelberg )
- 13.30 - 13.45 2. **Precise distance measurements by means of an automated micro-axial-tomograph in a standard light microscope**  
M. Hausmann, M. Kozubek, Pe. Matula, F. Staier, H. Eipel,  
M. Skalníková, and C. Cremer ( Heidelberg, Brno (Czech Republic )
- 13.45 - 14.00 3. **Nanosizing of fluorescent objects in cytometry**  
Udo Spöri, Antonio Virgilio Failla, Benno Albrecht  
and Christoph Cremer ( Heidelberg )
- 14.00 - 14.15 4. **Approaching the three-dimensional organization and dynamics of the human genome by virtual microscopy**  
Tobias A. Knoch and Jörg Langowski ( Heidelberg )
- 14.15 - 14.30 5. **Slide-based immunophenotyping by six colour laser scanning cytometry**  
Wiebke Laffers, Dominik Lenz, Attila Tárnok, Friedrich Bootz, and Andreas  
Gerstner  
( Leipzig )

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